

NOT JUST 'ROGUE MALES': GENDER IDENTITY IN GENERAL STRAIN THEORY

by

CALLIE HARBIN BURT

(Under the Direction of Jody Clay-Warner)

ABSTRACT

How can General Strain Theory (GST) explain why more males than females commit crime (the sex gap) as well as male and female criminality? I propose that gender identity conditions the relationship between the motivation to crime (strain) and delinquency. I argue that feminine gender identities constrain individuals from most delinquent behaviors, while masculine gender identities may actually propel individuals towards delinquency. Variation in the salience of gender identities explains within-gender identity group variance in delinquency. I analyze the conditioning effect of gender identity in GST in a national U.S. probability sample of 1269 adolescents and their mothers interviewed in 1981. The conditioning effect of gender identity is generally supported for males, but the hypothesized dampening effect of femininity is only weakly supported among females. The results suggest that gender identity is potentially an important conditioning mechanism in GST contributing to the sex and gender disparities in delinquency.

INDEX WORDS: General strain theory, Gender identity, Sex, Delinquency

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CALLIE HARBIN BURT

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CALLIE HARBIN BURT

Major Professor: Jody Clay-Warner

Committee: Mark Cooney
Ronald L. Simons

Electronic Version Approval Pending:

Maureen Grasso
Dean of the Graduate School
The University of Georgia
August 2003

DEDICATION

To Bubba and Nancy Burt: thank you for everything.

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CHAPTER 1

INTRODUCTION

Delinquency is not merely the acting out of rogue males. Most traditional theories of crime were developed to explain the offending behaviors of males and regarded female offenders as peripheral anomalies (e.g., Chesney-Lind & Shelden 1987). When females were included in studies, they were generally depicted in sexist and stereotypical ways (Belknap 2001). Although criminological research and theory no longer discard females, the historical neglect of this sex hinders our understanding of female offenders and the causes of crime for both males and females. As Pollock (2000: 52) notes: “We are still attempting to construct a unified theory that can account for both male and female [criminal] behavior.”

Theories designed to explain the etiology of delinquent behavior have focused on boys, due to the prevailing belief that delinquency is solely a male phenomenon. This perspective is at odds with both self-report and official data (Hindelang 1979; Maguire & Pastore 1997). In 2001, for example, among persons under 18 years, girls accounted for 30% (96, 948) of the arrests for index offenses (FBI 2002: 239). In 1998, one out of every 22 girls in the United States was arrested for a Part 1 crime. Approximately 28% of violent female offenders are under the age of seventeen. While total juvenile rates for Part 1 violent crimes have declined each year subsequent to 1995, the rates of arrest for violence continue to climb for females under the age of seventeen. The 1997 arrest rate for female perpetrators of violent crime was 80% larger than the rate ten years earlier. Furthermore, more than 1.3 million juvenile girls (8.1%) were under some form of correctional supervision in 1998 (FBI 1999). Although official and self-report data verify the continued existence of a sex¹ gap, girls do engage in substantial amounts of delinquency (e.g., Steffensmeier & Allan 1996).

¹ Against the recent tendency to obliterate it and speak only of ‘gender,’ I have retained the classical feminist distinction of sex (male/female by birth and chromosomal configuration) from gender (enacting masculine or feminine roles).

Two questions in reference to the sex gap continue to plague theories of crime and delinquency: (a) how do we explain the higher rate of crime among males, and (b) how can we explain why females commit crime (Broidy & Agnew 1997). In other words, theories have yet to explain adequately both the sex gap and the within group variation among the sexes, particularly for females. In response to this remaining unexplained variance between males and females as well as the traditional concentration on males, some researchers have called for separate theories of female offending (Adler 1975; Chesney-Lind & Shelden 1992; Klein 1973; Leonard 1982). Others have resisted this call, arguing that additional research is needed to test whether traditional male-centered theories account for female delinquency before we dismiss extant theories' applicability to females (Bartusch & Matsueda 1996; Smith & Paternoster 1987; Steffensmeier & Allan 1996).

I contend that at least one existing theory, Agnew's (1992) General Strain Theory (GST), holds promise for a unified explanation of the sex differences in offending. GST postulates that the relationship between strain and crime is conditioned by a number of factors, including coping resources, problem solving skills, social support, constraints to delinquent coping, and dispositions to delinquency (Broidy & Agnew 1997). Although purportedly general, the theory as currently formulated does not satisfactorily explain the different rates and types of male and female delinquency. The purpose of the paper, then, is to incorporate elements of identity theory into the GST formulation. Identity theory, which conceives of internalized self-meanings (identities) as control systems that maintain congruence between self perceptions of identity relevant meanings in a situation and the meanings contained in the identity standard (Burke 1991), is expected to improve GST's explanatory scheme and, more specifically, its applicability to the sex gap.

The present study extends GST by incorporating gender identity to show how structural and social psychological forces combine to explain variation in delinquency within sex and variations in rates of delinquency across sex. Individuals' gender identity as masculine or feminine is based on the meanings they have internalized with the role of male or female, respectively, in society (Burke 1989). Within identity theory, gender identity provides individuals with a standard for assessing self-meanings in

a situation and for adjusting behaviors in alignment with one's degree of masculinity or femininity (Burke 1991). In other words, when conceptualized as an identity, gender is the meaning of male or female for persons when they are reflexive and guides behaviors in interaction. Most acts commonly understood as delinquent, especially serious acts, are deemed masculine in nature (e.g., Messerschmidt 1993); thus, it is not a stretch to ask whether an individual's gender identity might be related to delinquency. Most forms of delinquency are counter to traditional notions of femininity. Delinquency is inconsistent with nurturance, passivity, nonaggressiveness, and physical and emotional weakness—attributes which are associated with females (Burke 1989; Burke & Tulley 1977; Jackman 1994). Steffensmeier and Allan (1996: 476) write, “[t]he cleavage between what is considered feminine and what is criminal is sharp, while the dividing line between what is considered masculine and what is criminal is often thin. Crime is almost always stigmatizing for females, and its potential cost to life chances is much greater than for males.”

The inclusion of gender identity allows GST to consider the mechanism by which socially prescribed sex roles influence the choice of one behavioral coping-strategy (i.e., delinquency) over other options, where all are available to the individual. This mechanism, gender identity, can explain both within- and between-sex differences through the variation in the degree to which individuals adhere to societal prescriptions and proscriptions appropriate for their sex category. The purpose of this analysis, then, is to analyze whether gender identity conditions the strain-delinquency relationship. More specifically, I contend that more masculine males and females are more likely to respond to strain² with delinquent behaviors than less masculine males and females.

This research contributes to the literature in four primary ways. First, it moves beyond previous work by describing the process leading to female delinquency, as well as the source of variation in delinquency across sex. Previous research has not specified a well-developed theoretical framework of

² Although Agnew adopts the term “strain” due to his extension of the classic strain theories, his theory actually owes as much to sociological and psychological theory and research on stress. I, therefore, use the terms “strain” and “stress” interchangeably in the present context, due to the fact that I am extending Agnew's GST and borrowing from a substantial portion of the stress literature.

the underlying social psychological processes leading to girls' delinquency, and, as such, this study forwards knowledge of juvenile delinquency more generally. Second, the research extends a dominant theory of crime, GST, to address differences in the experiences of females and males and how such experiences lead to variations in rates of delinquency. Third, there is good reason to believe that sex interacts with the social-psychological processes leading to delinquency; however, most studies have estimated models pooled across sex, producing misleading results. This study, in contrast, estimates separate models for boys and girls, and I expect predictors to have similar, but not equivalent, effects for the models for each sex. This expectation is supported by research that shows that strain has stronger effects on male than female delinquency (Broidy 2001), and that feminine and masculine orientations have dissimilar effects on girls' than on boys' delinquency (Cullen et al. 1979; Ford et al. 2001; Heimer & De Coster 1999; Horwitz & White 1987; Shover et al. 1979). The final point of divergence from most studies on sex differences in crime is this research's focus on a specific theoretical statement rather than an indiscriminate exploration of various possible relationships between sex and delinquency. In this respect the aims are more clearly specified than that of some feminist theories.

This paper proceeds in four sections. First, the GST framework is described and extant research testing the theory is discussed. Next, identity theory and the theory's conceptualization of gender identity are delineated. Third, gender identity is incorporated into GST, and, then, existing research on sex and delinquency is reviewed. Lastly, the extended theory is assessed using nationally representative data from the National Survey of Children (henceforth NSC).

CHAPTER 2

GENERAL STRAIN THEORY

Agnew's GST³ is a reconceptualization of the classic strain theories of Merton (1938), Cohen (1955), and Cloward and Ohlin (1960). Those theories maintained that crime results from the inability to achieve the ubiquitous goals of monetary success, middle class status, or both. These classic strain theories have been applied to the two aforementioned sex and crime questions, but the results were unsatisfactory (Agnew & Brezina 1997; Broidy & Agnew 1997; Chesney-Lind & Shelden 1992; Leonard 1982; Messerschmidt 1993; Morris 1987; Naffine 1987). Drawing upon the stress, aggression, and justice/equity research in psychology and sociology, Agnew (1992) developed a general strain theory at the social psychological level. This theory has become a major counterpart to social control and social learning theories (Agnew & White 1992; Agnew 1995). Agnew's GST improves the precision and rigor of the explanatory scheme over classic strain theories and broadens the scope of the motivation to crime (strain) and its application. For example, the theory is now relevant to all social classes rather than to those blocked from middle class status as in the classic strain theories (Jang & Johnson 2003). Additionally, GST diverges from previous strain theories by incorporating affect (i.e., the negative emotions caused by strain) into the strain-delinquency path and by mapping alternate routes that do not lead to delinquent behavior.

Unlike other dominant delinquency theories, GST directs etiological significance to negative relations or experiences as antecedent factors influencing criminal or delinquent outcomes (Agnew 1992, 1995). Strain results when an individual is not treated as she or he would like to be treated (Agnew 1992). Agnew identifies three major types of strain (or negative relations with others). According to GST, an individual experiences strain when others prevent or threaten to prevent her or him from achieving positively valued goals. To be sure, this form of strain is analogous to that conceptualized by classic strain theorists. In GST, however, a positively valued goal can be anything that an individual

³ See Agnew (1992) for a detailed explication of his theory.

desires, and Agnew states that most individuals, particularly adolescents, are concerned with relatively immediate goals, such as going to a ballgame with friends, rather than the long-term goal of middle class status (Agnew 1985, 1992). A second form of strain occurs when others remove or threaten to remove positively valued stimuli, such as the loss of parental warmth or support. The third major type of strain is the presentation or threat of presentation of noxious stimuli. This category of strain includes negative relations with parents, criminal victimization, or other negative life events.

According to GST, individuals experiencing strain may develop negative affective states or emotions, such as frustration, anxiety, or anger. When angry emotional states result, chances for delinquent responses increase (e.g., Agnew & White 1992; Brody 2001). Furthermore, GST states that deviant responses to strain may vary from being escapist (e.g., using drugs), instrumental (e.g. engaging in theft), or retaliatory (e.g. destroying the property of the one who caused the strain) in nature (Agnew 1992).

Agnew acknowledges that individuals experience strains, yet not all individuals engage in delinquent behaviors. Agnew contends that these three types of strain have a cumulative effect on delinquency, such that increases in the number, magnitude, or duration of strains amplify the likelihood that individuals will experience negative emotions such as anger, frustration, and, depression. These negative emotions create pressure for corrective action, and delinquency is one possible response (Agnew 1992). Within the GST framework, delinquency is viewed as a coping response to negative emotions, and recent research finds that youths do indeed utilize delinquency as a coping mechanism and that delinquency may effectively alleviate strain in the short-run (Brezina 1996; 1998). GST recognizes that several non-delinquent responses are possible, and the theory accounts for different rates of crime between certain groups, as well as different risks for delinquency among certain groups, by incorporating both social structural and social psychological factors. While some individuals respond to negative emotions caused by strain with delinquency, others manage negative affective states through cognitive, emotional, or behavioral coping mechanisms (Agnew 1992).

GST maintains that strain is the root cause of delinquent acts and that some individuals respond to negative emotions resulting from strain with delinquency. A major part of the theory, then, involves specifying the conditions under which delinquent responses are more or less likely to occur (Agnew 1992: 70-71). GST postulates that strain is most likely to lead to delinquency when; (a) the constraints to delinquent coping are low, and (b) the individual “has a disposition for negative coping” (Agnew & White 1992: 476). An array of personality and structural factors are posited to influence an individual’s constraints to coping and the disposition to delinquency, such as self-esteem, level of conventional social support, attributions regarding the source of strain, level of self-control and social-control, association with delinquent peers, and cognitive and instrumental problem-solving skills (e.g., Agnew 1992). For example, delinquent friends may augment an individual’s opportunities to engage in delinquent coping, and positively reinforce the choice of a delinquent act (Agnew & White 1992). Supplementing these identified conditioning factors, I contend that an individual’s gender identity also influences the likelihood of an individual’s use of delinquent coping behaviors.

Two principal features of Agnew’s theory make it applicable to delinquency by both sexes. First, GST centers on the cause of delinquency (strain) as a social psychological variable rather than a social structural one. This allows the theory to consider both objective and subjective responses to strainful events, which may or may not lead to negative emotions. Objective strains are defined as “events or conditions that are disliked by most members of a given group,” while subjective strains are “events or conditions that are disliked by the people who are experiencing (or have experienced) them. The subjective evaluation of an objective strain is a function of a range of factors, including individual traits (e.g. irritability), personal and social resources (e.g. self-esteem, self-efficacy, social support), goals/values/identities, and a range of life circumstances” (Agnew 2001: 320-321). Thus, by incorporating both varied emotional responses to strain and coping repertoires available to individuals, the theory allows for an individualized consideration of personal differences, such as sex (Broidy 2001). And, most importantly, GST recognizes that strain is a necessary but not sufficient factor in delinquency.

Because GST acknowledges many factors that follow exposure to strainful events and condition the pathway to delinquency, it can take account of the experiences peculiar to each sex.

A Review of GST

A spate of fairly recent studies have tested aspects of GST, and virtually all tests find a significant, positive relationship between strain and involvement in deviant behaviors. Most tests, however, have not assessed GST in its entirety, primarily because preexisting data sets exclude certain variables, such as the availability of legitimate coping strategies. The paucity of complete tests, notwithstanding, GST has progressed to the “forefront of criminological theory” (Hoffmann & Miller 1998: 83).

Three important patterns emerge from the research on GST. First, in most tests, where strain is operationalized in terms of negative life events and relationships, there exists a significant relationship between strain and delinquency. Not less than nineteen studies have tested for a strain—delinquency relationship, and all have confirmed its presence (Agnew 1985; Agnew & Brezina 1997; Agnew et al. 2002; Agnew & White 1992; Aseltine, Gore, & Gordon 2000; Broidy 2001; Capowich, Mazerolle, & Piquero 2001; Eitle 2003; Hay 2003; Hoffmann & Cerbone 1999; Hoffmann & Miller 1998; Hoffmann & Su 1997; Jang & Johnson 2003; Mazerolle & Piquero 1997, 1998; Mazerolle et al. 2000; Paternoster & Mazerolle 1994; Piquero & Sealock 2000). A second generalization that can be made is that the effects of strain on delinquency are at least to some extent mediated by negative affective states, especially anger but also frustration, depression, and guilt (Agnew 1985, 1993; Aseltine et al. 2000; Brezina 1998; Capowich et al. 2001; Hay 2003; Jang & Johnson 2003; Mazerolle & Piquero 1997, 1998; Piquero & Sealock 2000). Thus, following the GST framework and previous research, I predict:

Hypothesis 1a: For both males and females, measures of strain will be positively related to delinquent outcomes.

The third pattern is less favorable to GST; studies examining the hypothesized conditioning influences on the use of delinquent coping in response to strain have been inconsistent or inconclusive; factors considered to date include self-esteem, self-efficacy, mastery, delinquent peers, social support, self-control, attachment, and sex (Agnew et al. 2002; Agnew & White 1992; Aseltine et al. 2000;

Capowich et al. 2001; Hay 2003; Hoffmann & Cerbone 1999; Hoffmann & Miller 1998; Jang & Johnson 2003; Mazerolle & Piquero 1997, 1998; Paternoster & Mazerolle 1999). Mazerolle and Maahs (2000), however, contend that the failure to identify variables that condition the effects of strain on crime may result from researchers' choice of statistical methods. Rather than utilizing multiplicative interaction terms, Mazerolle and Maahs employ contingency table analysis and find that the effects of strain on individuals' behavioral response is significantly conditioned by association with delinquent peers, deviant propensity, and moral beliefs.

Six recent studies have addressed the role of sex in the GST framework (Agnew and Brezina 1997; Eitle 2003; Hay 2003; Hoffmann & Cerbone 1999; Hoffmann & Su 1997; Mazerolle 1998), following Brody and Agnew's (1997) assertion that GST had overcome the shortcomings of previous strain theories and could now be considered an operable explanation of both female and male criminality. Agnew and Brezina (1997) examined the effects of interpersonal strain, which was hypothesized to be a stronger predictor of female delinquency due to females' alleged greater concern with interpersonal relations than males. Counter to their predictions, however, the authors found that interpersonal strains, while a significant correlate of some types of delinquency among females, was a stronger predictor of male delinquency. Hoffmann & Su (1997) considered the extent to which boys and girls experience negative life events at different levels as well as the extent to which negative life events affect delinquency and drug use similarly. Their results supported the basic GST model, but there was little evidence of sex differences in levels of negative events or deviant behaviors in response to negative events. On the other hand, the author's findings did support their hypothesis that there existed sex differences in response to the strain measures, with such stressful life events predicting female but not male depressive symptoms and drug use when parental support was low. An analogous study by Mazerolle (1998) largely replicated Hoffmann & Su's findings. Mazerolle's analysis, which incorporated multiple measures of strain in predicting property and violent delinquency among respondents from the first two waves of the National Youth Survey, showed that these strain measures failed to predict female involvement in violent delinquency, but did predict male violent delinquency, and that few sex

differences existed in the effects of strain predicting property delinquency. The author suggested that sex differences in GST-related predictors “probably reflect differences in the *degree* to which these influences affect delinquency” (1998: 85, emphasis in original). Hoffmann and Cerbone (1999) considered whether sex moderated the effects of stress on delinquency, and found that it did not.

As aforementioned, this research considers both the status of sex and the identity of gender simultaneously. Conceptual limitations exist when gender identity is analyzed without considering the effect of sex as a social position (Stets & Burke 1996). Gender identity exists at the micro level, as the meanings that persons apply to themselves; on the other hand, sex can be understood a categorical position in the social structure. I expect that males will be more likely to respond to strain with delinquency than females, based on the expectations associated with their statuses as boys or girls. Sex as a status should have an effect on behavior in interaction irrespective of individuals’ identities, as sex as a status “provides a social structurally based signal to which others respond” (Stets & Burke: 216). Individuals bring with them in interaction, not only their self-meanings regarding how they see themselves as members of their group—their gender identities, but also their group memberships, such as male or female. To put another way, being both male and female and seeing oneself as more masculine or more feminine influence behavior in interaction. Therefore, although the empirical evidence is mixed concerning the role of sex in GST, I predict:

Hypothesis 1b: Strain will be a stronger predictor of delinquency among boys than girls, net of other variables.

Hay (2003) examined the relationship between family strains and delinquency, and how such strains may account for the sex gap in delinquency. Specifically, Hay assessed two hypotheses presented by Broidy and Agnew (1997): (a) whether males were subject to different strains than females, with “male strains” being more conducive to delinquency, and (b) whether males and females have different emotional and/or behavioral responses to strain. Hay found that when confronted with family strains, males and females report similar levels of anger, but females report significantly higher levels of accompanying guilt. The study also revealed, not surprisingly, that the combination of family strain and

anger had a more profound effect on male than female delinquency. Hay (2003: 126) suggests that males and females are differentially exposed to factors that condition the response to strain, such that boys have more exposure to factors conducive to the use of delinquent coping, and females have greater exposure to factors that diminish the use of delinquent adaptations. These findings, however, are limited by the study's use of a non-random sample with only a 60% response rate, an exclusive focus on family strains, a measure of trait anger compared to a single-item measure of projected guilt, and a measure of projected future or hypothetical delinquency as the primary outcome variable. Trait measures of anger, as opposed to situational, are problematic because GST posits angry responses to strain to be situational and because dispositional anger may affect how people perceive strain. Stable trait measures of anger may be distinct from the transitory anger that varies across specific incidents. The distinction between trait and situational anger has been a consistent theme in psychological research on hostility, aggression, and anger (e.g., Spielberger 1966; Spielberger et al. 1983)

In a recent study, Eitle (2002) examined the effect of negative life events and gender discrimination on crime and substance abuse in a sample of females. He found that females who perceived that they were subject to discrimination and other strains were more likely to be involved in delinquency than females who reported less strain and discriminatory events.

While the introduction of the sex variable as more than just a control is improving our understanding of sex differences in deviance in GST, I posit that in order to thoroughly appreciate the nature of both male and female crime GST must not only consider factors dependent on individual's sex but also gender identity, which can serve as a self-regulatory function for females and males in delinquent situations. Since numerous researchers have shown that females experience as much or greater amounts of strain than males and rate their strains as more stressful than males, GST cannot explain the sex gap by simply arguing that males are subject to more strains than females⁵ (Broidy & Agnew 1997: 277-278; see also Barnett & Baruch 1987; Barnett, Biener, & Baruch 1987; Bush & Simmons 1987; Compas 1987;

⁵ Indeed, Ross and Mirowsky (2003: 416) identify six principal patterns of stress, including: "(1) women are more distressed than men," "(4) the higher one's SES the lower one's level of distress," and "(6) undesirable life events increase stress."

Gove & Herb 1974; Kessler & McLeod 1984; Kohn & Milrose 1993; LaCroix & Haynes 1987; Mirowsky & Ross 1995; Petersen 1988; Thoits 1982; Turner, Wheaton, & Lloyd 1995; Wagner & Compas 1990). Furthermore, research attests that females experience significantly more anger than males, not less (e.g., Aneshensel 1992; Mirowsky & Ross 1995). If females experience greater amounts of strain and have a higher level of anger than males, an apparent anomaly in GST lies in the fact that males are and always have been involved in a greater amount of crime, particularly aggressive, serious offenses. To understand this apparent anomaly, I suggest that we must examine the cultural construction of masculinity and femininity, contrasting sex roles, and concomitant costs and rewards masculine and feminine individuals face when engaging in delinquency. Within group variation must also be addressed in this manner, as the fact remains that some females do engage in delinquent acts, including serious ones, and many males refrain from such behaviors. By introducing gender identity, the link between the gendered social structural components and behavioral choices and intentions of individuals is made theoretically clearer. I posit that the consideration of gender identity will allow GST to explain the sex gap and female delinquency, which have heretofore haunted criminological theories.

CHAPTER 3

GENDER IDENTITY

Identity Theory

Identity theory (hereafter IT) concentrates on the internal dynamics of self-processes as these affect behavioral choices (Burke 1980; 2003). Identity theorists contend that social structure influences individuals' identities, and these identities, in turn, influence behaviors: people choose behaviors, the meanings of which correspond to their identities (Burke & Tully 1977; Stets & Burke 1994; Stryker & Serpe 1994). Within the framework of structural symbolic interactionism, IT views the self as an organized collection of identities, each of which serves to shape behaviors in social interaction (where, invariably, there are alternative behavioral choices; Burke 1980; Stryker 1980). According to IT, an identity is "a set of meanings applied to the self in a social role or situation, defining what it means to be who one is in that role or situation" (Burke & Cast 1997: 281). In other words, when individuals categorize themselves by naming, classifying, and defining who or what they are, they are said to have an identity. Identities refer to the many reflexive, internalized, positional designations that arise within a social system from the situations, contexts, and relationships in which individuals are involved. These identities are the shared, internalized meanings associated with the positions or roles, *not* the roles themselves (Burke 1980; Burke & Hoelter 1988; McCall & Simmons 1978). Roles and, thus identities, do not stand in isolation but presuppose and relate to "counter-roles" (Burke & Tully 1977; Lindesmith & Strauss 1956), and the meaning of an identity is conveyed by its commonality with one group of persons similarly situated and by its differences from another group(s) situated in counter-positions (Stone 1962: 94).

Identity theorists take as axiomatic that the self is multifaceted, made up of interdependent and independent, mutually reinforcing and conflicting parts (Stryker & Serpe 1994). Adopting James's (1890) vision, the theory maintains that persons possess as many identities as networks of relations in

which they play roles (Stryker & Burke 2000). For example, a woman could have an identity as a mother, a lawyer, a knowledgeable book reader, and a horrible cook. Each of these four identities⁴ correspond to positions this woman occupies in four different relational networks, including her children and fellow members of the PTA, her clients and coworkers, her book club, and those at the soup kitchen where she volunteers, respectively. Multiple identities, such as these, are cognitive schemas organized in a salience hierarchy⁵ (Stryker & Burke 2000). The hierarchy of salience relates to one's situational self, forming the basis for action in interaction. The term salience has a general meaning as well as one tied to specific theoretical frameworks; within IT, *identity salience*⁶ is defined as the probability of enacting a line of action that is consistent in meaning with the identity that is activated or claimed in a situation (Stryker 1968). To put another way, more salient identities are those identities that are more likely to be invoked in a situation, relative to less salient identities (i.e., those lower in the salience hierarchy; Burke 1980; Stryker 1980; 1994). Indicators of the salience of an identity include resistance to abandoning a role despite the availability of alternative advantageous roles and the acquisition of attitudes and behaviors appropriate to a role (Stryker 1994). For example, an academic or student identity is shown to be highly salient when a college student discusses her studies on dates, family holidays, or other contexts where her studies are not especially relevant. IT theorists utilize this salience hierarchy as a means of making theoretical predictions as to which identity will take precedence in accounting for some self-relevant outcome (Stryker 1980). IT postulates that a person is more likely to invoke her more salient identity and, thus, is more likely to act out that identity across situations (e.g., Stryker & Burke 2000). In other words,

⁴ Identities need not be mutually exclusive, and networks of relations may not all be distinct.

⁵ Other identity theories (e.g., McCall & Simmons 1978; Rosenberg 1979) contend that identities are ranked hierarchically in terms of their prominence (rather than salience) "The prominence hierarchy constitutes the ideal self, what is desired or what is seen as central to the self concept," and assumes that "people are self-conscious of more important identities compared to less important identities" (Ellestad & Stets 1998: 642). Essentially, identity prominence corresponds to what the individual values, while salience refers to behavioral choices individuals make in a situation. Prominence is not incorporated in this theoretical extension because here I am less concerned with whether playing out an identity influences the importance of that identity for an individual, but rather, I am concerned with how identities influence behavioral choices.

⁶ The term "salience" is used, rather than "importance," "prominence," or "psychological centrality" (also see fn 9) to play its theoretical role in IT because these alternative conceptions generally indicate what a person regards as desirable or preferred from his or her own point of view. That is, the latter terms assume a level of self awareness that is not inherent in salience. "People need not be directly aware of the salience of their identities. Furthermore, we believe that identities viewed negatively by persons who hold them can be powerful determinants of those persons' behavior, as can identities to which persons themselves ascribe little importance" (Stryker & Serpe 1994: 19).

the higher the salience of an identity, the greater the likelihood of behavioral choices in line with that identity.

The relevance of identity salience to behavioral outcomes, such as the amount of discretionary time one devotes to a role or activities related to a given role, is well-established (e.g., Serpe & Stryker 1993; Stryker & Serpe 1982). The relative salience of identities is a function of commitment to the roles to which the identity is attached. *Commitment*, within IT, represents the connections that one has to others because one has a particular identity (Stryker 1968). Stryker delineated two aspects of commitment: *extensiveness* and *intensiveness*. The extensiveness aspect corresponds to the number of others to whom one is connected based on a given social identity. The other aspect, intensiveness of commitment, has to do with the strength or depth of the commitment to those others. Commitment may also be thought of as the social and personal costs entailed in no longer fulfilling a social role based on a given identity (Stryker 1968; 1980; 1994; Stryker & Serpe 1994). For example, by losing more intensive and numerous social attachments when an identity is given up, one incurs greater cost. Thus, using the above example of the mother/lawyer, IT would predict that her identities of mother and lawyer would be more salient than avid book reader or horrible cook if (as we would expect) the number and strength of the social ties this woman has due to the former two identities are greater than those associated with the latter two identities.

Another core cognitive process in IT is *self-verification*, or seeing the self in terms of the role as embodied in the identity standard (the internalized representation of a social role including the meanings and norms that an individual associates with that role; Burke 1991; McCall & Simmons 1978). Self-verification occurs when a person behaves so as to maintain consistency with his or her activated identity standard (Burke 1991; Swann 1983). An identity includes two important aspects: one's identification with a category and the internalized representations of behaviors that are socially associated with that category. People, as social beings, realize the structural categories and concomitant expectations and act in accordance with that knowledge because socially defined meanings (or the commonly recognized expectations associated with social categories) are incorporated into one's identity standard (Burke 2003).

The question remains as to why and in what contexts individuals act in consonance with socially defined role expectations. Recent extensions of IT focus on the internal processes resulting from self-verification and highlight the function of emotions as motivating factors to behaving in harmony with role expectations (Burke 1991). This research follows the widely endorsed finding that people feel efficacious and good when they are able to verify themselves (Baumgardner, Kaufman, & Levy 1989; Bohrnstedt & Felson 1983; Brown, Collins, & Schmidt 1988; Chassin & Stager 1984; Elliott 1986; Gecas & Schwalbe 1983; Higgins 1989; Moretti & Higgins 1990). Work by identity theorists indicates that the self-verification process activates emotional responses (Burke 1991; Burke & Stets 1999; Stets 1997). Negative emotional results attend the lack of self-verification,⁷ while self-verification leads to positive emotional responses. Individuals are thus motivated to behave in line with their identity standard to avoid negative emotions, such as depression and distress, and augment self-esteem and self-efficacy, which have been shown to follow verification (Burke 1991; Burke & Stets 1999). In this way, negative affect following the lack of self-verification, or consonantly, positive feelings will signal the salience of an identity to an individual (McCall & Simmons 1978). To put the above in slightly different terms, because these internalized meanings and expectations are the self, people defend them against change and misinterpretation. For example, a girl who defines herself as masculine and sporty would counteract any attribution that seemed to indicate she is feminine and fragile. Further, when individuals get feedback that is discrepant with the meanings held in their identity standards, they feel bad. Thus, emotional and behavioral responses transpire in response to internal and external signals of self-discrepant feedback (Cast & Burke 2002).

Since people are embedded in multiple role relationships and hold multiple identities, situations emerge where alternative identities can be invoked. In such contexts, the more salient identity will be invoked for emotional reasons just mentioned (Stryker & Burke 2000).

⁷ The lack of self-verification includes identity standard violation, which refers to an individual acting in a manner that is either implicitly or explicitly proscribed by their activated identity's standard, and identity standard preemption, which is failing to engage in a behavior that is proscribed by their activated identity's standard. An additional form of lack of self-verification occurs when a salient identity is threatened by others (e.g., when persons do not support an individual's role performance).

In sum, IT postulates that individuals choose behaviors that verify their identities; identities that are more salient to an individual are more likely to be invoked in a situation in order to avoid negative affect; and, this cyclic process simultaneously sustains the individual and the social structure. Identities influence behavioral choices in two primary ways: (a) the more salient an identity, the more sensitized an individual is to stimuli that may offer a chance for identity verification in interactions, and (b) individuals are constantly faced with alternative behavioral options in interactions and choose the action or inaction that verifies their more salient identity (e.g., Burke 1980; Burke & Stets 1999; Stryker & Burke 2000; Stryker & Serpe 1994).

Gender Identity

Gender identity is defined as the degree to which persons see themselves as masculine or feminine given what it means to be a male or female in society (Burke et al. 1988; Burke & Cast 1997; Spence 1985). Femininity and masculinity are rooted in the social rather than the biological, and because these are social definitions, it is possible for an individual to be female and see herself as masculine or male and see himself as feminine (e.g., Burke et. al. 1988). Gender identity⁸ involves all of the meanings that are applied to oneself on the basis of one's gender identification and, as an identity, is a source of motivation for gendered behaviors (Burke 1980; 1988; 1989). For example, a person with a more salient masculine identity should act more masculine, that is, engage in behaviors whose meanings are more masculine (Burke 1989), such as behaving in a more dominant, competitive, and autonomous manner (Ashmore et al. 1986).

Girls and boys are exposed to social roles and expectations attached to their sex through social situations and ongoing interactions (Katz 1986). Research suggests that by the age of three, a child can apply the labels "boy" and "girl" to his or her self, and by age six, the child recognizes that her sex will not change despite changes in age or outward appearance (Kohlberg 1966). Although individuals draw upon the shared social conceptions of what being a male or female means and entails, persons vary in the

⁸ It is necessary to distinguish gender identity from other gender-related concepts, such as gender roles (shared expectations of behavior given one's gender; Eagly 1987), gender stereotypes (shared views of personality traits often tied to one's gender; Spence & Helmreich 1978), and gender attitudes (views of others or situations commonly associated with one's gender, such as males thinking in terms of competition and females thinking in terms of care; Gilligan 1982); however, gender roles, gender stereotypes, and gender attitudes influence, but are not tantamount to, one's gender identity (Katz 1986; Spence & Sawin 1985).

extent to which they imitate archetypal masculine or feminine cultural models. A girl may label herself female, but instead of seeing herself in a stereotypically female manner, such as being nurturing, warm, or expressive (West & Zimmerman 1995), she may identify with masculine qualities (e.g., instrumental, competitive, dominant; West & Zimmerman). The point is that an individual's gender identity is located along a bipolar masculine-feminine continuum; it is an individual's positioning of himself or herself on this continuum that is his or her gender identity (not his or her sex) (Burke 1989). Since individuals' gender identities are self-meanings, they cannot be directly observed; rather they must be inferred from expressions and behaviors in which people engage (Burke & Tully 1977). Following IT's conceptualization of gender identity, I predict:

Hypothesis 2: More boys than girls have a masculine gender identity, and, more girls than boys have a feminine gender identity.

Identity theorists conceive of gender identity as a *master identity*, or as an identity that applies to the self across situations, rather than a *situated identity*, a set of meanings that are tied to particular situations or contexts (Stets & Burke 1996). Research supports this intuitive belief about the relevance of gender in social interaction; for example, Gecas and associates (1973) found gender to be the most salient social identity for both male and female adolescents in their cross-cultural study. This conception of gender identity is consistent with the notion that "doing gender" is unavoidable (West & Zimmerman 1987).

Due to the fact that in our society sex roles are dichotomous, the meanings attached to masculinity and femininity are necessarily contrastive (e.g., Burke 1989; Burke & Hoelter 1988; Burke & Tully 1977). Gender identities, therefore, are predicated on ostensible similarities and differences between the female and male role in society (Burke 1991). Indeed, masculinity and femininity are negatively related when individuals are asked to judge themselves based on the self-descriptors "masculine" and "feminine" (Burke & Tully 1977; Spence 1993). Furthermore, research indicates that

most individuals think of gender identity as a bipolar construct; that is, being masculine is not being feminine (Storms 1979).⁹

Following the principles of identity theory (and semantic congruency), people choose behaviors that have the same meanings as their self-meanings or identity standards; unlike situational identities, for most persons gender identity is activated frequently and in a wide array of situations. Thus, individuals with more feminine identities choose more feminine behaviors, when possible, and, avoid more masculine behaviors. In the same vein, individuals with more masculine identities select more masculine behavior and avoid more feminine behaviors. In this way, IT can be employed to explain the two primary questions concerning sex and crime. Masculine scripts do not explicitly proscribe most forms of delinquency and, in some situations, prescribe delinquent acts. More feminine individuals, on the other hand, are constricted from such behaviors as they are inconsonant to femininity.

Gender Identity and GST

Two problematic trends characterize much research on sex differences in crime. First, when sex is the focal aspect of criminological research, similarities in criminal and delinquent behaviors between the two categories are invariably ignored or misrepresented (Messerschmidt 1997). Studies that have not ignored sex patterns notice strong correlates in the etiology of male and female crime (e.g., Gottfredson & Hirschi 1990; Steffensmeier & Allan 1996). Mears and colleagues (1998: 263) write, “What differs between the sexes, it seems, are not the *generative* factors that give rise to delinquency, but rather the *inhibitory* factors that prevent or counteract it.” For example, adolescent male and female offenders have analogous social backgrounds; they are characterized by low socioeconomic status, poor education, and disproportionately minority status (e.g., Chesney-Lind & Shelden 1994; Denno 1994; Steffensmeier &

⁹ At this juncture, one might believe that IT’s conception of gender identity is tantamount to the idea of “doing gender.” Although “doing gender” shares certain assumptions regarding sexed expectations and behaviors with gender identity, and, as previously noted, behavioral concomitants of gender identity are in consonance with “doing gender,” their explanations of gendered actions are not synonymous. Three principle aspects of identity theory differentiate it from the idea of “doing gender.” First, while both IT and “doing gender” recognize that opportunities and resources for enacting gendered behaviors vary across individuals and situations, IT incorporates the concept of identity salience to explain the variation in males’ and females’ propensity to engage in gender-appropriate behaviors holding opportunities and resources constant (e.g., Stryker & Burke 2000). Second, IT explicates the reasons why individuals chose to act in accord with gendered scripts—negative emotions accompany both behaviors that deviate from one’s gender identity script as well as the failure to verify an identity that is contextually activated (Burke 1990). Lastly, in contrast to the propositions of “doing gender,” IT explains how internalized socially prescribed sex roles, or self meanings, vary between individuals, i.e. with the identity standard.

Allan 1995; 1996). Furthermore, patterns of delinquency across sex are parallel and stable.

Criminologists find that across time or across crime categories, male rates predict female rates of crime, thus, providing indirect evidence for similarities in the etiology of male and female crime (Steffensmeier & Allan 1996; 1988; Steffensmeier & Streifel 1992).

A second problem in much research on sex and crime is associated with sex-role theory. A summary definition of this theory is that biology plus sex norms results in male crime (Steffensmeier and Allan 1991; see also Andersen 1988; Connell 1987; Edwards 1983; Lopata & Thorne 1978; Shover & Norland 1978; Steffensmeier & Allan 1991; 1995; 1996; West & Zimmerman 1987; 1995). This perspective masks individual choice and agency and ignores differences in socialization, adherence to ascribed sex roles, and individuals' conceptions of the expectations associated with the sex categories. The explanatory power and validity of sex-role theory is stifled by biological reductionism and "gender invariability." Messerschmidt (1997) notes that theories that point to innate differences between males and females as the catalyst for the sex ratio in crime are simply specious. Ignoring the within sex variability in identification with sex roles will only render theories inept. Insofar as theories of crime and delinquency fail to incorporate within sex variation and/or impute biogenic differences between males and females as primary causal factors in crime, sex will remain the strongest predictor of crime, while the processes by which these divergent behaviors are manifest will remain largely inexplicable.

Criminologists have long recognized that most forms of delinquency are deemed masculine, particularly those that are violent and aggressive in nature (e.g., Campbell 1993; Messerschmidt 1993). Shover and associates (1979: 163), for example, write: "Feminine behavior is viewed as the antithesis to criminality." Unlike sex-role theory, identity theory does not artificially polarize the sexes. When gender is conceptualized as an identity, we examine the meaning of male and female when they are reflexive and how this self-meaning—rather than ascribed expectations—guides behavior in interaction. Incorporating IT's conceptualization of gender identity into GST will allow for the consideration of within sex variation and the motivation for choosing a delinquent coping response to the negative emotions resulting from strain as well as the type of delinquent behavior, if so chosen.

The sex gap in delinquency can be explained in this way: the experience of strainful events generates negative emotions, and delinquency is one possible response (Agnew 1992). Males are more likely to respond to strain with delinquency than females, as more males than females have a masculine identity. Masculine individuals are more likely to cope with strain with delinquent behavior because some delinquent behaviors verify their identities as masculine (such as violent retaliation in response to being picked on by their peers; Coleman 1990: 196), while other delinquent behaviors, while not explicitly proscribed, are not proscribed by their gender identity (Messerschmidt 2000). For example, some forms of petty theft do not necessarily verify masculinity but are not violative of masculine expectations. For females, in contrast, more of whom have feminine identities rather than masculine identities, most delinquent behaviors contravene the social directives for femininity, and engagement in such behavior by females leads to more severe public and private censure for girls than for boys. Indeed, as Denno (1994: 86) notes, because crime is associated with “maleness,” society deems females who engage in criminal behaviors to be “doubly deviant—defying both the law and their gender roles.”¹⁰ A simple example of this is illustrated in the sexed social responses to physical fighting or aggressive bullying; when boys engage in such behavior, persons often comment that “boys will be boys,” but responses to such behaviors by girls are not generally analogous to “girls will be girls.”

The proposed model explicates within sex variation by differences in the salience, content (the internalized meanings and expectations), and the direction (masculine or feminine) of persons’ gender identities. Again, salience is the readiness to act out an identity in a situation. Individuals with a more salient feminine gender identity are more likely to seek situations and engage in behaviors to verify this

¹⁰ This position for female offenders was recognized as early as the turn of the century when Lombroso & Ferraro (1895: 151-152) wrote, “[T]he born female criminal is, so to speak, doubly exceptional, as a woman and as a criminal. For criminals are an exception among civilized people, and women are an exception among criminals. . . . As a double exception, to her sex and to criminality, the criminal woman is consequently a monster. Her normal sister is kept in the paths of virtue by many causes such as maternity, piety, weakness, and when these counter influences fail, and a woman commits a crime, we may conclude that her wickedness must have been enormous before it could triumph over so many obstacles.” This perspective towards female offenders has persisted; Wilson & Herrnstein (1985: 117) note, “If aggression or its antisocial expression is stronger in the average male than the average female, then females would be less likely to pass over the threshold into criminal behavior and, when they did, they would be more atypical, or deviant among women than male offenders are among men.” Steffensmeier and Allan (1991: 71) conclude that because society places stricter cultural constraints on female behavior in general, females who become delinquent or violent appear to deviate more significantly from the norm than their male counterparts; thus, females who decide to engage in crime, “must traverse a greater moral and psychological distance than males.” (see also Baskin et al. 1993: 402; Coughlin 1994: 3; Erickson & Murray 1989: 135-136).

identity than those whose gender identities as feminine are less salient; in this way, the former girls would be considered “more feminine.” These girls are less likely than those girls who are feminine to engage in masculine behaviors or other actions that violate the expectations attendant to the female role.¹¹ Males with a feminine gender identity are less likely to choose aggressive delinquent behaviors in response to strain, than their counterparts with masculine identities, because such behavior would be at odds with their feminine identities. Males with more salient masculine gender identities, when choosing a coping response to negative emotions caused by strain, are not only unconstrained by their gender identity from engaging in most delinquent behaviors, but also, delinquency may in some cases verify their masculinity.¹² Females, with a masculine gender identity, are less likely to avoid delinquent coping strategies than feminine females for the same reasons.¹³

Socially constituted behavioral scripts for being female tabu delinquent behavior; thus, girls and boys whose identities as feminine are more salient are less likely to engage in delinquent behaviors. Thus, I hypothesize that both the salience and direction (masculine or feminine) of individuals’ gender identities condition the response to strain. More formally:

Hypothesis 3: More masculine individuals have a higher expected count of delinquent behaviors in response to strain than the more feminine individuals, net of other factors.

Hypothesis 3a: Girls with a more masculine identity are more likely to engage in delinquent acts in response to strain than girls with more feminine gender identity.

Hypothesis 3b: Males with more masculine identities are more likely to engage in delinquent acts in response to strain than boys with more feminine gender identities.

¹¹ Research on gender roles in females supports this assertion. For example, Kogut, Langley, and O’Neal (1992) conducted an experiment investigating the extent to which gender role masculinity is related to the degree of women’s angry retaliation, as well as whether the hypothesized relationship between gender role masculinity and anger was mediated by gender role differences in reactivity to provocation or to differences in the labeling and rating of anger. Using Spence and Helmreich’s (1978) Personal Attributes Questionnaire (PAQ) to measure the women’s gender role masculinity, the authors found that high masculine subjects were more aggressive than low masculine subjects. Notably, masculinity was unrelated to the labeling or rating of anger. Kogut et al. concluded that gender role masculinity is not implicated in the labeling or degree of an angry response to provocation, but, rather, gender roles influence the way individuals respond to anger. To put another way, the authors suggest that those subjects low in gender role masculinity are constrained by socialization influences from aggressively responding to anger-provocations and are more likely than those higher in gender role masculinity to “deal with their anger in a way more socially acceptable than acting out” (367).

¹² As aforementioned, identity verification is accompanied by positive emotions, which may alleviate the negative emotions resulting from strain, while the lack of identity verification leads to negative emotions (Burke 1991).

¹³ While this explication may seem convoluted, the reason for this is that while individuals with masculine identities are more likely than those with feminine identities to engage in delinquency, individuals’ sex must still be considered, as due to the aforementioned reality that gender identity cannot be directly observed, societal responses to delinquent behavior are still sexed.

Examining offending behavior by type, one finds that some types of crime are more dominated by males than others (e.g., Mazerolle et al. 2000). So while girls do appear in all categories of delinquent behaviors, they appear much less frequently in some categories than others (e.g., Steffensmeier & Allan 1996). This proposed criminological model suggests that the reason for the variation in the sex gap across different offense types is that some forms of delinquent behaviors are not as incongruent with the behavioral scripts of femininity. For these delinquent acts, including running away, substance abuse, and certain statutory offenses, we would not expect gender identity to have as strong an impact or as copious a sex difference as those delinquent acts that society considers more “serious” and masculine, such as physical violence, damaging property, or acts that endanger the lives of others. These latter acts starkly contravene the expectations and prescriptions of femininity (e.g., nurturance, caring for others, and passivity; Gilligan 1982; Kimmel 2004). For feminine individuals, verifying their gender identities either “preempts delinquent involvement or directs it into scripted paths” (Steffensmeier & Allan 1996: 481). In contrast, as Agnew (2001: 343) writes, “crime is frequently used... to accomplish masculinity.” In other words, in some contexts delinquency provides both a means for individuals with masculine identities to cope with strain while verifying their gender identities. Thus, the final predictions, again holding strain constant, are as follows:

Hypothesis 4: The conditioning effect of gender identity on strain will be a stronger for the more serious (i.e., masculine) forms of delinquency than those delinquent acts deemed less serious by society.

CHAPTER 4
RESEARCH ON SEX, GENDER, AND CRIME

Male and Female (Sexed) Patterns of Crime

Historically, female crime has not been considered a social problem. Males were considered the “real” offenders and their offending was the focus of the criminological enterprise (Belknap 2001). There is, however, method behind this “malestream” focus of criminology, as Naffine (1987: 1) states, “[p]erhaps the least contentious proposition one can advance within the discipline of criminology is that women are more law abiding than men.” Arrest, self-report, and victimization data consistently show that men and boys commit significantly more crime, both serious and not, than women and girls (e.g., Canter 1982; Steffensmeier & Allan 1996). Additionally, evidence suggests that males are generally more aggressive than females (Hoyenga & Hoyenga 1993), even before the preschool years (Maccoby & Jacklin 1980). While a comprehensive presentation of the sexed patterns of offending is out of the scope of this paper, a compendious overview of these patterns is provided.¹⁴

Patterns of offending for males and females “are notable both for their similarities and their differences” (Steffensmeier & Allan 1996: 460). In examining different offense types, arrest and self-report data reveal that both males’ and females’ criminal involvement are dominated by minor crimes, such as property and drug offenses. Examining the categories of offenses for which American youth are arrested, the Uniform Crime Reports (UCR) show that of the 1.3 million youth arrested in 2001, less than 5% of these arrest were for the serious, violent offenses of murder, rape, robbery, and aggravated assault (FBI 2002: 240). Males do, however, offend at much higher rates than women for all crime categories except prostitution and running away (Chesney-Lind 2004; Steffensmeier & Allan). Furthermore, the sex gap in delinquency and crime is greatest for serious offenses and least for mild forms of lawbreaking (e.g., Steffensmeier & Allan). Indeed, data from the UCR on youth show that while the overall ratio in

¹⁴ See Steffensmeier and Allan (1996; 1991) for a comprehensive presentation of female and male patterns of offending.

male—female arrests is 4:1, the gap amplifies for serious property crimes (11:1) and violent crimes (9:1). And for larceny theft, which is often considered a “female crime,” (e.g., the female shoplifter), the arrest ratio (3:1) suggests that it too is primarily perpetrated by males (FBI 2002).¹⁵

Of course, research on sex differences in the correlates of delinquency vary according to different samples and methodological techniques. In general, results consistently show, with a few exceptions,¹⁶ that the etiological factors related to delinquency among males are also influential in females’ delinquency. According to Steffensmeier and Allan (1991: 71):

[g]roups or societies that have high male rates of crime also have high female rates, whereas groups or societies that have low male rates also have low female rates. Over time, when the male rate rises, declines, or holds steady across a specific historical period, the female rate behaves in a similar fashion. This suggests that the rates of both sexes are influenced by similar social and legal forces, independent of any condition unique to women.

In sum, both males’ and females’ delinquent offenses are dominated by minor crimes; the predictors of delinquency for males and females are analogous; and available evidence suggests that for minor crimes there are few sex differences in the commission rates but for more serious offenses, sex differences are manifest.

Gender Roles and Delinquency

A belief in the relationship between masculinity or maleness and offending has a long history in criminology. Early research assumed that criminal behavior was a sex (i.e., biological), not gender, trait (Belknap 2001). For example, Lombroso and Ferraro (1895: 33) posited that a woman exhibiting criminal tendencies “is not only an abnormal woman, she is biologically like a man.” Over time, with the influence of sociological theories, the belief that males and females engage in different types of offending because of learned gender differences became widely accepted. For example, Cohen (1955) suggested that males become delinquent in masculine ways, while females engage in typically feminine delinquencies. In the early 1970s, several criminologists emphasized an affinity between characteristics

¹⁵ Notably, status offenses, particularly “running away,” play a much larger role in girls’ than in boys’ arrests, despite the findings from self-report studies that report no evidence of greater female involvement in status offenses; see Chesney-Lind & Pasko (2004) for a comprehensive overview of the role of status offenses in girls’ arrests.

¹⁶ For example, some evidence suggests that some minor physical anomalies may be associated with hyperactive behavior among boys but not with hyperactive behavior among girls. The bases of such differences could be attributed to biological factors (e.g., different hormonal or central nervous system structures) or socialization processes that accentuate behavioral problems among boys but inhibit them among girls (Waldrop 1976: 113).

shared by stereotypical images of masculinity and specific types of delinquent behaviors. Oakley (1972), for example, suggested that both delinquency and masculinity share several important characteristics, such as aggressiveness and forcefulness. More masculine people were thus expected to be more involved in delinquency—a masculine activity—than less masculine persons; this framework was deemed the “masculinity hypothesis.” Jaskell and Yablonsky (1974: 67) summarized this perspective: “Since men are expected to be aggressive, males are more likely to be delinquent than females, who are expected to adopt a more passive role.”

Studies conducted in the seventies on the relationship between masculine traits and delinquency produced inconsistent results and only a paucity of support for this masculinity hypothesis (Shover et al. 1979). Support was found in ethnographic studies of adolescents, which described female delinquents as engaging in serious, violent behaviors and in other ways that seem contrary to traditional stereotypes of femininity (Miller 1973; Adler 1975). Regrettably, such research often infers gender orientation from observed behavior when rigorous, independent measurement is actually obligatory. Other research measured masculinity independently of involvement in delinquency, although much of this work was conducted on single-sex samples. Schwartz and Stryker (1970) inspected the relationship between adolescent males’ delinquency potential and their stereotypically masculine traits. Their results did not support the masculinity hypothesis. In their study of college women, Eve and Edmonds (1978) measured masculinity with characteristics such as assertiveness, self-reliance, and leadership. They found a positive relationship between their measure of masculinity and a composite measure of joyriding, shoplifting, and drug use.¹⁷

Two studies of women in prison compared to non-incarcerated controls provided tentative support for a link between sex roles and crime. Widom (1979) found no difference between the women in prison and controls on measures of self-concept, masculinity, or personal autonomy. A difference was reported, however, between the two groups with the nonoffender group scoring significantly higher on the

¹⁷ Too few of the women in Eve and Edmonds (1978) study reported aggressive behaviors, which are more prototypical masculine behaviors, to allow for an examination of this form of behavior.

femininity scale; femininity was defined as affectionate, loyal, sympathetic, sensitive to the needs of others, understanding, and compassionate (371). In an earlier study, Cochrane (1971) found his sample of women in prison had a “more masculine value system” than the female control group of nonincarcerated women.

In one of the few studies of both sexes conducted during this period, Gold and Mann (1972) found limited support for the hypothesis that masculinity is associated with delinquency, although their operationalization of masculinity departs a great deal from measures commonly utilized. The construction of their measure of masculinity involved presenting respondents with several body images ordered from “clearly feminine to clearly masculine”¹⁸ and instructed them to identify the image that most closely resembles (a) their own body images and (b) their choices for the ideal male and female. The measure consisted of the “joint discrepancies between the image most like their own and the body images of the ideal boy and girl” (1972: 468). In a study more in line with the theoretical focus on sexed personality characteristics, Cullen et al. (1979) examined both sexes in a sample of college students. The authors operationalized masculinity as self-ratings on the following characteristics: aggression, independence, objectivity, dominance, competitiveness, and self-confidence. For males and females, a statistically significant positive relationship existed between masculinity and violent, property, and status offenses. In contrast to Eve and Edmonds’s study (1978) they found no relationship between masculinity and drug offenses. In summary, early research examining the relationship between masculine characteristics and delinquency suggested no consistent pattern between the two.

The theoretical research examined above posited a *direct* relationship between masculinity and involvement in delinquent behavior. Due to the absence of strong support for a direct link, more contemporary research has empirically examined an *indirect* relationship between gender roles and/or masculinity and delinquency. In a noteworthy study examining the link between traditional gender roles and delinquency, Shover, Norland, James, and Thornton (1979) assessed two competing interpretations:

¹⁸ While I have not examined the body images used in their study, the use of body images would seem to measure, at least to this author, biological maleness and femaleness rather than masculinity or femininity per se.

masculinity theory, with its assumption of a direct link between masculinity and delinquency, with opportunity theory, which posits that gender roles are related to delinquency indirectly through the effects of opportunity, attachment to conventional others, and belief in the legitimacy of rules. Using a non-probability sample of 1002 high school students and path analytic procedures, the authors found more support for an indirect relationship between traditional sex roles and delinquency through attachment and belief than a direct relationship as predicted by masculinity theory. The authors concluded that identification with stereotypical gender role expectations does not directly but rather indirectly affects involvement in delinquency. Additionally, Shover and colleagues found that traditional feminine role expectations were more powerful predictors of juveniles' attachment and beliefs than masculine expectations.

Horwitz and White (1987) assessed the influence of gender identity on delinquency and rates of psychological distress among a representative sample of adolescents. These authors found that both males and females with masculine identities displayed relatively low rates of distress as well as alcohol and drug problems. For males, identification with masculinity and rejection of femininity was associated with high rates of delinquency; in contrast, identification with femininity and repudiation of masculinity among females was related to expressions of psychological distress and low rates of delinquency. The results, however, only faintly supported their hypothesis that identification with traits associated with the opposite sex will produce the pathologies associated with the opposite sex (distress for females and delinquency for males). In accord with other research, the influence of gender identity on styles of pathology among these adolescents increased over the course of adolescence. Horwitz and White conclude: "Gender identity appears to be a factor that pushes people to acting out or to internalized behavioral styles" (167). The authors did not, however, examine prototypical "feminine acting out behaviors," such as eating disorders or verbal relational aggression among peers. Additionally, the measure of gender identity they utilized, the PAQ¹⁹ is limited to self-identification with traits presumed to

¹⁹ The PAQ (Personal Attributes Questionnaire; Spence & Helmreich 1978) consists of 24 abstract trait dimensions, or descriptions of dispositional properties that make no reference to overt behavior or to the situations in which these dispositions

be associated with masculinity and femininity, and does not include gendered behaviors or role performances.

In recent years, the sex gap in delinquency has been analyzed from a symbolic interactionist framework. Two lines of research are particularly relevant. Heimer (1996; Heimer & DeCoster 1999) advanced Matusueda's (1992) interactionist theory of delinquency, while Ford et al. (2001) approached the sex and crime questions with Higgins's (1987; 1996) self-discrepancy theory.

Heimer (1996), building on symbolic interactionism and research on sex differences in interaction, specifies a theoretical model of delinquency, which she calls "differential social control." The author asserts that traditional sex role definitions "are acquired and incorporated into the self (the 'me') through role-taking and then serve to regulate behavior, just as do attitudes about rules/laws and other types of attitudes and values" (56). The consequences of adolescents' sex role definitions, she finds, differ for males and females. For the females in her study, internalizing traditional sex role definitions reduced delinquency, in tandem with negative attitudes towards deviance and consideration of the social consequences of offending. Accepting sex role definitions had only trivial effects for law violation among the boys in the study. An attendant finding was that the adolescents' sex role definitions were determined, in a large part, by social-structural locations, with family income being negatively related to the acceptance of these definitions. Heimer (1996: 53) concluded: "The important finding here is that internalizing [sex role] definitions reduces the chances of delinquency by girls, presumably because such behavior is inconsistent with traditional images of femininity."

Heimer and DeCoster (1999) examined variation in violent delinquency across and within sex groups. Their model incorporated definitions towards violence as well as arguments about traditional sex role definitions and sex differences in the role of familial controls and peer influence; the authors also

are manifested. The PAQ presents a series of adjectives and phrases for self-report ratings on Likert-type scales (5-point bipolar scales) and consists of 23 male-valued, 18 female-valued, and 13 sex-specific items. In content, the male-valued scale contains socially desirable traits that are stereotypically more characteristic of males than females and refer to self-assertive, instrumental attributes. The female-valued scale consists of socially desirable traits that are stereotypically more characteristic of females and refer to interpersonally-oriented expressive qualities. Factor analyses of the data from males and females from several populations yield a two factor solution that confirms the assignment of items to the male-and female-valued scales (Spence & Helmreich 1980).

included how these processes are conditioned by individuals' structural positions. The authors' findings supported their theoretical model, such that cultural practices, sex definitions, and structural positions consolidate to affect violent delinquency in different ways across sex, and that these factors account for approximately 76% of the observed sex gap in violent delinquency in their sample. Their argument that females' violence is controlled through a more subtle and indirect process (emphasizing the meaning and expectations of the female sex role), while males' violence is controlled through more direct forms of control was supported. Heimer and DeCoster (1999: 303) conclude, "girls are less violent than boys mainly because they are taught . . . that violence is inconsistent with the meaning of being female."

The import of Heimer's studies (Heimer 1996; Heimer & DeCoster 1999) on the present research is limited by the measures of gender definitions and delinquent outcomes that were employed. The measure of gender definitions incorporated only four questions concerning individuals' beliefs about appropriate roles for men and women. This author is aware of the difficulty in constructing superior measures of aspects related to individual's masculinity and femininity in large, secondary data sets. However, the fact that the measure incorporated only four questions inquiring into adolescents' views about appropriate roles for adult men and women, excluding beliefs about how their gender identity affects their current expectations, role performances, and behaviors, hampers the studies' generalizability. Further, although most (if not all) forms of delinquency are more inconsistent with the sex roles for females than males, specific delinquent behaviors do vary in the degree to which they are inconsistent with femininity and masculinity. The measure of delinquency employed in these two studies, however, lumped all delinquency acts into one category, thus the manner in which traditional gender definitions affected specific delinquent behaviors, which are more or less inconsistent with the expectation for females and males, was ignored.

Using a convenience sample of male and female college students, Ford et al. (2002) examined the anticipated emotional consequences (such as guilt, shame, and self-contempt) of violating sex role norms in delinquent situations as a function of the extent to which sex roles were internalized. The authors asked respondents to imagine performing delinquent acts that differed in the degree to which they are

inconsistent with socially defined²⁰ sex roles. This allowed the authors to assess the veracity of Heimer's (1996) conclusion that beliefs in traditional sex role definitions inhibits delinquency for females but has no effect on males' delinquency. In support of their hypotheses, Ford and colleagues found that males and females anticipated experiencing more negative affect upon engaging in delinquent behaviors socially defined as more inconsistent with the expectations for their sex than those less inconsistent. Further, for both males and females, high sex role norm internalizers anticipated experiencing greater negative affect when performing delinquent behaviors high in sex role inconsistency than low sex role internalizers. Finally the authors found no difference between high and low sex role internalizers in their anticipated self-evaluations after performing delinquent acts low in sex role inconsistency. This study, while limited by a nonrandom sample and the assessment of anticipated emotional responses to the imagined performance of delinquent behavior, has two aspects that are consequential for the present research. First, by varying the degree to which delinquent behaviors violated sex role norms while holding constant the perceived seriousness of the acts, the authors demonstrated affective consequences of anticipated discrepancies between a specific delinquent behavior and sex roles "above and beyond anticipated discrepancies between delinquency and more general norms of acceptable conduct" (209). Second, by altering the degree of sex role inconsistency in delinquent behaviors, the study was able to test for the affective consequences of anticipated discrepancies between delinquent behaviors and sex norms distinct for males and females.

In sum, research on the existence of a relationship between gender roles and/or masculine and feminine traits on delinquency has been conducted on a variety of samples utilizing a variety of methods, yielding limited and inconsistent empirical support. Recent research examining the indirect effect of sex roles or masculinity and femininity on delinquency through a host of variables derived from traditional theories has yielded more consistent support for such a link, but such research is also plagued by erratic results.

²⁰ The degree to which specific delinquent behaviors are inconsistent with sex roles for males and females was determined by ratings conducted by the participants.

CHAPTER 5

METHOD

Data

This study utilizes data are from the second wave of the National Survey of Children (NSC), which focuses on the well-being of children. The NSC is a three-wave, nationally representative survey of U.S. children ages 7 to 11 when first interviewed in 1976. Black children were oversampled and constituted about one-fourth of the initial sample. The second wave was performed five years later in 1981, comprised of a subsample of the wave 1 children, with children in high conflict or disrupted families being oversampled. Interviews were completed with 1,423 children, or 82% of those selected for participation. Despite a nontrivial attrition rate between the two waves, the observed timing of key events in the adolescent life course—including dropping out of school—in the NSC is quite similar to that observed in other data sets (Moore & Gleib 1995). Interviews were also conducted with the child’s main teacher and the “parent who would be most capable of providing information about the child,” usually the mother (Furstenberg et al., 1983). The wave 2 data are weighed to constitute a national sample of children aged 12 to 16 in 1981 (see Furstenberg et al., 1983; Zill et al., 1992, for more sample information). The NSC has advantages over other possible data sources, such as the National Longitudinal Study of Adolescent Health (Add Health; Bearman, Jones, & Udry 1997), for exploring the proposed theory, because the NSC is a population-based study, and, thus, it does not by design exclude adolescents who had dropped out of school by the initial interview. The NSC is particularly well-suited for this test of GST, because it contains measures of strain, gender identity and delinquency as well as a rich battery of information on family resources and the nature of the respondents’ relations with others. Using listwise deletion, the final sample for these analyses is 1269, which is 84% of the wave two respondents.

It should be noted that while the NSC contains three waves of data, it is not suited for longitudinal tests of GST because there is at least a five-year lag between each wave of data. GST maintains that strain has a relatively contemporaneous effect on delinquency, as Agnew states, the effects of stress dissipate quickly and one is, therefore, more apt to detect short term stress effects of drug use and delinquency (Agnew & White 1992). Thus, this data set is inappropriate for longitudinal examinations of prior strain on subsequent delinquency because of the five year time lapse (Agnew 1992). Further, it is unlikely that delinquency or drug use will have a substantial short-term effect on most of the stressful life events that contribute to the strain measures.²¹

Dependent Variables

Three types of delinquent outcomes are examined in this study. This was done in order to ascertain the conditional effects of gender identity on delinquent acts that vary in their inconsistency (or consistency) with the social expectations for femininity and masculinity. The delinquency measures are listed from least to most inconsistent with the expectations associated with femininity.

The first dependent variable is a four-item measure of substance use (DRUGUSE) and counts the number of substances that the respondent “has ever” used, including: cigarettes, alcohol, marijuana, or other drugs²². This scale was factor analyzed²³ using varimax rotation. Items that loaded at least .50 on one and only one factor were taken as indicators of that factor. For DRUGUSE only one component was extracted and all four items were retained.

Ten additional items were factor analyzed using the procedure described above. Two measures of delinquency were created based on this analysis, one measuring statutory offense and the other measuring criminal acts. The second dependent variable, the statutory scale (STAT), was computed by adding the number of times the respondent engaged in the following behaviors: stayed out late, gotten

²¹ My specific theoretical model focuses on differences in the slope of strain in the regressions predicting delinquency based on gender identity, and I assess this model cross-sectionally. Accordingly, I face some of the same issues of causal ordering as have other scholars (e.g., Agnew 2002; Broidy 1999; Laub & Sampson 1988; see Hirschi & Selven 1967). I cannot be sure that these youthful conduct problems are the product, rather than the cause of strain. I have, however, attempted to minimize issues pertaining to the correct causal ordering by incorporating a wide array of strains.

²² Responses were yes=1, or no=0.

²³ Following common practice, the term “factor analysis” is used to represent the general process of variable reduction regardless of the actual method of extraction is used. All factor analyses performed here are principle component analyses (see Stevens 1992).

drunk,²⁴ skipped a day of school without permission, or run away from home. The response categories were as follows: 0 = never, 1 = once, 2 = twice, and 3 = three or more.

The final measure of delinquency, (DEL) measuring criminal acts, is comprised of three items, with the same response categories for the STAT scale. This measures the number of times the individual “hurt someone badly enough to need bandages or a doctor,” “took something from a store without paying for it,” and “damaged school property on purpose.” Due to the low prevalence of such behaviors, the variable was dichotomized into zero and one or more acts. This measure of serious delinquent acts incorporates aggressive behaviors, theft, and vandalism.

Independent Variables

Strain measures

Several strain measures were examined, including specific family, school, neighborhood, and peer strains employed in Agnew and colleagues’ (2002) test of GST using the wave 2 data from the NSC. These measures provide an indication of the amount of strain in the three major domains of adolescent life: family, school, and peer group. Each of the multi-item strains were factor analyzed following the abovementioned processes. Three strain measures are adopted from Agnew et al.’s model (2002), and are as follows:

(1) School strain. This is a one item measure of school hatred. Respondents were asked whether they “love, like, dislike, or hate going to school (8.7% say they hate school, and 12.2% state that they dislike school). School hatred is relevant to this inquiry because school is an unavoidable (by legitimate means) aspect of youths’ everyday lives (see Agnew 1985). At this age, the majority of boys’ and girls’ time and energy are spent in and around school and related activities. Agnew (1998: 110) states “a good deal of strain occurs at school,” including, “negative peer relations, negative teacher relations, low grades, and general dissatisfaction with school.” Data suggest that adolescents who experience this type of strain are more likely to engage in delinquency, including serious delinquency (Agnew 1985, 1997; Agnew &

²⁴ The “gotten drunk” variable differs from the alcohol measure on the DRUGUSE scale because the former measures the number of times the respondent has reached the point of inebriation, while the later questions whether or not the respondent has ever drunk alcohol.

Brezina 1997; Cernkovich & Giordano 1992; Hawkins & Lishner 1987; Jenkins 1997; Maguin & Loeber 1996; Welsh, Greene, & Jenkins 1999).

(2) Neighborhood strain. Respondents were asked, “How is your neighborhood as a place for kids to grow up,” with five possible responses, “excellent,” “good,” “fair,” “not so good,” and “poor.” High scorers report that their neighborhood is poor (7.4%). This measure is one of strain, rather than social disorganization, because the adolescent is providing a subjective rating of her or his neighborhood. Disorganization theory measures objective conditions of neighborhoods, and this measure has no objective aspect to it; how the respondent feels about her or his neighborhood and how she judges it as a place for growing up is more appropriate to measuring micro-level individual strain than macro-level disorganization.

(3) Parental Emotional Control. This measure comes from the parents’ response to the question “Do you have times when you lose control of your feelings and feel you might hurt your child?” Response categories range from “never” to “often.” Agnew et al. note (2002: 51), “It seems reasonable to suppose that such parents [those who respond ‘often’ or ‘sometimes’] are more likely to verbally and perhaps physically mistreat their children.”

Seven additional measures of strain are included in this analysis. Most of these added strains are family-related. Agnew has suggested that family strains, such as physical punishment, unfair parental discipline, parental rejection, and inconsistent parental expectations are among the most influential adverse ones faced by adolescents (1985). A recent test of GST focusing exclusively on family strains supports Agnew’s proposals (see Hay 2003). The two other strain measures concern the adolescents’ satisfaction with various aspects of her or his life and whether an upsetting or disturbing event has occurred in the past four years. Research has shown that adolescents are more likely than young children or adults to perceive their environment as stressful, and strains tend to be magnified by adolescent eyes (Compas et al., 1983; Hoffman & Cerbone 1999; Larson & Amussen, 1991). Moreover, adolescents, as compared to adults, lack the resources and the ability to deal with strain resulting from difficult situations and are more likely to respond to such events with anger and frustration (Agnew 1992, 1997; Attar et al.

1994; Guerra et al. 1995). Finally, given that adolescents lack the power and alternatives that their adult counterparts possess to remove themselves from aversive environments or stop the occurrence of stressful events, broad measures to incorporate the varied type of strains faced by adolescents are preferable (Agnew 1985; 1992). The supplementary strain measures include:

(4) Absence of parental encouragement or understanding. The three items in the scale, with response categories “never,” “sometimes,” and “often,” are reverse coded, so that high scorers state that when “they have done something good” their mother never, “tells [them] she is pleased,” or “hugs or kisses [them],” and when they do something wrong their mother never “talks to [them] about it.”

(5) Ambiguous, inconsistent negative parenting. Respondents were asked if this “sounds like [their] mother: “makes rules that are clear consistent,” “trusts you to behave even when she is not around,” “is firm with you and gets you to do what she wants you to do,” “encourages you to always do your best,” “lets you know she appreciates what you try to accomplish,” and “loves you and is interested in you.” The response choices are sounds “very much like,” “somewhat like,” or “not at all like”; thus, high scorers respond to all of these statements with “not at all like” ($\alpha = .79$).

(6) Lack of Autonomy. This is a five-item measure of the extent to which the juvenile makes decisions in her or his life. Criminologists have found the adolescent struggle for autonomy to be a nontrivial strain for U.S. adolescents and as a potential catalyst for behavioral problems (Agnew 1984; Marwell 1966). The adolescents were asked “who makes most of the decisions about: buying your clothes, spending your money, choosing your friends, watching television, and religious training.” These questions were recoded so that if the respondent is the one who makes most of the decisions about these aspects of life she or he is coded five. If the respondent does not make most of the decisions about any of these five things, she or he is coded zero ($\alpha = .68$).

(7) Arguments with parents. Respondents were asked “whether they argued with their parent about the rules.” A high score indicates that the adolescent argues with their mother over the rules frequently; a low score denotes that the respondent answered “never.”

(8) Lack of Parental respect. This measure considers the amount of voice the respondent has with her or his parent(s). Two questions comprise this measure: “do your parents talk over decisions with you,” and “do your parents listen to your side of an argument.” The response choices are “often” (1), “sometimes” (2), or “never” (3).

(9) Satisfaction scale. This five-item scale consists of questions about the adolescents satisfaction with various aspects of his or her life ($\alpha = .69$), such as “are you satisfied with your schoolwork” and “are you satisfied with your friends.” Answers ranged from “very satisfied” to “not too satisfied,” and high scorers responded with the latter for all five questions.

(10) Upsetting or disturbing event. This one-item strain measures whether or not the individual experienced an “upsetting or disturbing event” in the past four years. Individuals who have experienced such an event are coded one, while those who have not (or the event was not sufficiently disturbing or upsetting for them to remember) are coded zero.

For the test of hypothesis one, it will be necessary to consider the ten measures of strain individually. For tests of the other hypotheses, however, a cumulative measure of strain will be used.²⁵

Gender Identity Measures

Three measures are used to ascertain the individuals’ gender identity. A four-item scale of beliefs regarding traditional gender roles measures the extent to which the respondent believes in such sexed roles and includes their position on these statements: “Marriages run better when the husband works, and the wife stays at home,” “Children are better off if mothers do not work outside the home,” “Single women should not have children, even if they want to,” and “After a divorce, the mother should automatically get custody of all the kids.” Items were recoded so that high scorers indicate that they “strongly agree” with each of these statements. Thus, for females, a high score indicates femininity and for males, masculinity ($\alpha = .73$).

²⁵ The cumulative strain measure will be generated by standardizing and then summing those strains which predict delinquency in the model with both males and females. The use of a composite measure is consistent with Agnew’s theoretical (1992: 62-63) and empirical work (e.g., Agnew et al. 2002). The scale is coded so that higher values reflect greater strain.

The second dimension of gender identity measures gendered activities that the adolescents “love, like, dislike, or hate.” Stryker and Serpe (1994) note that individuals may not be aware of how salient an identity is in their hierarchy, but their behaviors informs us as to its ranking in the hierarchy. Thus, this measure indicates individuals’ propensities toward behaviors that are ostensibly gendered (expected of either boys or girls) and, thus, provides information as to the salience²⁶ of their gender identities.

Activities that are expected for females include: caring for young kids, reading romantic books, sewing, cooking, dancing, and shopping. Male activities include fixing things, karate, boxing, wrestling, and playing team sports. The items were coded so that involvement in behaviors deemed masculine are negatively coded, while those considered activities for females are positively coded.

The final measure of gender identity is reported from the juveniles’ mothers and measures gendered behaviors in which the targets have engaged. Seven items comprise this measure, and are the mothers’ responses (yes or no) to the following: Without any help, has the child ever babysat outside the home, cooked a complete meal for the family, done the family laundry, made any clothing, built something like an airplane or a radio from a kit, or repaired something in the household? Items were recoded so that a high score indicates involvement in the first four activities, which are generally proscribed by masculine norms, but not the latter two, which are commonly proscribed by feminine norms. In other words, a high score on this measure indicates femininity—engagement in behaviors expected for females but not for those two which are masculine in nature, as reported from the targets’ mothers ($\alpha = .68$).

Social control and social learning measures

Agnew notes that it is imperative that GST analyses control for social control and social learning measures because the failure to do so may result in an overestimation of strain effects (1995; Agnew & White 1992). Controlling for school and parental attachment is particularly important in this study

²⁶ Again, salience is the probability of enacting a line of action consistent in meaning with an identity standard, thus salience of the gender identity variable is measured as the degree of masculinity or femininity. While this is an imperfect measure of salience, due to the fact that identity standards for individuals’ gender identities are rooted in societal beliefs about appropriate behaviors for males and females (i.e., the behavioral expectations concomitant to one’s gender identity), and in American society some actions are clearly gendered, for example boxing and playing with dolls, such actions are utilized here to measure the extent to which the individual partakes in behaviors appropriate for masculine or feminine identities.

because the family and school strain measures may be correlated with such social control and learning measures (Agnew 2002). The argument can be made that measures of strain used in GST, such as the neighborhood strain measure previously mentioned, are actually evaluating competing delinquency theories. This argument is reasonable, (see Agnew 1995), but one should keep in mind that GST focuses not only on whether a neighborhood, a parent's discipline practices, or an adolescent's autonomy are *objectively* deficient, but also individuals' *subjective* experience of various events and situations. While stress is often generated by objective conditions, such as disadvantage, these objective conditions "must be perceived" in order to product strain and the concomitant negative emotions (Mirowsky & Ross 2003: 412; Mirowsky & Ross 1989). It is imperative that controls for other theories are included in tests of GST, to consider whether forces or opportunities other than strain are actually responsible for delinquent outcomes. Thus two social learning and five social control variables are incorporated into the analyses and replicate those used by Agnew and colleagues (2002).

Social Control Measures:

Parental monitoring. Mothers were asked about the number of their child's friends "they know."

Responses range from "none" to "all of them," and a high score indicates that the mother knows all of her child's friends. Although parental monitoring involves more than being familiar with the child's friends, this measure provides a general proxy for such measures as it requires considerable parental interest and time to become familiar with the members of a child's friendship network.

Educational goals. This two-item variable measures educational commitment. High scorers indicate that they would "like to obtain a college plus education," and they "expect to obtain a college plus education" ($\alpha = .55$).

School attachment. High scorers on this measure indicate that she or he is "interested in [her or his] schoolwork most of the time."

Time spent on homework. This measures the number of minutes the adolescent spends doing homework "on a usual day."

Parental attachment. This is a three-item scale measuring the respondents' attachment to their mothers. High scorers on this scale state that they want to be like their mother when they grow up, they love their mother, and often engage in enjoyable activities with their mother ($\alpha = .54$).²⁷

Social learning measures

Troublesome friends. While broad measures of association with delinquent peers unfortunately were not included in the survey and no single item concerning delinquent peers was directed to the adolescents, the mothers were asked whether their child "hangs around with kids who get into trouble." A high score indicates that the mother believes this is "often true" of their child (13.6% of the responses), with their other options being "sometimes true" or "not true."

Conscience. Respondents conscience is measured with the noteworthy question "do you feel ashamed when you know you have done something wrong" (1=yes, they feel ashamed).

Sociodemographic Controls

The following sociodemographic variables, which are often linked to adolescent deviant behavior and stress,²⁸ are controlled in all analyses: (1) age of the child in years, (recoded so 10=0); (2) a dummy variable for the race-ethnicity of the child (0=non-Hispanic White, 1=Black); (3) total family income, reported by the mother, which was transformed into three categories: 0 = less than 15,000, 1 = 15,000 to 25,000, 2 = more than 25,000; the zero category is the comparison group; (4) education of the primary parent, in years centered at the median (0=12 years); (5) a dummy variable for family status, referring to the marital status of the primary parent (1=married); and (6) a dummy variable measuring the primary parent's employment status (1=employed full or part-time).

Analytic Strategy

Does gender identity condition an individual's response to strain with delinquency? Because two of the delinquent outcomes (STAT and DRUGUSE) represent counts of engagement in such behavior, the conditional effect of gender identity on the strain-delinquency relationship is examined with count models

²⁷ Attachment to both mother and father were measured. They loaded on separate factors, however, and incorporating both as indicators of parental attachment results in a large reduction in sample size, because those respondents without fathers who were interviewed would be excluded resulting in a drastic reduction of the sample.

²⁸ "Some people are exposed to more social stressors and have fewer resources to deal with them. They are the poor and poorly educated; unemployed, employed part-time, or working in menial and unfulfilling jobs; and living in poor and rundown neighborhoods where crime is a constant threat (Ross & Mirowsky 2003: 419-420).

using Stata 8.0. Regression models for dependent variables that represent counts of some phenomena are more appropriate than ordinary least squares regression due to three problems that inhere in the latter model. First, OLS regression assumes that the dependent variable is continuous, whereas count data is inherently discrete. Additionally, count dependent variables are by definition truncated at zero, as unequivocally, negative counts are not possible. And, lastly, count dependent variables invariably have highly skewed, non-symmetric distributions; this violates the OLS assumption that the error terms approximate a normal distribution (Allison 1995; Long 1997; Long & Freese 2003).

There are a variety of models that deal with characteristics of count outcomes. The most basic model is the Poisson regression model, on which the negative binomial regression model (NBRM) and related count models are based (Long 1997). With this model the probability of a count is estimated by a Poisson distribution, where the mean of the distribution is a function of the independent variables. The Poisson process presupposes that the events are independent. To put another way, if an event occurs, it does not affect the probability of the event occurring in the future (Allison 1995). The model has the requirement that the conditional mean of the outcome is equal to the conditional variance; an assumption known as equidispersion. This model is rarely used in practice due to this equidispersion requirement, which is routinely violated in most applications. If the model is fitted to an outcome with overdispersion, while slopes will not be affected, the standard errors will be biased downward, leading to spuriously large z-values (Long; Barron 1992).²⁹ The NBRM was developed to deal with this problem, and while the Poisson model and the NBRM have the same mean structure, the NBRM introduces unobserved heterogeneity allowing for overdispersion (Long & Freese 2003). My strategy is to first estimate the models with the negative binomial, which yields an estimate of overdispersion and model fit. If the overdispersion parameter is significant (indicating a dependent variable with a distribution incorporating many zero values and large positive skews), I report the negative binomial results; if the parameter is not significant, I rely on Poisson estimates. Since the measure of general delinquency is a binary variable, a

²⁹ See appendix A for a description of the Poisson regression model and its assumptions and additional information on the NBRM.

series of logit models will be employed to examine the effects of these measures of strain, gender identity, and the sociodemographic and theoretical controls on this delinquent outcome.

The analysis proceeds through a series of stages for each dependent variable, following initial models examining the individual effects of the strain variables. More specifically, these initial models pooled across sex are estimated by regressing the three dependent variables on the controls and individual strains. The individual strain measures that significantly increase the expected count or likelihood of delinquency for two of the three outcomes will be compiled into a composite strain measure to facilitate the examination of interaction effects.

Next, a series of models are fitted predicting drug use. Before examining the central hypotheses about the conditioning effect of gender identity, it is useful to examine whether the key concept in GST, strain, is positively associated with drug use as a composite measure and significantly improves the model fit. Thus, Model 1 simply provides a baseline against which to assess the import of the composite strain measure on the model and includes only the demographic controls and social learning and control measures as predictors. Model 2 adds the composite strain measure, and post-estimation commands will be conducted to test whether incorporating the composite strain significantly improves the fit of the model. The remaining models will be estimated separately for males and females. Model 3 is a replication of Model 2 estimated separated for females and males respectively. Next, Model 4 includes both males and females and injects a strain—sex interaction,³⁰ allowing an assessment of hypothesis 1b, which predicts that the slope of the strain predictor is significantly steeper for males. In other words, a significant exponentiated coefficient that is less than 1.0 indicates that strain is a more potent predictor of males' than females' delinquency. Models 5-7, which are the primary focus of this paper, evaluate whether the measures of gender identity are associated with females' and/or males' drug use. Examining this requires interaction models that incorporate product terms for strain and the gender identity measures. Following Aiken and West (1991: 40-47) the interaction terms are created by first standardizing each of the variables and then multiplying the standardized values together. This procedure has the advantage of

³⁰ The interaction term is created by the same process described below.

mitigating the multicollinearity between the interaction term and its component parts. I predict that this product term will condition the relationship between strain and delinquency, such that the slope of strain predicting the delinquent outcomes is dependent on the individuals' gender identities. The gender identity measures will be entered separately into the equations for girls and that for boys. The significance of these interaction terms represent the significance of differences in the effect of strain based on gender identity for these youths' outcomes. These steps will be repeated for models predicting statutory offenses and delinquent offenses. The final stage involves comparing the coefficients across models in order to test hypothesis 4. This hypothesis, which predicts that the effect of the gender identity—strain interaction on deviant outcomes increases as the seriousness of the offenses increase (i.e., from drug use, statutory, to delinquent offenses) will be tested by comparing the coefficients across all three models. Since the three outcomes are predicted with different statistical modeling techniques, variation in the conditioning effect of gender identity for the three outcomes (hypothesis 4) will be examined by comparing the estimations non-statistically.

Since my theoretical interest is in the conditioning effect of gender identity, I focus primarily on the interaction terms in my discussion of the results. The coding of the interaction terms is such that for the measure of strain X traditional gender role beliefs, a negative coefficient would be in line with hypotheses for females and indicate that increasing femininity diminishes the effect of strain on the deviant outcomes; for males, a positive coefficient is predicted and would suggest males with more masculine gender identities are more likely to respond to strain with delinquency than their less masculine counterparts. Because these regression models are nonlinear, the magnitude of the change in the outcome associated with a given change in one of the independent variables depends on the levels of all of the independent variables,³¹ therefore, when I discuss the effect of an independent variable on either the expected count (for drug use and statutory offenses) or the probability of the event occurring (for the

³¹ Nonlinearity has implications for interpreting the effects of independent variables. When interpreting the effect of predictors in regressions, we focus on the change in Y to the change in X, holding constant the other variables. In linear regression, a change in a predictor X is the same at all values of other independent variables. Interpreting the coefficients for nonlinear functions, however, is a bit more complicated. The effect of a unit change in a predictor X depends on the values of other variables in the model and entails more than simply the parameter of the model (Long 1997). Unless otherwise noted, the effects of the independent variables are discussed holding the other predictors at their means.

measure of serious delinquency), I am explaining the influence of the variable net of the other independent variables.

CHAPTER 6

RESULTS

Table 1 presents the variables used in this analysis and their descriptive statistics, as well as the results of comparisons in their means (or proportions where appropriate) between males and females for the final sample after listwise deletion. As shown, slightly more girls than boys are included in the sample; the sample size for girls is 650 while the number of boys is 619 (a difference of approximately 1%). Fortunately, there are no significant differences between males and females for the demographic controls; some differences do exist, not unexpectedly, in the social control and social learning measures. Regarding the social control measures, females have a significantly higher mean level of parental monitoring, school attachment, and time spent doing homework than their male counterparts ($p < .001$). No sex difference exists in the means for educational goals and degree of attachment to mothers. Consistent with prior research, significant sex differences exist as well for the two social learning measures. The mean score for males' troublesome friends is higher than females, while a z test of proportions for the measure of conscience indicates that girls are more likely to report that they "feel ashamed when they have done something wrong" than males.

No difference between males and females exists in the individual strain measures, with the exception of the measure of autonomy; for this variable females report a higher level of lack of autonomy than males ($p < .001$). In accord with the research on sex differences in strain or distress (e.g., Ross & Mirowsky 1995), the slight difference between males' and females' mean scores on the composite strain measure (-.09 and -.02, respectively) does not approach significance. Thus, as predicted, boys' higher level of involvement in delinquent behaviors can not be explained within GST by the fact that males experience more strain than females.

Turning to the measures of gender identity, sex differences in the degree and salience of the three measures are manifest. Interestingly, males report significantly greater adherence to traditional gender-

role beliefs than females (8.45 compared to 7.76, respectively; $p < .001$). For the second measure of gender identity, sentiments toward gendered activities with a high score indicating a predilection to feminine activities, girls' score (4.31), of course, dwarfs that of males (0.37; $p < .001$). Similarly, the difference in the mean for third measure of gender identity, which taps into behaviors in which the juveniles have actually engaged according to their mothers, is highly significant, with females having a higher average score (3.90 compared to 2.18 for males; $p < .001$). Thus, according to the targets' mothers, girls more often engage in behaviors that are ostensibly feminine, and refrain from those commonly deemed masculine than males; conversely, more males than females engage in masculine activities and abstain from feminine activities. These results support hypothesis 2; in other words, as expected, positions along the masculine-feminine continuum representing gender identities are differentiated by sex, such that more males fall along the masculine side of the continuum than females, and vice versa.

One final noteworthy aspect shown in Table 1 concerns sex differences in the dependent variables. Not unexpectedly, a comparison of the mean counts of drug use for males and females is not significant. There are significant differences, however, in the average number of statutory offenses, with males reporting greater involvement than females. Additionally, the proportion of boys sampled who engaged in behaviors incorporated into the measure of serious delinquent acts is twice the size of the proportion for females. Approximately 30% of males were involved in this measure of delinquent behavior, in contrast to only 15% of the females. As with the statutory offense count, this difference is significant ($p < .001$).

Assessing the impact of individual strains

Table 2 presents the results of separate regressions for each of the three dependent variables on the demographic and theoretical controls and the strain measures. Poisson estimates are presented for all of the models predicting drug use, since the overdispersion parameter was not significant ($G^2 = 0.00$; $p = .50$).³² For the models predicting statutory offenses, NBRM models are used because there is significant

³² The NBRM reduces to the PRM when $\alpha = 0$, thus a likelihood-ratio test was conducted to test the hypotheses the $H_0 = 0$. The formula for the test statistic is as follows: $G^2 = 2(\ln L_{\text{NBRM}} - \ln L_{\text{PRM}})$. Because the overdispersion parameter was not significant, the Poisson model is preferred to the negative binomial model (see Long & Freese 2003).

evidence of overdispersion ($G^2 = 140.60$; $p < .001$), and, as previously mentioned, logit models are used to estimate the outcome for serious delinquency. For each model, the first column presents the exponentiated coefficients. For the models predicting drug use and statutory offenses, an exponentiated coefficient is the factor change in the expected count for a unit increase in the independent variable, net of other independent variables; in the logit models predicting delinquency, an exponentiated coefficient is the factor change in the odds ratio (i.e., the odds of engaging in one of the acts in the measure versus not engaging in any of these acts). In each of the models, the second column shows the standard deviation of the exponentiated coefficients in parentheses, while the third column (%StdX) presents the percent change in the expected count or odds for a standard deviation increase in the independent variable, net of other factors. The percent changes can be compared for different coefficients within each model to assess the relative impact of each of the variables on the outcomes.

Overall, the results of these regressions provide support for a positive link between strain and delinquency. Six of the eleven strain measures are significantly related to these deviant outcomes in the expected direction, including: school strain, parental emotional control, lack of autonomy, satisfaction scale, upsetting/disturbing event, and arguments with parents. For example, a standard deviation increase in the measure for parental emotional control increases the odds of engaging in delinquent behavior by 30.5% $\{100 * [\exp(b * StdX)]; p < .001\}$; the experience of an upsetting event increases the odds of engaging in a crime in the delinquency measure by 62.7%; and a unit increase in the (un)satisfaction scale increases the expected count of drug use by a factor of .07 ($p < .001$), holding other variables constant. Neither the measures of inconsistent/negative parenting, neighborhood strain, nor “being picked on” by peers are significant predictors of any of the outcomes.³³ The variable “lack of parental encouragement/understanding,” is marginally significant only in the model predicting statutory offenses and the direction of the coefficient (negative) is opposite than that expected. The remaining non-significant strain, “absence of parental respect,” is only significantly related to statutory offenses, and, while a standard

³³ For a discussion and explication of the failure of being picked on by others to predict delinquency, see Agnew and colleagues (2002), who utilized the same measure of peer strain.

deviation increase in this measure increases the expected count of statutory offenses by 11.5% ($p < .05$) net of other variables, the criterion for inclusion in the composite strain measure requires that an individual strain is significantly and positively related to at least two of the three deviant outcomes. The composite measure of strain, then, was computed by standardizing and summing the following strain measures: school strain, parental emotional control, lack of autonomy, satisfaction scale, upsetting/disturbing event, and arguments with parents.

Assessing the impact of predictors on drug use

A series of Poisson regression models were estimated for drug use and the results are presented in Table 3. In the first column of this table, a baseline model was estimated that assesses the effects of the sociodemographic and theoretical controls on drug use. As can be observed in the first column of Table 3, a respondent's sex does not significantly influence the expected count of drug use. Indeed, although not significant, being female actually increases the expected count of delinquent behaviors when strain is not incorporated into the model. In the two later models (d2 and d4), which include both sexes as well as strain, sex is again not significant, though the direction of the coefficient becomes negative with the inclusion of the summary strain measure.

As expected, the demographic control variables for age, race, and total family income are significant. Blacks, net of other factors, have a significantly lower count of drug use ($\exp\beta = 0.81$; $p < .05$) than non-Blacks in all models.

Turning to the social control predictors, school attachment and parental attachment diminish the expected count of drug use. Concerning the social learning controls, the measure of troublesome friends is a strong predictor of drug use in all of the models predicting drug use. For example, in model d2, which includes the controls and composite strain, a unit increase in the measure (e.g., from a parent's response that it is "not true" that their child "hangs around with kids who get in trouble," to it is "sometimes true,") raises the expected count of drug use by 35% ($p < .001$).

Consistent with GST and hypothesis 1a, which expects strain to be a significant predictor for males and females, Model d2 shows that strain is positively related to drug use for both sexes. For each

unit increase in the strain measure, the expected count of drug use increases by a factor of 0.30 ($p < .001$); indeed, except for the coefficient for age, the composite strain measure has the strongest effect on drug use in these models.³⁴ Further a likelihood-ratio test comparing the nested models d1 and d2 shows that the inclusion of the strain measure improves the fit of the model significantly ($LR \chi^2 = 69.06$; $p < .001$). Models d3 assess whether the composite strain measure is positively related to drug use for females and males (respectively in columns 3 and 4) and reveals that it does, providing further support for hypothesis 1a.

Model d4 (column 5) displays the effects of the sex X strain interaction. Support for this hypothesis would be evidenced by a negative coefficient, indicating that strain has a greater effect on males' than females' drug use. As shown, the interaction has a small ($\exp\beta = 1.05$) and marginally significant ($p < .07$) effect on drug use. The coefficient, however, is opposite the direction predicted and suggests that the influence of strain on drug use is stronger for females than males, such that net of other factors, increases in strain lead to greater increases in the expected count of drug use for females than males.

The last six columns of Table 3 present the results of the examination (using multiplicative interaction terms) of the conditioning effects of gender identity on the relationship between strain and drug use in order to test whether gender identity conditions the strain—delinquency relationship (hypothesis 3). Model d4 introduces the effect of traditional gender beliefs X strain on drug use separately in models for females and males. The results indicate that traditional gender role beliefs do not have an appreciable effect on the association between strain and delinquency for either males or females. Similar insignificant results are shown for the measure of sentiments toward gender identity X strain interaction. Although the coefficients are in the predicted direction, the effects are not substantive and do not approach significance. In the final models predicting drug use, the gender-role behavior X strain

³⁴ Wald tests comparing the coefficient for the composite strain and the other coefficients in Model d2 indicate that, while age is a stronger predictor of drug use net of other variables, the composite strain measure is a more strongly related to the expected count of drug use. For example, the test of the hypothesis that the coefficient for strain and that of troublesome friends (the third largest coefficient) reveals strain is more strongly related to drug use than the measure of troublesome friends net of other factors ($\chi^2 = 11.26$; $p < .001$).

interaction is incorporated. For males, although the interaction term is in the expected direction, the coefficient does not reach significance. In the model for females, however, this third measure of gender identity does significantly condition the effects of strain ($\exp\beta = 0.91$; $p < .07$). For at least one of the dimensions of gender identity, then, femininity does appear to reduce the effects of strain on drug use.

Assessing the impact of predictors on statutory offenses

Results of the negative binomial regression models predicting counts of statutory offenses are presented in Table 4. Beginning with the control variables, the results reported resemble those for the models predicting drug use, with few exceptions. Being Black is again negatively associated with the expected count of statutory offenses in models with both sexes and two of the three for males, but is not a significant predictor in the models for females, though the coefficient is in the same direction. Neither mothers' education nor parental monitoring are related to the count of statutory offenses; however, mothers' marital status is significant ($p < .05$) in the first two models, such that individuals whose mothers are not currently married have a higher expected count than others, holding other factors constant.

The results of the summary strain measure are quite consistent across models and favorable for GST, in that they reveal that strain is positively associated with statutory offenses. As shown in Model s2, a unit increase in the summary strain measure increases the expected count of statutory offenses by a factor of 0.27 (or 27%; $p < .001$). As with the previous models hypothesis 1a is supported; even when controlling for key criminological variables, strain amplifies the expected count of statutory offenses.

Turning to the relationship between sex and statutory offenses; results of Models s1, s2, and s4 illustrate that, net of other factors, being female decreases the expected count of statutory offenses, by a factor of 0.12 in the baseline model without strain and by 0.16 when strain is incorporated (Model s2; $p < .001$). In Model s4, the sex X strain interaction term is entered in order to assess whether, as predicted in hypothesis 1b, the slope of escalating delinquency in response to increased strain is significantly steeper for males. Analogous to the relationship in the models for drug use, the effect of the interaction term is weak but the term is significant ($p < .05$), which shows that, contrary to the hypothesis, the slope of delinquency in response to augmented strain is significantly steeper for females. Holding constant other

factors, a given increase in the amount of strain for males and females leads to a greater increase in the expected count of delinquency among the females than the males. Thus, hypothesis 1b is again contradicted by the interaction term which shows that strain is a stronger predictor of statutory offenses for girls than boys.

The results of the regressions examining the conditioning effect of the gender identity measures on the strain—statutory offenses relationship are presented the Models s4 through s6. Among females, none of the three measures of gender identity were associated with the count of statutory offenses. For males, adherence to traditional gender role beliefs had a direct positive relationship with statutory offenses; holding other factors constant, a unit increase in the measure of males' adherence to traditional gender role beliefs increases the expected count of statutory offenses by 8% ($p < .05$). Traditional gender role beliefs do not, however, condition the effect of strain on statutory offenses. While both the direct effects of sentiments toward gendered activities and its indirect effect through strain are in the expected direction (negative), neither are significant. Support for hypothesis 3b, however, is provided in column 7 of Table 4, which incorporates the interaction of gendered (feminine) behaviors and strain. As predicted, the relationship between strain and the count of statutory offenses is stronger for males with a more masculine score on this measure of gender identity, than those with less masculine (more feminine) identities ($\exp \beta = .94$; $p < .05$). For example, the expected count for a male experiencing the mean amount of strain and two standard deviations above the mean score for the measure of feminine behaviors is 2.32, net of other factors, while a more masculine male reporting an equivalent amount of strain and scoring two standard deviations below the mean for the measure of feminine behaviors has an expected count of 2.03 statutory offenses.

The results of the negative binomial regressions of statutory offenses on strain, sex, and gender identity provide strong support for the GST framework but do not support the hypothesized (3a) conditioning effect of gender identity on strain for females. On the other hand, the finding that males who have more masculine scores on one of the measures of gender identity have a higher expected count of statutory behaviors than males with more feminine scores in response to a fixed amount of strain, bolsters

hypothesis 3b. Before assessing hypotheses 4 and 5, the final deviant outcome, serious delinquency, which is most inconsistent with the expectations associated with femininity and, conversely, more consistent with masculinity, is examined.

Assessing the effect of predictors on serious delinquency

Results of logistic regression models predicting delinquency are reported in Table 5. The effects of the controls operate in much the same manner as in the two previous models, with a few deviations. In contrast to the previous models, age does not have an effect on the odds of involvement in delinquency. Although the influence of race is insignificant in the models including both sexes, being Black has significant, though opposite effects in the models separated by sex. For females, being Black decreases the odds of engaging in delinquency by a factor of roughly 0.48 ($p < .05$), holding all other variables constant. The odds of engaging in an act of delinquency for Black males is 1.53 ($p < .10$) times larger than that for non-Black males before gender identity is entered in the equation (Model 3). When gender identity is incorporated into the models, the effect of race on the likelihood of delinquency increases, with Black males having an odds of delinquency as much as 1.78 ($p < .05$) times that of their non-Black counterparts.

Perhaps the most interesting divergence in the control variables in this model from the previous models is the effect of troublesome peers. In models for males, a unit increase in the measure of deviant peers almost doubles the odds of engaging in delinquency and is highly significant ($p < .001$), holding other factors constant. For females troublesome friends is not associated with delinquency, as evidenced by the insignificant odds ratios reported in the female-only models.

As presented in Models 1, 2, and 4, the odds of delinquency are much greater for males than females; net of other factors, the odds for males are approximately 2.40 times larger than that for females ($1 / 0.42$; $p < .001$). Males, as expected, are much more likely than females to engage in delinquency than females, holding other factors constant. Turning to the effect of the summary strain measure, for both males and females consistently across the models, a unit increase in the strain measure increases the odds of delinquency by at least 50% ($p < .001$). Net of other factors, the predicted probability that an individual

experiencing the minimum amount of strain will engage in delinquency is 0.09, for an individual reporting the mean amount of strain the probability increases to 0.20, and for the individual experiencing the largest observed strain score the probability of engaging in these acts of delinquency enlarges to 0.48.

The sex X strain interaction term was introduced in Model 4 to test the hypothesis that increasing strain has a significantly greater effect on males' delinquency than females. Unlike the previous models, however, the effect of strain on males is slightly stronger than that for females ($\exp\beta = 0.97$), though the coefficient is not significant.

Finally, Models 5-7 incorporate the gender identity X strain interaction terms in order to examine the hypothesis that a more feminine gender identity diminishes, while a masculine identity elevates, the strain—delinquency relationship. Gender identity does not significantly condition the effect of strain on the odds of engaging in these delinquent acts for females, although two of the three interaction terms are in the expected direction. In the models predicting males' delinquency, two significant gender identity findings are shown. For males, an increase in their score in the measure of preference for feminine activities directly diminishes the odds of engaging in delinquency. Each unit increase in masculinity in this measure of gender identity (decrease in the score) increases the likelihood of delinquency by 32%. To put another way, males who like engaging in activities deemed socially appropriate for girls are less likely to engage in delinquency given the same amount of strain as males who are more masculine in this dimension of gender identity, net of other factors. The other significant finding, shown in column 7, is consistent with hypothesis 3b. Males who report stronger beliefs in traditional gender role definitions (i.e., are more masculine) have a substantially larger odds of responding to a given amount of strain with delinquency, than their more feminine counterparts ($\exp\beta = 1.41$; $p < .001$). Hypothesis 3a, which predicts that more masculine females are more likely to respond to strain than their less masculine counterparts, was not supported in these logit models; the measures of gender identity were inconsequential for females' response to strain with delinquency. Consistent with hypothesis 3b, strong beliefs in traditional gender roles increase the odds that a given amount of strain will result in delinquency for males.

Assessing the effect of strain, sex, and gender identity across models

The results for all of the models support GST and hypothesis 1a; the individual strains and summary strain measures are consistently strong predictors of drug use, statutory offenses, and delinquency. Further, in all of the models, the summary strain measure had the greatest influence on delinquency, except for the effect of age on statutory and drug offenses. Following the weight of the GST research on sex differences (e.g., Agnew & Brezina 1997), as well as the effect of sex as a social status, I predicted that in response to an increasing amount of strain, males would have a steeper slope of delinquency escalation than females. The results reported in Model 4 for each outcome, however, reveal that this is not the case. Strain is not a significantly stronger predictor of deviance for males, and, in fact, the strains measured here are more strongly related to drug use and statutory offenses for females than males. No significant sex difference exists in the effect of strain on the measure of delinquency. While perplexing, this finding has been reported in other tests of GST. For example, Hoffman & Su (1997) write that stressful life events among males and females are similarly associated with delinquency and drug use. In these analyses, the finding that strain has a stronger effect for females than males may be due to the relatively mild acts that comprise the delinquent outcomes. It is possible that this finding is limited to such mild acts as drug use and statutory offenses that dominate the measures of deviance in this data. Among those who respond to strain with delinquency, boys (especially those with masculine gender identities) may choose the more serious forms of delinquency, which are not measured in the data, while girls will choose the less serious behaviors, many of which are considered here, that are less inconsistent with the expectations for females. That the direction of the coefficient for the sex X strain interaction was in the expected direction for the most serious delinquent outcomes does lend credence to this explanation.

As shown in Table 1, hypothesis 2, which predicts that more boys than girls have a masculine gender identity and more girls have a feminine gender identity is supported by t-tests of mean differences across the sexes. Hypothesis 3 predicted that more masculine individuals have a higher expected count (or odds of) delinquency than their counterparts with more feminine gender identities and was examined in models separated by sex. Assessing whether gender identity conditions the effect of strain on

delinquency yielded some positive results in favor of the extended GST theory. Hypothesis 3a, which applied to girls, received only meager support. Girls with more feminine scores on one dimension of gender identity had a significantly lower expected count of drug use in response to strain than more masculine girls. Gender identity did not, however, condition the response to strain in any of the other models for drug use or the statutory and delinquency outcomes, which are more inconsistent with norms of femininity. As at least a partial explanation of the insignificance of these interactions, I would point to the role of sex as a status and the well-documented body of research that emphasizes the higher levels of marginalization and stigmatization of females who engage in criminal behavior, regardless of their gender identity (e.g., Denno 1994), due to the role of sex as a status. Additionally, as the social control variables utilized are less than perfect, the conditioning effect of gender identity on delinquency among females may be a function of unmeasured opportunity factors and/or increased social control that females experience.

Hypothesis 3b predicts that males with more masculine identities are more likely to engage in delinquent acts in response to strain than those with more feminine gender identities. Turning to the models predicting drug use, no significant interactive effects for males were observed. Gender identity did, however, condition the effects of strain on statutory offenses and delinquency for males in the expected direction. The results reveal that the criminogenic effects of strain on delinquency are enhanced when males have a more masculine gender identity. Thus, Hypothesis 3, while not receiving unequivocal support was bolstered by these findings, particularly for males.

Hypothesis 4 was examined by comparing the results of the models predicting the three outcomes. This final hypothesis predicts that gender identity will be a stronger predictor of the more serious, masculine forms of delinquency than those delinquent acts considered less delinquent. Due to the fact that these dependent variables have different distributions and, thus, require different regression models, conducting significance tests of the conditioning effects of gender identity across the models would be violative of fundamental assumptions of inferential statistics and thus misleading. Nonetheless, comparing the relative size of the coefficients and their significance across the models for males indicates

support for increases in the effect of gender identity on the strain-delinquency relationship with increases in the seriousness of the offense. Support for hypothesis 4 in the male-only models is evidenced by the significance level as well as the size of the odds ratio for the strain X traditional gender role expectations interaction term in the model for general delinquency. This finding indicates that more masculine forms of deviance may provide both a way for individuals with masculine gender identities to cope with their strain and experience the positive emotions following the verification of their masculine gender identities. In other words, insofar as boys with masculine gender identities respond to strain with delinquency, they engage in those more masculine forms of delinquency that are more in line with their gender identities.

As can be observed across the tables for girls, the strength of the conditioning effect of gender identity on strain was not related to the seriousness of the delinquent outcome. In sharp contrast to hypothesis 4, the criminogenic effects of strain were conditioned by gender identity only for the model least inconsistent with the norms of femininity—drug use. In the models predicting statutory offenses and delinquency, no significant strain--gender identity interactive relationships were observed among females. That hypothesis 4 was unsubstantiated for females is no doubt due in a large part to the negligible conditioning effects of gender identity. In sum, the conditioning effects of gender identity are positively related to the seriousness of the outcome for males; for the females in this sample, on the other hand, the seriousness of the delinquent act did not seem to affect the conditioning effect of gender identity.

Table 1: Descriptives, Statistics, and Mean and Proportion Comparisons by Sex for Study Variables (N=1269).

Variable Name	Description	Mean ^c	Girls' mean	Boys' mean	std dev.	minumum	maximum
Female	Sex of respondent (1=female; 0=male)	0.51	1.00	0.00	0.50	0.00	1.00
Age	Age of respondent	13.61	13.63	13.59	1.56	10.00	17.00
Black ^a	Race of the Respondent (1=Black; 0=non-Black)	0.22	0.23	0.22	0.42	0.00	1.00
Total family income ^d	Categorical (0,1,2) measure of total family income; 0 = < 15,000; 1 = 15,000 - 25,000; 2 = > 25,000; the comparison category is coded 1.	0.97	0.95	0.98	0.85	0.00	3.00
Parential education	PC's highest grade/year of education completed	11.98	11.94	12.03	2.73	0.00	20.00
Not married ^a	PC's marital status (1=not married; 0=married)	0.27	0.27	0.27	0.44	0.00	1.00
Parental monitoring	Parental monitoring, response from mother	3.83	3.92	3.74***	1.03	1.00	5.00
Educational goals	Two-item measure of educational commitment	6.99	7.06	6.91	1.98	2.00	10.00
School attachment	School attachment (one-item)	2.52	2.59	2.45***	0.60	1.00	3.00
Time homework	number of minutes respondent typically spends on homework per day	79.72	83.15	76.12***	50.36	0.00	360.00
Parental attachment	3-item measure of responden's attachment to parents	4.64	4.67	4.61	1.31	0.00	6.00
Deviant peers	Respondent's troublesome friends (response from mother)	1.15	1.09	1.21***	0.41	1.00	3.00
Conscience ^a	Respondent's conscience (1=feel ashamed when done something wrong)	0.83	0.87	.80***	0.37	0.00	1.00
School strain ^b	School strain, 1-item measure of respondent's feelings toward school	2.38	2.30	2.47**	1.11	1.00	5.00
Neighborhood strain	Respondent's rating of their neighborhood as a place to grow up, 1-item	1.70	1.70	1.71	1.25	1.00	5.00
Parental emotional control ^b	Parental emotional control (response from mother), 1-item	1.55	1.54	1.55	0.71	1.00	4.00
Lack of parental encouragement	3-item measure of absence of parental encouragement or understanding	4.39	4.36	4.42	1.29	3.00	9.00
Inconsistent, negative parenting	5-item measure of ambiguous, inconsistent, negative parenting	2.00	2.01	1.99	1.90	0.00	11.00
Lack of autonomy ^b	5-item measure of respondent's lack of autonomy	2.42	2.57	2.25***	1.62	0.00	5.00
SS ^{bo}	5-item scale of respondent's satisfaction	3.18	3.24	3.12	1.90	1.00	12.00
Upsetting event ^{ab}	Binary measure of whether respondent experienced upsetting event (1=yes)	0.49	0.48	0.49	0.50	0.00	1.00
Arguments with parents ^{bo}	Measure of arguments with parents, 1-item	1.52	1.53	1.51	0.67	0.00	3.00
Lack of parental respect	Lack of parental respect, 2-items	1.51	1.46	1.56	1.20	0.00	4.00
Picked-on by peers	2-item measure of respondent being "picked on" by others	0.40	0.37	0.43	0.66	0.00	2.00
STRAIN	Composite measure of strains (standardized and summed)	-0.03	-0.02	-0.09	2.77	-6.40	8.88
Traditional gender beliefs	4-item measure of respondent's beliefs toward traditional gender roles	8.10	7.76	8.45***	3.80	0.00	16.00
Feminine behaviors	6-item measure respondent's involmt in gendered behaviors (from mother)	3.06	3.90	2.18***	1.49	0.00	6.00
Affinity to feminine activities	Measure tapping respondent's affinity towards gendered behaviors	2.39	4.31	0.37***	2.79	-4.00	8.00
DRUGUSE	4-item count of respondent's self-reported use of drugs	0.98	0.96	1.01	1.07	0.00	4.00
STAT	5-item count of respondent's self-reported statutory offenses	2.02	1.69	2.37***	2.09	0.00	11.00
DEL ^a	3-item count of respondent's self-reported criminal offenses	0.22	0.15	.30***	0.42	0.00	1.00

^a Significance levels based on z test of proportions; otherwise based on t-test of difference in means.

^b Denotes the strains that comprise the STRAIN measure.

^c The values reported for the mean are prior to standardizing the variables.

^d Significance between males and females based on one-way ANOVA tests.

Table 2. Regressions of Self-Reported Druguse (Poisson), Statutory Offenses (Negative Binomial), and Delinquency (Logit) on Demographic Measures, Theoretical Controls, and Individual Strain Measures (n=1269).

Independent Variables	Druguse Model I			Stat Model II			Del Model III		
	e ^β ^a	Std.E.	%StdX ^b	e ^β ^a	Std.E.	%StdX ^b	e ^β ^c	Std.E.	%StdX ^d
Female	0.97	(0.06)	-1.3	0.74	(0.04) ***	-13.8	0.43	(0.06) ***	-34.4
Age	1.25	(0.03) ***	42.3	1.18	(0.02) ***	29.3	1.02	(0.05)	2.8
Black	0.81	(0.07) **	-8.6	0.81	(0.06) **	-8.6	0.92	(0.19)	-3.6
Total family income < \$15,000	1.04	(0.09)	2.0	1.01	(0.08)	0.6	0.92	(0.20)	-3.2
Total family income > \$25,000	0.92	(0.07)	-3.9	1.07	(0.07)	3.4	0.94	(0.18)	-2.4
Parent's education	1.02	(0.01)	6.2	1.01	(0.01)	2.3	0.95	(0.03)	7.3
Mother's marital status	1.26	(0.22)	11.0	1.20	(0.19)	8.5	1.03	(0.48)	1.7
Parental monitoring	1.03	(0.03)	3.3	1.02	(0.03)	1.7	1.04	(0.08)	4.3
Educational goals	0.98	(0.02)	-4.2	1.05	(0.02) **	9.4	0.98	(0.04)	-4.5
School attachment	0.91	(0.05) *	-5.6	0.89	(0.04) *	-6.8	0.77	(0.10) *	-14.3
Time spent doing homework	1.00	(0.01)	-3.3	1.00	(0.01) *	-6.0	1.00	(0.01)	-5.1
Parental attachment	0.98	(0.02)	-3.2	0.94	(0.02) **	-8.2	0.85	(0.05) **	-19.0
Deviant peers	1.37	(0.08) ***	13.7	1.40	(0.08) ***	14.7	1.58	(0.26) **	20.4
Conscience	0.95	(0.07)	-2.0	0.90	(0.06)	-4.0	0.84	(0.16)	-6.3
School strain	1.05	(0.03)	5.5	1.10	(0.03) ***	11.2	1.12	(0.03) *	13.7
Neighborhood strain	0.90	(0.06)	-12.8	0.99	(0.06)	-1.7	1.03	(0.17)	3.4
Parental emotional control	1.08	(0.04) *	5.8	1.14	(0.04) ***	9.9	1.45	(0.15) ***	30.5
Lack of parental encouragement	1.02	(0.03)	2.9	0.95	(0.02) *	-6.4	0.93	(0.06)	-8.4
Inconsistent, negative parenting	0.99	(0.03)	-2.3	1.00	(0.02)	0.0	1.02	(0.04)	3.9
Lack of autonomy	1.13	(0.02) ***	21.8	1.06	(0.02) **	9.4	1.04	(0.05)	6.8
Satisfaction Scale	1.07	(0.02) ***	12.6	1.02	(0.02)	4.7	1.03	(0.04) *	5.3
Upsetting/Disturbing Event	1.17	(0.07) **	8.3	1.15	(0.06) **	7.1	1.67	(0.25) ***	29.3
Arguments w\ parents	1.13	(0.05) **	8.4	1.18	(0.05) ***	11.5	1.14	(0.12)	9.0
Absence of parental respect	0.99	(0.03)	-1.1	1.05	(0.03) *	5.8	1.02	(0.07)	3.0
Picked-on by peers	1.03	(0.05)	2.2	1.05	(0.04)	3.6	1.20	(0.13)	13.0
Log-likelihood	-1509.07			-2251.78			-603.48		
Chi- Square	407.78***			344.19***			144.92***		
Pseudo R ²	0.12			0.08			0.12		

* p <.05; ** p <.01; *** p <.001; two-tailed tests.

^a This exponentiated beta for the Poisson and negative binomial regressions (also denoted as μ) is the factor change in the expected count for a unit increase in the independent variable, net of other independent variables.

^b This column presents the percent change in the expected count for a standard deviation increase in the independent variable.

^c This exponentiated beta for the logit regression indicates the factor change in the odds of involvement in a delinquent act versus a negative outcome for a unit increase in the independent variable, net of other variables.

^d This column presents the percent change in the odds for a standard deviation increase in the independent variable, net of other variables.

Table 3: Poisson Regression Models of Druguse^a on Controls, Strain, Strain X Sex, Gender Identity, and Strain X Gender identity^c

Independent variable	Model (d1)	Model (d2)	Females Model (d3)	Males Model (d3)	Model (d4)	Females Model (d5)	Males Model (d5)	Females Model (d6)	Males Model (d6)	Females Model (d7)	Males Model (d7)
Female	1.06	0.99			0.95						
Age	1.32***	1.28***	1.35***	1.23***	1.28***	1.35***	1.23***	1.34***	1.23***	1.34***	1.23***
Black	0.75***	0.79***	0.79*	0.79*	0.79**	0.79*	0.78*	.79*	0.81	0.79*	.79*
Family income , \$15,000 ^b	1.01	1.05	1.23	0.87	1.05	1.22	0.88	1.23	0.88	1.23	0.86
Family income > \$25,000 ^b	0.91	0.93	1.09	0.81*	0.94	1.08	0.81*	1.09	0.81*	1.09	0.80*
Mother's education in years	1.03*	1.02	1.00	1.05*	1.02	1.00	1.05*	1.00	1.05*	1.00	1.05*
Mother's marital status (1=not married)	1.02	0.98	1.00	0.96	0.99	1.00	0.97	1.00	0.96	0.99	0.96
Parental monitoring	1.02	1.03	1.07	0.99	1.03	1.07	0.99	1.07	0.99	1.07	0.99
Education goals	0.98	0.98	1.01	0.95*	0.98	1.01	0.96*	1.02	0.96*	1.02	0.95*
School attachment	0.84***	0.93	0.90	0.94	0.93	0.90	0.94	0.90	0.94	0.90	0.94
Time spent doing homework	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parental attachment	0.93***	0.97	.94*	1.00	0.97	0.94*	1.01	.94*	1.01	0.95†	1.00
Deviant peers	1.46***	1.35***	1.35**	1.40***	1.35***	1.34**	1.40***	1.35**	1.40***	1.36***	1.39***
Conscience	0.90	0.93	0.94	0.93	0.93	0.92	0.93	0.95	0.93	0.94	0.94
Strain (summary measure)		1.30***	1.32***	1.27***	1.29***	1.35***	1.24***	1.36***	1.24***	1.44***	1.19***
FemaleXstrain					1.05†						
Traditional gender beliefs						0.96	0.97				
Affinity to feminine activities								0.98	0.95		
Feminine behaviors										1.08	1.03
StrainXtraditional gender beliefs						1.06	0.96				
StrainXaffinity fem activities								0.98	1.00		
StrainXfeminine behaviors										0.91†	0.94
N	1269	1269	650	619	1269	650	619	650	619	650	619
Log likelihood	-1529.03	-1494.5	-744.45	-737.7	-1492.74	-743.14	-737.26	-744.28	-737.22	-742.56	-736.59
LR Chi ²	367.85***	436.92***	279.51***	181.37***	440.44***	282.12***	182.25***	279.84***	182.32***	283.27***	183.60***

†p <.10; * p <.05; ** p <.01; *** p <.001; two-tailed tests.

a Presented are the exponentiated betas for Poisson regressions (also denoted as μ), which are the factor change in the expected count for a unit increase in the independent variable, net of other independent variables.

^b Family income from \$15,000 to \$25,000 in 1980 is the reference category.

Table 4: NBRM of Statutory Offenses^a on Controls, Strain, Sex X Strain, Gender Identity, and Strain X Gender identity^c

Independent variable	Model (s1)	Model (s2)	Females Model (s3)	Males Model (s3)	Model (s4)	Females Model (s5)	Males Model (s5)	Females Model (s6)	Males Model (s6)	Females Model (s7)	Males Model (s7)
Female	0.78***	0.74***			0.72***						
Age	1.19***	1.17***	1.19***	1.14***	1.16***	1.18***	1.14***	1.18***	1.14***	1.19***	1.14***
Black	0.77***	0.81**	0.82	0.83‡	.82**	0.82	0.84‡	0.82	0.86	0.82	0.84‡
Family income , \$15,000 [‡]	0.99	1.01	1.05	0.97	1.01	1.05	0.97	1.05	0.97	1.05	0.96
Family income > \$25,000 [‡]	1.05	1.08	1.18	1.01	1.08	1.18	1.00	1.18	1.00	1.18	1.00
Mother's education in years	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Mother's marital status (1=not married)	1.18*	1.16*	1.18	1.11	1.16	1.18	1.10	1.01	1.10	1.19	1.10
Parental monitoring	1.00	1.01	1.05	0.99	1.02	1.05	1.00	1.05	0.99	1.05	0.99
Education goals	1.04*	1.04**	1.07**	1.02	1.04	1.06	1.02	1.07**	1.02	1.07**	1.02
School attachment	0.81***	0.88**	0.84*	0.92	0.88	0.84	0.92	0.84*	0.92	0.84*	0.92
Time spent doing homework	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parental attachment	0.91***	0.95**	0.95	0.94*	0.95	0.95	0.94*	0.95	0.94*	0.95	0.94
Deviant peers	1.49***	1.39***	1.34*	1.42***	1.39***	1.34*	1.42***	1.34*	1.42***	1.34***	1.41***
Conscience	0.86*	0.88‡	0.87	0.89	0.88‡	0.88	0.90	0.87	0.89	0.99	0.89
Strain (summary measure)		1.27***	1.36***	1.19***	1.28***	1.35***	1.19***	1.36***	1.16***	1.35***	1.15***
FemaleXstrain					1.06*						
Traditional gender beliefs						0.95		1.08*			
Affinity to feminine activities								1.03	0.94		
Feminine behavior										0.99	1.03
StrainXtraditional gender beliefs						1.01	1.00				
StrainXaffinity to fem activities								0.99	0.95		
StrainXfeminine behaviors										1.02	0.93*
N	1269	1269	650	619	1269	650	619	650	619	650	619
Log likelihood	-2289.54	-2257.38	-1076.36	-1168.74	-2254.79	-1075.83	-1166.28	-1076.29	-1167.21	-1076.32	-1166.7
LR Chi ²	268.68***	333.00***	153.80***	156.22***	338.18***	154.87***	161.13***	153.95***	159.28***	153.88***	160.31***
Pseudo R ²	0.06	0.08	0.08	0.07	0.08	0.08	0.07	0.08	0.07	0.08	0.08

‡p <.07; * p <.05; ** p <.01; *** p <.001; two-tailed tests.

^a Presented are the exponentiated betas for negative binomial regressions (also denoted as μ), which are the factor change in the expected count for a unit increase in the independent variable, net of other independent variables

^b Family income from \$15,000 to \$25,000 in 1980 is the reference category.

^c In models with both sexes, n=1269; for female-only models, n=650; in male-only models, n=619.

Table 5: Logit Models of 'Serious' Delinquency^a on Controls, Strain, Strain X Sex, Gender Identity, and Strain X Gender identity^c

Independent variable	Model (1)	Model (2)	Females Model (3a)	Males Model (3b)	Model (4)	Females Model (5a)	Males Model (5b)	Females Model (6a)	Males Model (6b)	Females Model (7a)	Males Model (7b)
Female	0.46***	0.42***			0.42***						
Age	1.01	0.97	0.98	0.96	0.97	0.98	0.96	0.99	0.95	0.98	0.96
Black	0.94	1.00	0.48*	1.53	1.00	0.48*	1.63*	0.48*	1.78*	0.49*	1.54*
Family income < \$15,000 ^b	0.89	0.93	1.13	0.75	0.93	1.13	0.69	1.11	0.76	1.14	0.75
Family income > \$25,000 ^b	0.88	0.91	0.66	1.13	0.91	0.66	1.16	0.65	1.12	0.66	1.13
Mother's education in years	1.04	1.02	1.10 [†]	0.98	1.02	1.10 [†]	0.98	1.10 [†]	0.98	1.09	0.98
Mother's marital status (1=not married)	1.16	1.10	0.75	1.37	1.10	0.75	1.43	0.76	1.36	0.74	1.36
Parental monitoring	1.01	1.04	1.20	0.98	1.04	1.21	0.99	1.21	0.98	1.21	0.97
Education goals	0.98	0.98	0.89	1.03	0.98	0.89	1.02	0.9	1.03	0.9	1.03
School attachment	0.68**	0.78*	0.77	0.77	0.78*	0.77	0.75	0.77	0.77	0.77	0.77
Time spent doing homework	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parental attachment	0.83**	0.88*	0.91	0.85*	0.88*	0.91	0.85*	0.91	0.86*	0.92	0.85*
Deviant peers	1.79***	1.62***	1.05	1.97***	1.62**	1.05	2.10***	1.05	1.96***	1.09	1.95***
Conscience	0.84	0.88	0.86	0.85	0.88	0.86	0.84	0.89	0.84	0.86	0.86
Strain (summary measure)		1.51***	1.50***	1.53***	1.50***	1.50***	1.60***	1.53***	1.53***	1.66***	1.47***
FemaleXstrain					0.97						
Traditional gender beliefs						0.98	0.95				
Affinity to feminine activities								0.87	0.76**		
Feminine behaviors										1.10	1.02
StrainXtraditional gender beliefs						1.02	1.41***				
StrainXaffinity to fem activities								0.96	0.98		
StrainXfeminine behaviors										0.86	0.93
N	1269	1269	650	619	1269	650	619	650	619	650	619
Log likelihood	-623.12	-609.66	-251.93	-344.36	-609.58	-251.91	-338.82	-251.53	-342.1	-251.34	-344.16
LR Chi ²	105.63***	132.55***	43.92***	71.40***	132.71***	43.97***	82.48***	44.72***	75.90***	45.10***	71.79***

[†] p < .10; * p < .05; ** p < .01; *** p < .001; two-tailed tests.

^a This table presents the exponentiated beta for the logit regression indicates the factor change in the odds of involvement in a delinquent act versus a negative outcome for a unit increase in the independent variable, net of other variables.

^b Family income from \$15,000 to \$25,000 in 1980 is the reference category.

^c In models with both sexes, n=1269; for female-only models, n=650, in male-only models, n=619.

CHAPTER 7

DISCUSSION

In recent years, a number of feminist researchers have stressed the limitations of applying androcentric criminological theories to females' behaviors (e.g., Chesney-Lind 1989). Their argument centers on three logical problems with criminological theories, namely that: (a) the dominant traditional theories were designed to explain male behavior, (b) the everyday lives and experiences of females differ in many important ways from that of males, and (c) theories of crime and delinquency must take these differences into account in order to explain adequately criminal behaviors. For these reasons, they claim that theories focusing on females must be created as a complement to extant theories. In contrast, other researchers (e.g., Heimer & DeCoster 1999; LaGrange & Silverman 2000; Steffensmeier and Allan 1996) are attempting to "gender" existing theories, and, in doing so, they spotlight factors supporting a position against sex-specific theories. Most importantly, while not ignoring distinctly sexed processes and constraints, a wealth of research has highlighted the similarities across sex in the causal processes leading to delinquency (e.g., Brunson & Miller 2001; Giordano et al. 2003; Miller 1998; Steffensmeier & Allan). Further, as noted by Steffensmeier and Allan (1996), although traditional theories have yet to satisfactorily describe the ways in which differences in the life experiences of females and males contribute to sex differences in type, prevalence, and context of criminal behavior, sex-specific theories are likely to be less adept if they involve separate explanations for female crime and male crime. Finally, creating sex-specific theories is inefficient; unless it has been evinced that the sexes require different theories (and it has not), I posit that we must not discard extant theories. To this end, this paper has taken the task of "gendering" a dominant theory of crime.

Both official reports and self-report studies show uniformity in male and female offending rates for status, drug, and less serious offending, with the rate of males' crime being considerably higher for the more serious and violent offenses (Belknap 2001; Steffensmeier & Allan 1996). Incorporating identity

theory's conception of gender identity, I argue that it is no coincidence that the more serious crimes, for which the sex gap in rates of offending are greatest, are deemed masculine. Rather, offenses that are considered masculine are avoided by feminine individuals and preferred among masculine individuals, compared to less masculine options because the tie between identity and behavior exists in their common meaning (Burke & Reitzes 1991); thus, the masculine character of such offenses are reinforced. I suggest that gender identity (the degree to which individuals see themselves as masculine or feminine) shapes individuals' behavioral responses to criminogenic factors, including the type and context of crime if such a behavior is chosen.

Although criminologists have a long-standing interest in understanding the effects of strain on (male) crime, substantially less interest has been directed towards understanding how this process may be sexed and gendered. Thus, following Broidy and Agnew's (1997) discussion and explication of GST's applicability to both the sex gap and female criminality as well as GST's focus on a single motivational factor to crime and incorporation of social psychological and structural factors that may be gendered or sexed, I extend GST to incorporate gender identity. Overall, this work represents an addition to GST because it incorporates theoretical arguments about gender *and* sex. Specifically, I develop explicit arguments about the influences of the *status* of being male and female and the *identity* of being masculine and feminine on delinquent behavior in response to strain.

A number of findings emerge from this study. Consistent with past work, strain is positively related to delinquency. In addition, males and females in this study experience similar amounts of strain, but contrary to expectations, males are not more likely to respond to strain with these forms of deviance than females. This is likely due to the fact that a limited number of delinquent acts were measured, and these acts were relatively mild in nature. Insofar as more serious, masculine forms of delinquency were incorporated, I would expect sex differences in the effects of strain to be manifest, with males being much more likely to respond to strain with delinquency than females (see Broidy & Agnew 1997).

The results support my hypothesis that for males with more masculine gender identities, because criminal behaviors are not inconsistent with the expectations associated with masculinity, the self-

regulatory functions of their gender identities do not prevent them from engaging in such acts in response to strain. Rather, the evidence supports the contention that males use delinquency as a way to verify their masculinity (Messerschmidt 1993). For these more masculine males, options of legitimate coping, such as crying to parents, going to counseling, or doing nothing while experiencing peer harassment, for example, are eschewed because those coping strategies are inconsonant with masculine definitions. This finding stands in contrast to those of Heimer (1996), who found that traditional gender definitions were only weakly related to a composite measure of various acts of delinquency for males. However, these results replicate those of Ford and colleagues (2002) who found that among both males and females the internalization of sex role expectations did relate to delinquent outcomes that were categorized according to seriousness as well as sex role inconsistency. In the same vein, this research suggests that males with a more feminine gender identity are less likely to respond to strain with delinquency because acts of delinquency are inconsistent with the meanings held in their gender identity standards. In other words, engaging in delinquency in response to strain would not be a way of verifying their gender identities but rather would be violative of the behavioral expectations held in their gender identity standards, and, thus, would exacerbate rather than alleviate their stress.

The results only weakly support the hypothesis that females with a feminine gender identity are constrained from delinquent coping due to the prescriptions of femininity than their counterparts with masculine gender identities. While a modicum of support is provided in the models predicting drug use, this hypothesis fails in the prediction of the outcome most inconsistent with femininity, serious delinquency. For the females in this sample, a feminine gender identity does not condition the relationship between the measures of strain and serious delinquency.

Two interesting implications emerge from the observations that deviant peers are more important for boys' than for girls' offending and that being Black has different implications for males' and females' behavior. Early criminological research portrayed female criminals as lone offenders incapable of forging friendships and as not being influenced by their peers but depicted male criminals' sociable nature and focused on the important criminogenic effects of their deviant peers (Thrasher 1927; Cohen 1955;

Wattenberg 1956). As research has accumulated, however, studies have shown that deviant peers are related to both male and female misconduct (Cairns & Cairns 1994; Fergusson et al 2002; Moffitt et al 2001; Rowe et al 1995). In fact, Giordano et al. (2003: 297) write, “the idea that peers influence adolescent female as well as male behavior patterns is so well accepted that many contemporary studies of peer effects do not include tests for [sex] interactions or explore the idea of differential pathways.”

The differential effects of deviant peers in predicting delinquency for males and females, however, suggest that their effects might not be as simple as either the early or more recent perspectives imply. It may be important to examine the way that deviant peers influence the gendered expectations held in individuals’ identity standards as well as whether a delinquent coping response to strain is acceptable, required, or constrained. Analogously, race influences serious delinquency in different directions for girls and boys. Black males were more likely to engage in serious delinquency than their non-Black counterparts, while being Black decreased the likelihood that females engaged in delinquency. Some research suggests that Black males and females are more likely to internalize more traditional gender identity standards as well as definitions favorable to violence than their White counterparts (e.g., Heimer & DeCoster 1999); furthermore, the meaning of masculinity and femininity overlaps in part with the meaning of one’s other salient identities, such as race (Burke 2003). Behaving in line with one’s gender identity, or any identity, is a form of role-taking, which is conditioned by the broader social organization in which it is embedded. Social organization is a configuration of roles or perspectives that constrains the form, content, and participants of interaction (Shibutani 1986). Thus, not only might these individuals’ racial or ethnic identity shape their behavioral responses to strain, but also race has an influence on interactions and socialization, and, thus, affects gender identity through the fashioning of internalized identity standards. Future work should pursue subgroup differences (e.g., race/ethnic subgroups) to determine if correlates of sociodemographic characteristics moderate the conditioning influence of gender identity on the strain delinquency relationship. Of import here, however, is the recognition that gender identity is an important individual level mechanism shaped by structural arrangements by which delinquent behavior is constrained or produced.

Although I believe the present research makes a meaningful contribution to existing research on the relationship between sex, gender, and delinquency, there are some limitations to note regarding the present study. First, these analyses did not capture all of the propositions of GST. There was no measure of the important intervening variable of negative affect that predisposed the actor to engage in deviance. Furthermore, the data did not allow for an assessment of non-delinquent illegitimate coping strategies, such as eating disorders, nor was there explicit focus on the opportunity structure or individual differences in beliefs towards deviant/criminal activities. GST postulates that the relationship between illegitimate and legitimate coping strategies is a function of the success and availability of legitimate coping strategies. However, the analyses only incorporate measures of several forms of delinquent coping strategies. Future work should include additional coping strategies and examine how the use of these coping strategies is conditioned by gender identity and negative emotions.

Similarly, the measures of gender identity are not ideal tests of identity theory's concept. Identity salience is not being directly measured or incorporated in this initial analysis of the conditional effect of gender identity on GST. A central argument regarding the strain/negative emotions—gender identity interaction is that the salience of individuals' gender identities plays an important part in choosing what coping mechanism to employ. While individuals may have a feminine gender identity, it may occupy a low position on their identity salience hierarchy, thus, engaging in delinquent behaviors that controvert their feminine identity standard is of little or not importance to them. While other individuals who are considered less feminine by this measure may be more inclined to avoid delinquent behaviors because their gender identities as feminine (even though it is less feminine than the formers' gender identities) is highly salient. This, of course, is a theoretical prediction requiring direct empirical examination. Unfortunately, no large, public-use data of which this author is aware has measures of GST variables, masculinity/ femininity, *and* identity salience. And, while in the present analyses, masculinity/femininity is utilized as a rough proxy for gender identity salience, a more direct measure is ideal. Future experimental work may be needed to incorporate predictions based on the salience of individuals' identities.

The age of this data is a potential limitation. Although the National Survey of Children are now more than 20 years old, they are the only public use data that contain rich information from a nationally representative sample on all of the constructs addressed in this study. Moreover, given that the sex ratio in delinquency has not changed much since the early 1980s, (e.g., Henggeler 1989; Liu & Kaplan 1999; Steffensmeier & Allan 1996) and research indicates that sexed socialization patterns appear to have remained relatively fixed since the 1970s (Buetel & Marinini 1995; Chesney-Lind & Shelden 1997), I believe that the age of the data does not limit the conclusions study. I advise caution before generalizing to more inclusive contemporary populations. Future research must investigate whether data from the 2000s would replicate those of the 1980s. Finally, as previously mentioned, this study is based on cross-sectional data, which raises questions about the time-ordering of the central variables. While future work with prospective longitudinal data is needed to confirm the applicability of the conditioning effects of gender identity on the GST process leading to delinquency, Agnew suggests (1989; 2002: 51) that some of the strain measures utilized here are relatively stable over time, and “that strain has a larger causal effect on delinquency than delinquency has on strain.”

CHAPTER 8

CONCLUSION

The present study makes several contributions. First, it addresses the long ignored but important question of why females engage in delinquency. Second, this analysis demonstrates the applicability of an extant theory of delinquency, General Strain Theory, to understanding and explaining female and male behavior. Third, this study acknowledges that males and females are not homogenous groups and extends GST by incorporating gender identity into the paradigm. Fourth, the results indicate that gender identity does condition the relationship between strain and delinquency in the GST causal sequence. Finally, the results evince the importance of focusing on specific aspects of the female experience, rather than those of the stereotypical delinquent (young boys).

The results confirm the GST postulate that strain is significantly and positively associated with delinquency. A second contribution of this work is that it demonstrates the applicability of an extant theory towards explaining female delinquency. Although the contention that traditional theories are incapable of elucidating why some girls commit delinquent acts may be true for some theories, these findings prove that it is premature to dismiss all existing theories' applicability to female behavior. I posit GST's capacity to fuse psychological and structural factors conditioning the response to strain and to incorporate experiences peculiar to females, as well as its ability to acknowledge the heterogeneous experiences and characteristics of young girls and concomitant differential internal and external constraints girls confront, make it a choice theory to explain female *and* male delinquency.

A third contribution of this study is that it evinces the value of recognizing and incorporating the heterogeneity within gender categories. The primary contribution of this study is the finding that the gender identity of boys plays an important role in mediating the relationship between strain and delinquency. Because their gender identity is more salient than that of their less masculine counterparts, their commitment to acting out masculinity is stronger, and conversely, the results suggest that males with

a feminine gender identity have an aversion to violating expectations and norms by engaging in criminal behaviors. While only supported weakly, given that delinquent behavior is deemed a “masculine” activity, more research is needed to examine the postulate that the more feminine the girl, the more deviant the delinquent act, and thus, delinquency becomes “doubly deviant.” For girls with a more masculine gender identity, on the other hand, this gender role barrier to delinquency is much weaker or nonexistent. To be sure, I am not arguing that girls or boys with a more masculine identity are more prone to deviant or destructive behaviors, as delinquency is only one of many forms of illegitimate coping. One could even make a plausible argument that some forms of delinquency are preferable to other, more “feminine” illegitimate coping strategies, such as eating disorders, self-mutilation, or risky sexual behaviors, which can be unnoticed and deadly.

A central question in the feminist and criminological literature is whether the same theories can apply to both males and females. This research shows that strain is one of the strongest correlates of delinquency for both males and females. While the proposed model fared better in predicting boys’ than girls’ offending, it appears that this model holds promise for males and females. Unfortunately the data set did not allow for an ideal test of the conditioning effect of gender identity. The results suggest, however, that both sex and gender must be considered when examining the etiology of crime. Future research should examine how negative emotions are conditioned by gender identity as well as augment the variety of deviant responses in the analyses. Further research is also needed to confirm and specify the process leading to the increased probability of delinquent responses to strain for girls with more masculine gender identities. The results suggest that with extensions incorporating experiences unique to females, existing theories, such as GST, can explain why females *and* males engage in delinquent behaviors.

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APPENDIX A

In the past, social scientists utilized OLS regression to fit models with dependent variables that represented counts of something. Although, usually OLS regression is adequate, count models are more appropriate and modern statistical programs have facilitated both estimation and interpretation of these models.

Both the Poisson regression model (PRM) and the NBRM are based on the Poisson distribution, which is defined as follows: y is a dependent variable representing the number of times that an event has occurred during a specified time range (thus, y has only positive integer values). The variable y has a Poisson distribution with parameter $\mu > 0$, if:

$$\Pr(y = r) = \mu^y(e^{-\mu})/y! \quad \text{for } y = 0, 1, 2, \dots$$

where μ is the expected value (mean) of y and $y! = r(r-1)(r-2) \dots (1)$. While μ can be any positive number, y can only take on integer values. The Poisson distribution has four essential properties:

- (1) As μ increases, the mass of the distribution moves to the right, specifically

$$E(r) = \mu$$

The parameter μ is known as the rate because it is the expected number of times that an event has transpired per unit of time. μ can also be referred to as the mean or expected count (Long 1997).

- (2) Equidispersion—the variance equals the mean:

$$V(y) = E(y) = \mu$$

In most practical applications, y has overdispersion; in other words, the variance is often larger than the mean (Allison 1999).

- (3) As μ increases, the probability of zeros decreases. For most count variables, the Poisson distribution underpredicts the number of zeros (Allison 1999).

- (4) As μ increases, the Poisson distribution ever more approximates a normal distribution (Long 1997).

As noted in the text, an essential assumption of the Poisson process is that events are independent. In other words, past occurrence(s) of an event does not affect the probability of a future occurrence. The Poisson distribution can be derived from the Poisson process, which is a simple stochastic process (Long & Freese 2003). A direct application of the Poisson distribution cannot fit any real data because the rate that an event occurs, μ , differs across individuals. The Poisson distribution does not account for this heterogeneity, and causes overdispersion in the marginal distribution (Long 1997).

The failure of the Poisson distribution to account for heterogeneity across observations leads to the PRM, where the number of events y has a conditional mean depending on the values of the independent variables. The PRM can be considered a non-linear regression model, with errors equal to $\varepsilon = y - E(y|x)$, and the errors are heteroskedastic (Allison 1999). In this model, variation in μ is introduced through observed heterogeneity—different values in independent variables result in different values of μ ; however, all individuals with the same independent variables have the same μ (Long 1997).

The PRM rarely fits in practice because, like the Poisson distribution, it requires equidispersion in the outcome y . Most counts have overdispersion, causing the standard errors in the PRM to be biased downward, resulting in spuriously large z -values and a concomitant incorrect rejection of the null hypothesis. The NBRM is the first extension of the PRM which allows the conditional variance of y to exceed the conditional mean (Long & Freese 2003). The most common motivation for the NBRM, as opposed to the PRM, is unobserved heterogeneity. In the PRM, the conditional mean of y given the independent variables is known: $\mu = \exp(x_i\beta)$. In the NBRM, the mean μ is replaced with the random variable λ . The structural model for the NBRM is given as:

$$\lambda = \exp(x_i\beta + \varepsilon_i);$$

Of course, like all error terms in regression models, ε is the random error assumed to be uncorrelated with the independent variables. One can conceive of ε as: (a) the combined effects of unobserved variables that have been omitted from the model, or (b) a source of pure randomness. Thus, in the NBRM, variation in the expected count λ is due *both* to variation in the independent variables and to unobserved

heterogeneity introduced by the error term ε (Long 1997). Therefore, for a given combination of values for the independent variables, there is a distribution of λ 's rather than a single μ .

For reasons analogous to OLS regressions, the NBRM is not identified without an assumption about the mean of the error term ε . The assumption implies that the expected count λ after adding the unobserved heterogeneity, is the same as it was for the PRM ($\Sigma\lambda = \Sigma\mu$). The NBRM estimated distribution corrects a number of fitting problems often accompanying the use of the PRM, and are as follows: (a) the variance of the NBRM distribution exceeds that of the PRM distribution for any given mean, (b) the increased variance in the NBRM leads to greater probabilities for small counts (which is usually characteristic of count data), and (c) there are slightly higher probabilities for larger counts in the NBRM distribution. The larger conditional variance in y in the NBRM increases the relative frequency of both low and high counts (Long & Freese 2003).

As noted twice previously, the PRM assumes that the occurrence of an event does not affect the relative probability of an event occurring in the future. The NB distribution, on the other hand, is derived from a contagion process; contagion occurs "when individuals with a given set of x 's initially haven the same probability of an event occurring, but this probability changes as events occur" (Long 1997: 236). Contagion violates the PRM assumption, but in the NBRM unobserved heterogeneity and contagion can generate the same count (Long).

The NBRM is superior to the PRM for analyses of most social science data where every possible influence on the outcomes of interest is not able to be measured. A likelihood test will be conducted, however, for each model with the NBRM to determine whether it is a significantly better fit than the PRM.