ABSTRACT

Title of Dissertation: REVISITING THE ROLE OF DELINQUENT ATTITUDES ON CRIMINAL BEHAVIOR

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By employing global attitude measures, which ask respondents to evaluate the abstract idea of a behavior absent of context, rather than specific measures that inquire about the appropriateness of a behavior under various circumstances, prior work has failed to capture the complexity of delinquent attitudes. As a result, research has: 1) not adequately assessed the dimensionality of the attitude construct; 2) potentially mis-specified the attitude-delinquency relationship and; 3) been unable to investigate the intersection between attitudes and situational contexts in the emergence of delinquent behavior. This dissertation seeks to address these gaps using two sources of data. The first comes from a sample of 11th graders (n = 223) from a large public high school in the Pacific Northwest and the second comes from four waves of the Gang Resistance Education and Training (G.R.E.A.T.) Evaluation, a longitudinal study of around 1,400 adolescents from six cities across the United States. The results raise questions about the conclusions that have been made from studies using global attitude items. First, in both

data sets attitudes form multidimensional, crime-specific constructs (e.g., attitudes towards fighting and attitudes towards theft). Second, for most models, the factors constructed using specific attitude items have a larger standardized effect on behavior and behavioral intentions and lead to better model fit than do the global items. Third, specific attitudes towards fighting demonstrate discriminating effects on behavioral intentions, indicating that behavior in context is related to the attitude toward that behavior, in that specific context. There was minimal evidence for discriminating effects with theft attitudes, however. Collectively, these results call for a renewed focus on the complex relationship between attitudes, situations, and delinquent behavior.

REVISITING THE ROLE OF DELINQUENT ATTITUDES ON CRIMINAL BEHAVIOR

By

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CHAPTER 1: INTRODUCTION

A central goal of criminologists is to identify the factors that increase an individual's propensity for deviating from societal rules. For many of the field's most prominent theoretical perspectives, the key to understanding individual differences in this propensity rests in the attitudes that individuals hold. Allport (1935: 810) defined attitudes as the evaluative feelings, favorable or unfavorable, towards particular objects or behavior that exert a "directive and dynamic influence upon an individual's response [in] situations with which it is related". In this way, attitudes relate to behavior because they reflect an individuals' *potential for action* by determining when (if ever) a certain behavior is deemed appropriate (Thurstone, 1931) This evaluative characterization of attitudes is consistent with differential association (Sutherland, 1947), social learning (Akers, 1998), and symbolic interaction (Matsueda, 1992) perspectives, all of which assert that the variability in adolescent delinquency can, at least in part, be explained by variability in the exposure to attitudes that are favorable to delinquent conduct (Akers, 1996; Matsueda, 1988, 1992; Matsueda and Heimer, 1987; Sutherland, 1947). For example, adolescents who view delinquency as right, warranted or justifiable under certain circumstances have a greater (non-zero) potential for engaging in delinquent behavior, whereas those who view such behavior as wrong or unwarranted under most conditions have a low (or no) potential for engaging in such action (Akers, 1998; Sutherland, 1947; see also Matsueda, 1988; Wikstrom, 2006).

The idea that attitudes guide delinquent behavior may seem intuitive for many criminologists, but scholars nonetheless have criticized attitudinal perspectives on both theoretical and empirical grounds. Hirschi (1969) and Matza (1964) have challenged the

notion that there is variation in attitudes towards delinquency, arguing instead that most—if not all—adolescents hold attitudes against delinquent behavior. Extant research has been supportive of this criticism, finding that the overwhelming majority of adolescents report that engaging in delinquent acts is "wrong" or "very wrong" (Agnew, 1994; Elliott and Menard, 1984; Reed and Rose, 1998). As Hirschi (1969) points out, this lack of variation in delinquent attitudes is detrimental to attitudinal perspectives for two related reasons. First, in order for attitudinal perspectives to offer important contributions to the understanding of delinquency, there must necessarily be meaningful variation in attitudes (the main independent variable) across individuals. If little to no variation exists, then the fundamental premise of attitudinal perspectives is flawed. Moreover, if attitudes determine individuals' potential for delinquent action, then the limited variation in attitudes also means that delinquency should be exceptionally rare among adolescents when, in fact, such behavior is relatively common (Moffitt, 1993). Indeed, the limited variation in delinquent attitudes is not a good and consistent predictor of antisocial behavior. Several studies have indicated that many individuals who hold attitudes unfavorable to delinquent conduct nonetheless engage in delinquency (Barriga et al., 2008; Gottfredson and Hirschi, 1990; Hirschi, 1969; Megens and Weerman, 2010), and individuals who actually do hold attitudes favorable to delinquency offend at a lower rate than attitudinal perspectives would likely predict (Kornhauser, 1978; Matza, 1964). As a result, several scholars have concluded that "any relationship between [attitudes] and delinquent conduct is weak at best" (Tarry and Emler, 2007, p. 178; see also Felson, 2014; Hirschi, 1969; Menard and Huizinga, 1994).

Such conclusions may be premature, however. Work in other fields has noted that there is an important distinction between *attitudes towards behavior* and *attitudes towards behavior in specified contexts*. The former is typically measured using what are known as "global" measures of attitudes (Ajzen, 1989). These measures—which are the most common measures used in delinquency research—simply ask respondents to evaluate the abstract idea of a behavior without providing any context in which the behavior might occur (e.g, "how wrong is it to steal something from another person"?). As Rokeach and Kliejunas (1972) note, such global measures are inappropriate for measuring attitudes towards behavior because behavior does not occur absent of context; rather, it is heavily influenced by situational circumstances (see also Campbell, 1963; Fishbein and Ajzen, 1975; Pickens, 2005; Schuman and Johnson, 1976). In fact, appraisals of behavior may be so contingent on situational circumstances that the abstract evaluations captured by global measures could be wholly irrelevant for understanding action (Prislin and Ouellette, 1996; Rokeach and Kliejunas, 1972). Consequently, several scholars have called for the use of specific attitude items that capture appraisals of behavior in specified contexts or circumstances (Ajzen and Fishben, 2005). Rather than assessing some abstract evaluation of a behavior, these measures attempt to capture attitudes about behavior as an action response under defined circumstances (e.g., how wrong is it to steal food when you are starving and cannot afford food?). Arguably, these measures should be better indicators of one's true potential for action because they prime individuals to consider the appropriateness of a behavioral response under various circumstances (Ajzen, 1989).

The distinction between attitudes towards behavior and attitudes towards behavior *in context* is not one of mere semantics; rather, the two different forms of measuring attitudes can lead to different conclusions—e.g., one might express an unfavorable attitude towards the idea of fighting in the abstract sense while at the same time believe it is acceptable to fight when being disrespected or threatened. Furthermore, the importance of attitudes about behavior in context is consistent with the aforementioned preeminent attitudinal perspectives in criminology. For instance, in discussing differential association theory, Matsueda (1988) highlighted the complexity of delinquent attitudes, noting that definitions favorable to crime can take two forms: 1) abstract precepts of the law and; 2) the concrete situations in which the precepts do or do not apply. According to Matsueda, it is these latter, more specific, attitudes that are most important for understanding the potential for delinquent conduct because most individuals do not hold outright oppositional attitudes that make crime morally correct, but hold exceptions that define the circumstances in which delinquent action is appropriate (see also Sykes and Matza, 1957). These exceptions allow individuals to excuse behavior viewed inappropriate, in the abstract sense, by deflecting blame away from themselves. Akers has (1996) offered a similar argument, stating that definitions favorable to crime can be both global and specific. Global definitions represent an individual's overall "global" beliefs towards offending behavior and specific attitudes define one's given situation, acting as discriminating stimuli that provide cues that can facilitate law violation in the right kind of circumstances. He notes that specific definitions favorable to crime are not just exceptions for those who hold global attitudes against delinquency, but that they also serve to define when it is or is not appropriate to engage in a specific delinquent act

among those who hold global attitudes favorable to delinquency. Akers' (1996) point is that even individuals who report global beliefs favorable to the abstract idea of antisocial conduct are likely to vary in their attitudes regarding the number and types of situations in which violating the law is appropriate. Such distinctions about the type of attitudes being considered ultimately raise questions about the manner in which delinquent attitudes have been measured in the past, and challenges how one conceptualizes the attitude-delinquency relationship.

Shifting our conception and measurement of attitudes toward appraisals of behavior *in specific circumstances* can address three major existing gaps and criticisms in the criminological literature. The first gap concerns the underlying nature of the attitude construct. Simply put, we know little about the measurement properties of a construct meant to capture attitudes in context (Matsueda, 1988). To date, scholars have largely assumed that delinquent attitudes form a single underlying trait—as is evident by the tendency to sum multiple (global) attitude items together (Carson, 2013; Carson and Esbensen, forthcoming; Megens and Weerman, 2010). The implication of this unidimensionality assumption is that the underlying structure of the attitude construct, and its subsequent relationship with behavior, is relatively simple: an individual's potential for delinquent conduct can be captured by a single value and this value should represent an individual's potential for delinquent action across a wide range of crime types and situational contexts. It is certainly possible that an individual's approval of delinquency is largely a function of a single, underlying trait, but there is also reason to believe that the attitude construct is multidimensional. For instance, it may be that: 1) each attitude about a behavior in a particular circumstance represents its own unique

definition favorable to crime (specific attitudes are independent of one another); 2) attitudes coalesce around the situations or contexts (e.g., the victim "deserved" it) or; 3) the items form offense-specific attitude constructs. If delinquent attitudes are indeed multidimensional, this would suggest that individuals formulate delinquent attitudes in a much more complex manner than has previously been discussed, and that they may rely on different attitudes depending on the crime type (e.g., fighting versus theft) or situational context. Under such circumstances, the tendency to engage in delinquent conduct would not accurately be captured by a single value, but would require multiple values depending on the dimensionality of the underlying construct. Therefore, identifying the correct dimensionality of delinquent attitudes, which can only be accurately captured by incorporating various circumstances into the evaluations of specific delinquent acts, can shed considerable insight into the processes of how individuals use attitudes as a guide for delinquent action in situations (Matsueda, 1988).

A second, and related, benefit of viewing attitudes as the potential for action in context is that it provides a more concrete, and in turn perhaps a more empirically valid, conceptualization of the attitude-behavioral relationship. To be sure, one of the central criticisms of attitudinal perspectives is rooted in the fact that extant research suggests attitudes are weak predictors of antisocial behavior. However, if researchers have not yet measured attitudes properly – truly capturing "action potential" – then prior research may fail to give insight on the empirical relationship between attitudes and behavior. For instance, when assessing whether attitudes about fighting predict fighting behavior, one might wrongfully conclude that individuals who report that fighting is "wrong" based on a global, abstract measure (i.e., context-less) have no potential for fighting, when in

actuality those same respondents may approve of fighting under certain circumstances (Rokeach and Kliejunas, 1972; see also Matsueda, 1988; Sutherland, 1947). In this way, one's potential for delinquent action is arguably not captured by the global attitudes towards the idea of a behavior, but by the number and type of circumstances in which he/she views delinquency as an acceptable behavioral response. If operationalizing delinquent attitudes (whatever their dimensionality) through the use of specific attitude items truly offers better insight into this construct, then this more specific measure should perform notably better than global measures in explaining delinquency.

The story may not end there, however. The notion that individuals hold specific attitudes towards behaviors under certain circumstances implies that the situational circumstances themselves are important for understanding the facilitation of delinquent behavior. In measurement terms, this would suggest that the individual items assessing attitudes in specific circumstances are of substantive importance above and beyond their relationship to any general, latent trait(s) that may exist. At first glance, this may seem at odds with the two previous research questions. After all, the idea that individual items retain substantive importance after accounting for the underlying factor(s) seems to contradict the basic premise that composite measures of delinquent attitudes reflect one's general potential for delinquent action. However, when items come together to form a more general latent trait, the items rarely possess equivalent factor loadings, which can suggest that responses to specific items are at least partially a function of the specific circumstances that characterized each item (i.e., the characteristics of the circumstances themselves are contributing to responses to the items beyond what is captured by the latent trait(s)). Put simply, even if the results of the first research question indicate

unidimensionality, the individual items may still be of substantive importance because they discriminate the circumstances in which delinquency is acceptable. Ajzen and Fishbein (1977) note that this apparent paradox revolves around the idea that both attitudes and behaviors can be measured at different levels of specificity, and that in order to understand delinquent conduct, attitudes needs to be measured at the same level of specificity as the behavior under consideration—what is known as the *principle of compatibility* (Ajzen, 1988). For instance, if one is interested in understanding delinquent tendencies across all contexts in general (e.g., how many times in the last year someone has been in a fight) then one should use a composite measure of attitudes that taps into one's overall potential for delinquent action. If, however, one is interested in the potential for action in a specific situation (e.g., how likely is it that a person gets in a fight after being disrespected) then one should measure an individual's attitudes in that specific circumstance.

This offers another level of complexity to attitude-delinquency research, but one that is fully consistent with the primary criminological theories that invoke attitudes as proximate causes of delinquency. These theories propose that delinquency is due to more than just some underlying propensity for delinquency; an individual's potential for delinquent action changes depending the situational context one finds himself in—what Sutherland (1947) referred to as the person-situation complex (see also Hay and Forrest, 2008; McGloin, Sullivan and Kennedy, 2012; Wikstrom, 2006). Accordingly, this study will examine the discriminatory role that specific situational circumstances have in understanding delinquent behavior by estimating whether the specific attitude items can explain why individuals would respond to the same situational circumstances (e.g.

disrespect) in different ways while accounting for the more one's general latent attitudes towards delinquency—i.e., assessing whether specific attitude items have discriminatory power.

The purpose of this dissertation is to contribute to the attitude-delinquency literature by addressing the three gaps described above. More specifically, this dissertation will: 1) identify dimensionality of an attitude construct that accounts for behavioral context; 2) determine whether an attitude measure that accounts for situational context is better able to account for variation in delinquency than is a global, abstract measure; 3) examine discriminatory power of individual attitude items to predict delinquent behavior under specific circumstances. It does so using two data sets. The first comes from a sample of 223 11^{th} graders from a large public high school in the Pacific Northwest who completed a survey specifically designed to address these three areas of inquiry (the PNW dataset). Second, this study also relies on four waves of data from the Gang Resistance Education and Training (G.R.E.A.T.) evaluation. The G.R.E.A.T. data do not afford the opportunity to test all three questions, but the longitudinal nature of the data allow for an assessment of the temporal ordering of the attitude-delinquency relationship. Further, these data cover a broader age range of adolescents, which can address concerns that the restricted age-range may limit the generalizability of the PNW dataset.

CHAPTER 2: THE IMPORTANCE OF ATTITUDES IN CRIMINOLOGY

Allport (1954) describes attitudes as one of the "primary building stones in the edifice" of social sciences (p. 45). The assumed importance of attitudes in understanding social behavior is evident by the development of a large number of sociological and psychological theories that accorded attitudes a seminal role during the early to mid-20th century. James (1890), Thomas and Znaniecki (1918), Wirth, (1931), Allport (1935), Mead (1934), Maslow (1948), and Heider (1950) all developed theories of social behavior where attitudes were one of, if not *the*, proximate causes of action. For instance, consider Cooley's (1902) theory of the looking glass self, which helped lay the foundation for symbolic interactionism (see also Mead, 1934). He viewed intrapersonal characteristics—such as attitudes—as resulting from the complex interaction between the individual and his/her primary social groups. It is through the formation of these attitudes that individuals form their own social identity and an image of themselves which sets the tone for how an individual will act in future social interactions. Cooley's perspective laid the foundation for the sub field of social psychology, highlighting the importance of attitude formation for understanding how individuals define and react in different social settings. Perhaps not surprisingly, Thomas and Znaniecki (1918) originally defined the field of social psychology as the scientific study of attitudes. The point is that many of the most prominent theoretical perspectives in the social sciences were founded on the idea that there was nearly a one-to-one correspondence between attitudes and behavior (Zanna and Fazio, 1982).

Over time, two main explanations have been offered for the assumed relationship between attitudes and behavior, both of which draw from the symbolic interactionist

perspectives developed by Cooley (1902) and Mead (1934). The first is the idea that individuals act in accordance with their attitudes in order to avoid psychological distress (Festinger, 1954; Miller and Tesser, 1989). In his seminal theory of cognitive dissonance, Festinger (1954) posited that the fact that individuals hold positive or negative evaluations of a behavior implies that there is psychological motivation to maintain consistency between behavior and attitudes. When faced with a situation where potential behavioral options conflict with one's own attitudes, individuals opt for actions that are consistent with their attitudinal beliefs in order to prevent the feeling of cognitive discomfort. Similarly, individuals largely opt to avoid engaging in behaviors in which they hold negative evaluations towards because they anticipate that they will experience negative psychological discomfort for selecting a behavioral option that is incongruent with their attitudes (see also Elliott and Devine, 1994). Thus, for instance, when an adolescent who holds attitudes against stealing is presented the opportunity to steal, s/he should abstain in order to avoid mental discomfort (Ajzen, 2005; Festinger, 1954; Elliott and Devine, 1994).

A second explanation holds that attitudes shape the way in which individuals interpret a situation and filter what behavioral responses are appropriate. Allport (1935) argued that without guiding attitudes, situational contexts are meaningless events; it is attitudes that provide meaning in an ambiguous universe (see also James, 1890). But the perceptions of the context are just one part of how an individual defines the situation. One also uses affective (i.e., evaluative) attitudes to determine what is or is not normatively appropriate in the given situational context. Fishbein and Ajzen (1975), for instance, posited that individuals begin by employing their attitudinal beliefs to define the

meaning of a situational context, and then use these attitudes to filter behavioral options and decide on a course of action. In this way, attitudes are viewed by some as stimuli that are used by individuals to both interpret how an individual defines a situation and also cue one's appraisals on what behaviors are normatively appropriate in those circumstances.

Although these explanations do differ in some respects, it is worth noting that they share some important qualities in their conceptualization of attitudes and their relationship to behavior. First, attitudes are conceived as an individual's affective evaluations of a behavior (i.e., the psychological tendency to view a behavior as favorable or unfavorable; Allport, 1935; Festinger, 1954; Mead, 1934). Second, though these preeminent perspectives use different language such as "mental readiness to act" (Allport, 1954), "dissonance avoidance" (Festinger, 1954) and "plans of action" (Mead, 1934), they all argue that attitudes are a central determinant of one's *potential for action* (Thurstone, 1931; see also Campbell, 1950; Fulson, 1942). The "potential for action" refers to the idea that an individual's tendency to engage in a specific behavior is, at least in part, a function of the favorable or unfavorable affect held towards that behavior. Individuals who hold negative attitudes towards a behavior are expected to have little to no potential for engaging in that behavior, whereas those who hold a behavior in a positive light are expected to have a relatively high potential for such action (Allport, 1935; Mead, 1934; Thurstone, 1931).

Importantly, the prominence of these attitudinal perspectives was at their peak in sociology when attitudinal perspectives in criminology initially emerged. In an attempt to address criticisms that the field of criminology was eclectic and atheoretical (Michael and

Adler, 1933), Sutherland (1947) sought to organize the study of crime under the field of sociology, and to identify a scientific generalization that could be a necessary and sufficient explanation of crime (Matsueda, 1988; see also Laub, 2006; Laub and Sampson, 1991). Sutherland (1947) was specifically interested in identifying an intervening mechanism that could explain the multiple observed correlates of criminal behavior (e.g., broken homes, age, and social class). He argued that criminal behavior, like all human behavior, is learned through the structured interactions with others. Individuals who engage in crime are not biologically or pathologically different from non-offenders as many scholars at the time believed (Glueck and Glueck, 1950; Hooton, 1933), but instead engage in delinquency because they have been socialized by others to be criminal. The content of learning includes two elements. One element is the techniques and skills for committing crime, which can vary from simple techniques (hitting someone) to more complicated acts (stealing a car). The second, and arguably more important element, captures the attitudes one learns that either define a law or social norm something that should be observed or broken. For Sutherland, criminal behavior emerges when individuals learn an excess of attitudes favorable to law violation over definitions unfavorable to law violation (Sutherland, 1947). Through their structured interactions with others, individuals acquire attitudes that define when, and in what situations, laws and social norms are meant to be followed or violated. Thus, consistent with the prevailing sentiment in sociology at the time, differential association defines the proximal cause of variations in antisocial behavior as the variability in the extent to which individuals define delinquency as right or wrong (see also Matsueda, 1988).

The concept of definitions was underdeveloped in Sutherland's initial works (Sutherland, 1937, 1947). He claimed that definitions consist of the motives, drives, attitudes, rationalizations and definitions of situations (Sutherland and Cressey, 1978), but he did not operationalize the concept of definitions further (see Jeffery, 1965). Both Akers (1996) and Matsueda (1997) have suggested that Sutherland's (1947) idea of definitions can best be conceptualized as attitudes that motivate deviant behavior by deeming it appropriate in specified situations and, thus, delinquent attitudes can be complex and multifaceted. As Matsueda (1988) states, individual variations in antisocial attitudes can be classified in three categories: where some individuals "define a given law as a rule to be followed under all circumstances; others define that law as a rule to be violated under certain circumstances; still others may define the law as a rule to be violated under virtually all circumstances" (p 280). In this way, one's definitions favorable or unfavorable to crime relate to behavior in a similar fashion as found in the more general attitudinal perspectives described above—by describing an individual's potential for action. Those who hold attitudes favorable to delinquency in virtually all situations have a higher potential for delinquent action than those who view delinquency as acceptable only in some circumstances, who, in turn, have a higher potential for delinquent action than those who view delinquency as inappropriate across all situations (Akers, 1998; Cressey, 1954; Matsueda, 1988; Sutherland, 1947).

Sutherland's (1947) view that criminal behavior was influenced by criminal definitions/attitudes was, at least in part, initially adopted by several criminological theorists, including Cohen (1955), Cloward and Ohlin (1960) and Wolfgang and Ferracuti (1967). Still, the most prominent theoretical perspectives that extended

Sutherland's (1947) concept of definitions include Sykes and Matza's (1957) techniques of neutralization and Akers' (1998) social learning theory. Sykes and Matza (1957) were critical of Sutherland's failure to elaborate on the content of definitions favorable to delinquency and sought to fill this gap in their neutralization theory. They began by rejecting the idea that some individuals held attitudes that outright approved of delinquent conduct, as is argued in many subcultural theories of delinquency (e.g., Cohen, 1955). Instead, Sykes and Matza (197) argued that individuals generally hold attitudinal beliefs unfavorable to antisocial behavior (e.g., that fighting, in general, is wrong), but draw upon and extend legally prescribed excuses to neutralize their moral beliefs against offending. The legal code prescribes that criminal behavior can be legally excused under certain conditions, such as self-defense, and these legally defined excuses can be exaggerated by individuals to allow for the commission of criminal acts in a broader range of situations than are actually allowed by the law. For example, the legal justification of self-defense may be extended from the "imminent physical threat" legally prescribed in law to "defending one's honor from disrespect". Thus, Sykes and Matza (1957) highlight that legal codes are stated as generalizations, but that individuals and groups define which specific situations fall under those vague legal categories. The point is that definitions may not serve as motivating attitudes that require criminal behavior, but as extensions of the general legal code that allow individuals to neutralize criminal acts under certain conditions.

Akers' (1998) social learning theory also elaborated on Sutherland's concept of definitions, and offered a more expansive discussion on how attitudes influence behavior. Akers (1996) describes definitions as the "attitudinal sets brought into a situation that

make law breaking seem appropriate in that situation" (p. 238). Like Sutherland, Akers (1996) views individuals as cognitively engaged in the situations in which they are present, and are thoughtful and considerate of how the circumstances align with their attitudes (see also Thomas and McGloin, 2013). Thus, in each situation, individuals reflect on potential behavioral options and select a behavioral choice that is congruent with their attitudes.

Although Akers (1996) is similar to Sutherland (1947) in arguing that attitudes affect one's potential for delinquent action, he more explicitly drew on the language used by behavioral learning theorists to argue that the influence attitudes have on behavior can be both direct and indirect. Attitudes can influence behavior directly because "part of the package of rewards and punishments is the discrepancy between one's beliefs and deeds" (pp. 239-240). Therefore, if the delinquent act is congruent with or allows one to demonstrate adherence to a certain norm or set of values, that might provide enough positive motivation for engaging in the act, because individuals anticipate cognitive congruence as being pleasing and/or incongruence as aversive. In this way, Akers (1998) retains Sutherland's central idea that attitudes provide a direct motivation for engaging in delinquent behavior because cognitive consistency is psychologically appealing to individuals.

Social learning theory also argues that attitudes can indirectly influence delinquent behavior by acting as "discriminative stimuli" or cues that signal that a certain behavior is likely to be socially reinforced or punished by others in that situation. Because individuals acquire delinquent-related attitudes through their interactions with others, it is likely the transmission of these attitudes act as cues as to when these

associates would reinforce/punish delinquent behavior. If an individual's associations (i.e., parents, peers) transmit the definition that it is acceptable to fight when being disrespected, individuals may interpret that as evidence that those peers will provide status and respect for fighting when being disrespect. In this way, attitudes do not necessarily increase one's delinquent potential by providing direct motivation for delinquency in the sense that is implied in Sutherland's work (1947), but rather serve as cues as to when delinquent behavior will be rewarded or punished by others.

In sum, the idea that favorable or unfavorable attitudes are indicative of one's potential for delinquent action is at the core of several theoretical perspectives (Akers, 1998; Sutherland, 1947; Sykes and Matza, 1957; see also Wikstrom, 2006). And, while these perspectives do differ in some respects, they share some important qualities in terms of how the process of delinquency develops. Individuals are socialized through the structured interactions with others to believe which laws and social rules are meant to be observed, and in what circumstances it is acceptable for such norms to be violated. When encountering situations in which delinquency may be a potential behavioral option, individuals draw on their attitudinal beliefs to guide their behavioral actions in order to avoid mental and social pains, or to gain mental and social rewards. The two central predictions of these attitudinal perspectives, then, are that: 1) there is important variation across individuals in the extent to which delinquency is viewed as appropriate, and 2) this variation is a primary explanation of individual differences in offending because delinquent potential can, at least in part, be captured by attitudinal beliefs—i.e., individuals will refrain from delinquency when they think it is wrong, and be more likely to engage in delinquency if they think it is an acceptable course of action. These central

notions of attitudinal perspectives have not gone unchallenged by rival theorists, however.

Criticisms of Attitudinal Perspectives

In the mid-20th century several sociologists started to scrutinize the attitude-behavior relationship and began to publish findings that questioned the core propositions of attitudinal perspectives (Deutscher, 1966; Wicker, 1969). For example, Blumer (1955) argued that the attitude concept was too empirically ambiguous to be of theoretical interest (i.e., not well defined), and that scholars had not demonstrated convincingly that individuals consider attitudes before choosing an act. Wicker (1969) went as far as to claim that attitudes do not influence behavior and that it would be beneficial for social scientists to abandon the entire concept. It did not take long for scholars in criminology to embrace these criticisms and challenge the fundamental propositions of attitudinal perspectives, with the most vocal critics being Ruth Kornhauser, Travis Hirschi and David Matza. The criticisms lobbed at attitudinal perspectives of delinquency can be divided into two categories: conceptual and empirical.

CONCEPTUAL CRITICISMS

Kornhauser (1978) provided a thoughtful critique of existing criminological theories that sought to identify each perspective's assumptions of human nature and the primary causal process leading to the development of antisocial behavior. One set of theories she evaluated was what she labeled "cultural deviance theories", which included Sutherland's differential association and Akers' social learning perspectives. Kornhauser (1978) recognized the importance of attitudes from differential association and social learning theories, and identified "cultural definitions" as the "sole causal stimuli" in

attitudinal perspectives (Kornhauser, 1978, p. 199). Kornhauser viewed the assumption that attitudes were the primary cause of antisocial behavior as problematic for several reasons. She argued that the idea that attitudes can provide a direct motivation for delinquency implies that individuals hold attitudes that outright approve of criminal acts (i.e., hold oppositional values), and therefore definitions favorable to crime must positively require antisocial behavior. Kornhauser (1978) argued that this necessarily means that individuals are perfectly socialized to hold attitudes favorable to delinquent behavior—in other words; they are exposed only to attitudes favorable to delinquency and are never exposed to definitions unfavorable to delinquency. If such perfect socialization did occur, then individuals would be compelled to engage in antisocial acts in nearly all situations (see also Matza, 1964).

Kornhauser's interpretation leads to some difficulties for attitudinal perspectives. First, if individuals acquire their attitudes through their interactions with others, then individuals must become perfectly socialized to hold attitudes *either* favorable or unfavorable to delinquency. In other words, Kornhauser viewed individual socialization as being characterized by a dichotomy where one learns that a delinquent act is either right or wrong. In this way, she argued that Sutherland (1947) and Akers (Burgess and Akers, 1966) did not allow for individuals to be exposed to heterogeneous and conflicting attitudinal beliefs. For example, groups who believe that fighting is acceptable would not present definitions to individuals that are unfavorable to fighting, which would mean that specific attitudes/exceptions favorable to crime do not exist because groups who transmit pro-criminal definitions would view delinquency as acceptable in all situational contexts (Matsueda, 1988). It follows that attitudinal perspectives cannot explain individual

differences in offending because, if individuals always act in accordance with the attitudes they learn from others, then individuals cannot be deviant, only groups can be deviant.

EMPIRICAL CRITICISMS

Kornhauser's (1978) conceptual critique connects with an empirical problem for attitudinal perspectives that has been described by Matza (1965) and Hirschi (1969): the idea that individuals are perfectly socialized to hold attitudes that positively require delinquency over-predicts the frequency of offending behavior. If individuals hold attitudes favorable to fighting/stealing then these individuals should be fighting considerably more than is actually observed in data—in other words, it would suggest that individuals have a much higher potential for delinquency than they actually do. As Matza (1964) notes, even individuals who do engage in delinquency spend most of their time *not* committing antisocial acts: An individual is "delinquent by and large because the shoe fits, but even so we must never imagine that he wears it very much of the time" (p. 26). This would mean that attitudes are an insufficient (and possibly unnecessary) explanation of delinquency because the correlation between attitudes and delinquent behavior is much smaller than attitudinal perspectives would suggest (Hirschi, 1969; Matza, 1964). Thus, attitudes should not be able to explain much variation in delinquent behavior, and instead the more interesting question is why people offend despite the fact that they believe such behavior is wrong.

Hirschi (1969) offered an additional critique of the attitudinal perspectives. He began by noting that these perspectives assume that certain groups hold definitions favorable to the violation of laws, or at least counter to more general beliefs against

crime. But as Hirschi (1969) points out, there is no evidence that any groups or individuals hold attitudes that encourage law violation. No one, Hirschi argues, is positively encouraged by parents and/or others to commit crime or socialized to hold attitudes that criminal behavior is an appropriate course of action. In fact, most, if not all, of the people an individual associates with (parents, peers, teachers, etc.) actively discourage offending. This means that it is highly unlikely that any individual would come to hold attitudes favorable to law violation, as most, if not all would view offending as inappropriate and wrong. This directly contradicts the normative conflict idea that there is important variation in delinquent attitudes across individuals. Indeed, if there is no observed variation in delinquent attitudes, then the fundamental premise of attitudinal perspectives is flawed.[1]

Attitudes towards delinquent behavior have typically been measured by asking respondents how wrong it is for someone their age to, for example, get into a physical fight, steal, use marijuana and/or damage someone else's property (Elliott and Menard, 1991; Megens and Weerman, 2010; Thornberry et al., 1994). Agnew (1994) used data from the National Youth Survey and assessed the distribution of responses to attitudes related to fighting. He showed that 93% of adolescents viewed hitting someone as being either "wrong" or "very wrong", with just 7% indicating some sort of approval for hitting behavior. This led Agnew (1994) to state "virtually no one generally approved of violence" (p. 567). The research suggests that there is even less variability in attitudes

[1] It is worth noting that the absolute language used to describe Hirschi's (1969) critique of attitudinal perspectives is consistent with Hirschi's (1969) perspective. In fact, Costello (1997) later echoed a similar critique in a debate with Matsueda (1997), holding that the control perspective explicitly rejects the notion that certain groups view criminal behavior as being morally appropriate. In response, Matsueda (1997) used this absolute language against Costello, noting that while vast majority of individuals do indeed hold definitions against crime, arguing that all groups hold unfavorable criminal attitudes ignores the large body of ethnographic work showing differential value systems (Anderson, 1999; Shaw, 1931).

favorable to theft. Using data from the NYS, Reed and Rose (1998) found that 98% percent of adolescents report that stealing something worth more than $50 is either "wrong" or "very wrong", with just 2% reporting some approval for this theft behavior. The finding that adolescents overwhelmingly hold attitudes against delinquency has also been found in studies of vandalism (Pollard, 1988) and, to a lesser extent, binge drinking (O'Malley et al., 1998). This lends support to the positions of Kornhauser, Hirschi, and Matza, indicating that there is little variation in delinquent attitudes, with most if not all adolescents reporting unfavorable attitudes towards of antisocial behavior. Clearly, this poses a significant problem for the viability of attitudinal perspectives (see also Agnew, 1994).

Another empirical issue concerns the predictive power that attitudes have on delinquency. Despite the limited variation in delinquent attitudes, it is possible that this small variation predicts antisocial behavior. Before assessing the extant literature on the relationship between attitudes and delinquency, it is important to distinguish between the two ways researchers have studied this issue: attitude-behavior rankings and attitude-behavior congruence (Schuman and Johnson, 1976). Attitude-behavior rankings refer to the correlation between the rank ordering of an individual on a delinquent attitude scale and on a delinquent behavior scale. It is predicted that individuals who rank higher on a scale measuring favorable delinquent attitudes (i.e., have a higher potential for delinquent action relative to others) would engage in delinquent conduct at a higher rate than those who rank lower on the attitude scale (i.e., their attitudes and behavior are both "more" delinquent) (Megens and Weerman, 2010). Attitude-behavior congruence, however, refers to the tendency of an individual to act in a manner that is consistent with his/her

attitudinal beliefs—delinquency should only be committed by those who possess some potential for delinquent action. Thus, if an individual engages in delinquent conduct while simultaneously holding favorable attitudes towards delinquency, then that individual is acting in congruence with his/her attitudes. If, however, an individual engages in delinquency while simultaneously holding attitudes unfavorable to such behavior, than that individual is acting in a manner that is incongruent with his/her attitudinal beliefs.

Congruence and relational studies will tell similar stories of the attitude-behavioral relationship if those who rank high on delinquent attitudes report approval of delinquent behaviors and those who rank low on delinquent attitudes report disapproval towards delinquency. But as should be evident, rankings and congruence do not always lead to consistent conclusions, particularly when studying attitudes towards behaviors such as delinquency (Schuman and Johnson, 1976). For instance, an individual who reports that stealing is "wrong" may score high on a ranking scale if the overwhelming majority of respondents report such behavior as "very wrong". If that individual engages in theft then one would conclude that attitudes are a good predictor of that individual's delinquency when using a ranking scale (high on delinquent attitude scale and delinquent) but that the individual acted incongruently with her attitudinal beliefs (engaged in delinquency despite viewing it as "wrong"). If, however, that individual did not engage in delinquency, one would conclude that she acted congruently with her attitudinal beliefs (did not engage in behavior she viewed as wrong) but that her attitudes were not strongly correlated with her own behavior (high on delinquent attitude scale but not delinquent). Thus, when assessing the relationship between attitudes and behavior,

the consideration of rankings and congruence do not necessarily lead to the same findings, but both are informative when assessing the validity of attitudinal perspectives (Schuman and Johnson, 1976).

A considerable amount of research has assessed the rank ordering relationship between attitudes and delinquency across several populations, and the results have been somewhat mixed. Several of the studies have concluded that attitudes are weak and statistically non-significant predictors of delinquent behavior. Rose and Reed (1998) found that delinquent attitudes did not predict theft behavior, and that the size of the coefficient was small and sometimes in the wrong direction. Moreover, Menard and Huizinga (1994) used data from the NYS and found that attitudes had a weak and non-significant direct effect on general delinquency. Emler and colleagues (1978) compared delinquent attitudes among institutionalized offenders and a matched control, and found that attitudes were not a significant predictor of self-reported delinquency—in other words, that attitudes were not able to distinguish between offenders and non-offenders. Further, Tarry and Emler (2007) found that antisocial attitudes were not a significant predictor of self-reported delinquency among a sample of British adolescents. Even further still, Zhang et al. (1994) demonstrated that, while attitudes were a strong predictor of delinquency in early childhood, the effects became substantially weaker in later adolescence (see also Jang, 2002) and Hubbard and Pratt's (2002) meta-analysis found antisocial attitudes were a weak and non-significant predictor of female delinquency. Ultimately, these null findings led Tarry and Emler (2007) to conclude that there appears to be no meaningful relationship between attitudes and antisocial behavior (see also Liska, 1974).

Interestingly, however, other scholars have disagreed with Tarry and Emler's (2007) assessment, and have cited the large number of studies with statistically significant findings to conclude that attitudes are important in understanding the etiology of antisocial behavior. Using data from the Richmond Youth Study, Matsueda (1982) showed that definitions were a strong predictor of delinquent behavior and that attitudes mediated the relationship between other correlates (e.g., race, parents) and crime (see also Matsueda and Heimer, 1987). Similarly, Thornberry et al. (1994) found that attitudes favorable to delinquency had a relatively strong effect on antisocial behavior using data from the Rochester Youth Development Study. Further, in a recent meta-analysis, Pratt and colleagues (2010) assessed the effects of definitions/anti-social attitudes and found that nearly 70% of studies assessing attitudes found a statistically significant relationship between attitudes and offending, and that the effect size is relatively large and comparable to the effects of delinquent peer influence and self-control (see also Pratt and Cullen, 2000). However, Pratt et al.'s (2010) findings also indicated that there was considerable variation across studies in the size and significance of the attitude effect.

The second approach to studying the attitude-behavior relationship focuses on the congruence between one's attitudinal beliefs and behavior; this approach is comparatively rare, however. The attitude-congruency models make a relatively straightforward prediction: delinquency should (primarily) be committed by those who hold favorable attitudes (i.e., those who have the potential for delinquency). In one of the first tests, Ball (1957) found evidence of behavioral-attitude consistency when using a sample consisting of students and incarcerated youth. Specifically, he found that individuals who reported stealing were more likely to hold attitudes favorable to theft.

Agnew (1994) assessed attitude-behavioral consistency with regard to violence, and found that the overwhelming majority of adolescents who reported engaging in violence in the previous year (87%) reported that it violence was either "wrong" or "very wrong", suggesting little congruence between attitudes and behavior. Moreover, Megens and Weerman (2010) recently assessed attitude-behavioral consistency using a sample of Dutch high school students. They found that nearly half of the respondents acted in a manner that is inconsistent with their attitudinal beliefs. These are the only three studies to date that have explicitly sought to examine the congruence between attitudes and delinquent behavior, and the studies reached different conclusions.

Ultimately, extant research does not offer much support for attitudinal perspectives, finding that there is little variation in reported attitudes, and that attitudes are a weak and inconsistent predictor of behavior. But as the next sections will discuss, the weak empirical standing of attitudinal perspectives may be the product of improper measurement. In particular, nearly every study assessing the effect of attitudes on delinquency has assessed one's *global* approval of delinquent behavior without specifying any contextual circumstances in which the behavior might occur (e.g., how wrong is it to steal versus how wrong is it to steal when you are starving and cannot afford food). This is problematic because behavior always occurs in context, which means that potential for delinquent actions cannot be captured independent of context. Conceptualizing delinquent attitudes as the potential for delinquency in context can advance attitudinal research in three important ways. First, because almost all the extant studies have employed global attitudinal measures, little is known about the nature and content of attitudes favorable to delinquency, particularly the dimensionality of

delinquent attitudes (Matsueda, 1988). The content of attitudes may revolve around single situational contexts (e.g., defending oneself from physical violence), specific crime types (e.g., Thomas, 2015; Tittle et al., 1986), specific type of excuses (the victim deserved it) (e.g., Maruna and Copes, 2005) or simply a general willingness to offend (e.g., Osgood et al., 1988). Second, if delinquent attitudes are inherently tied to contexts, then one's potential for delinquency would be measured more accurately by using the number and types of circumstances in which individuals view a specific delinquent act as acceptable rather than single global attitude measure(s). Therefore, a scale using the specific attitude items should improve the predictive validity of attitudinal perspectives when compared to models using global attitudinal measures. Finally, the extant research has failed to address whether attitudes can differentiate those who will engage in delinquency under particular conditions – in other words, it has not considered how situational circumstances interact with attitudes in the facilitation of antisocial behavior. The next sections consider these three issues in more depth.

Rethinking Delinquent Attitudes: Specific Attitudes and Situational Circumstances

As the number of studies finding a weak relationship between attitudes and behavior grew, many sociologists and psychologists inferred that attitudinal perspectives were fundamentally flawed (Liska, 1979; Wicker, 1969). Proponents of attitudinal perspectives responded by stating that researchers had failed to measure attitudes appropriately (Campbell, 1963). For instance, Schumer and Johnson (1976) responded to Wicker's (1969) harsh critique by noting that the overwhelming majority of research on the attitude-behavior relationship had failed to incorporate the situational contexts in which behavior is embedded while assessing attitudes towards that behavior. They argued

that behavior is inextricably linked to situational circumstances, and that research that failed to incorporate the situational circumstances in measures of attitudes cannot be used as negative evidence against attitudinal perspectives (see also Rokeach and Kliejunas, 1972). Several others have stressed the importance of incorporating of situational circumstances in attitude research, arguing that there is an important conceptual and measurement distinction between *attitudes towards behavior* and *attitudes towards behavior in context.* Under this premise, it is the failure to distinguish between these two concepts that is responsible for the lack of an empirical relationship between attitudes and behavior (Rokeach and Kliejunas, 1972; Schumer and Johnson, 1976).

Attitudes towards behavior are largely measured using what are known as *global measures* of attitudes (Fishbein and Ajzen, 1986), whereby individuals are asked in a very general sense how wrong it is to bring the law, get into fights or steal (Elliott et al., 1985). A defining characteristic of these global measures is that they do not provide any contextual or circumstantial information within which respondents can embed and evaluate the behavior. This is problematic because behavioral action is inextricably embedded within contexts— individuals use situational circumstances as information in evaluating the appropriateness of a behavior. The failure to incorporate situational circumstances into measures of attitudes results in the measures reflecting an individual's evaluation of the vague abstract idea of a behavior, not the evaluation of a behavior as a potential course of action in important contexts. In turn, it is widely believed that the appropriate way to measure attitudes toward behavior is by using specific measures of attitudes, which situate one's evaluation of a behavior in a wide range of contexts that are relevant to that behavior. These questions more accurately capture one's potential for

action because the measures incorporate the situational information that individual's draw on when evaluating the appropriateness of a behavioral action (Ajzen and Fishbein, 1978; Rokeach and Kliejunas, 1972).

The distinction between global and specific attitude measures is not trivial, but can actually lead to very different conclusions over one's reported approval/disapproval of an action. Research has suggested that the use of specific items can elicit different reported attitudes when compared to global measures in the areas of racial discrimination (Kinder and Sanders, 1996) job satisfaction (Ironson et al., 1989), political affiliations (Dunlap et al., 2000) and voting behaviors (Ajzen, 2005). The importance of specific attitude measures has even been acknowledged in the criminal justice literature. Early research assessing citizen attitudes towards the death penalty relied almost exclusively on global measures that captured (dis)approval over the idea of the death penalty (e.g., should the state be allowed to execute individuals who are convicted of murder?). The results of these analyses indicated that Americans were overwhelmingly supportive of the death penalty (Rankin, 1979; see also Durham, Elrod and Kinkade, 1996). Later work, however, began to ask specific attitude measures that asked respondents to evaluate the death penalty as an action in a given context, rather than an idea (e.g., the death penalty should not be used in against the mentally ill when life in prison is an alternative) (Sandys et al., 1995). These results suggested that Americans largely hold unfavorable attitudes towards the action of the death penalty in situations in which capital punishment is applied (Applegate et al., 1987; Cullen et al., 2000). These differential results led many scholars to suggest that the use of global attitude measures has produced a gross over-estimate of the level of approval of capital punishment in the United States, and that the

use of specific attitude measures is more appropriate because they ask respondents to embed their appraisal of a behavior in "real life scenarios" (Maggard et al., 2012 p. 164; Applegate et al., 1987; Cullen et al., 2000). Similar results were found when assessing police officer attitudes towards policing. Schafer (2002) used simultaneously global measures that assessed police officer attitudes towards the general idea of community policing, as well as specific attitude measures of attitudes towards the community policing policies being implemented in their department given the context in which they worked. He found that there was large disconnect between these two different levels of attitudes: Officers had a tendency to report favorable attitudes towards the *idea* of community policing, but unfavorable attitudes towards the implementation of such policies. The point is that attitudes towards an action or object can exist at multiple planes, one of which being the attitudes towards the abstract idea of a behavior/object and the other being the attitudes towards the behavioral action in relevant contexts, and these different levels of attitudes do not always line up.

Interestingly, however, the distinction between global and specific attitudes has frequently been overlooked in the criminological literature as it relates to the tendency to offend. Almost all of the work assessing the attitude-delinquency relationship has relied on global attitude measures, such as those derived from the NYS (Elliott et al., 1985), which simply assess attitudes towards the abstract idea of a delinquent behavior and not attitudes towards delinquent action in context. In this way, the potential to engage in a specific delinquent act is assumed to be accurately captured by a single global item that reflects one's approval or disapproval towards that action. The use of global measures is consistent with Kornhauser's (1978) dichotomous interpretation of attitudinal

perspectives where individuals are seen as holding attitudes that either view delinquent behavior as right or wrong (see also Costello, 1997). Indeed, Hirschi's (1969) criticism that individuals/groups rarely if ever hold attitudes favorable to delinquent behavior seems largely to be speaking to the attitudes towards the idea of delinquent behavior.

But this is not the theoretical process discussed by attitudinal perspectives such as Sutherland (1947) or Akers (1998)—as both perspectives emphasizes the importance of attitudes towards a behavioral action in context rather than attitudes towards the abstract idea of a behavior. For instance, Matsueda (1988) implied that variation in delinquent attitudes cannot adequately be captured using global attitude measures because it is exceptionally rare for individuals to hold attitudes that are overtly oppositional to middle-class values (i.e., attitudes supportive of the idea of delinquent behavior). Rather, variation in delinquent attitudes is better captured using the number of circumstances in which individuals view offending as a favorable behavioral action. To be sure, Matsueda (1988) argued that individuals can be categorized into three groups when it comes to attitudes towards delinquency: 1) those who view delinquent behavior as wrong in all circumstances; 2) those who view delinquent behavior as acceptable under certain circumstances and; 3) those who view delinquent behavior as acceptable in virtually all circumstances. According to Matsueda (1997), most individuals fall into the first group, viewing delinquency as always being wrong. Further, the majority of individuals who hold some attitudes favorable to delinquency fall under group two, largely only viewing delinquency as being acceptable under certain specified circumstances. Still, this would suggest that while individuals largely hold global attitudes against the idea of delinquent behavior, they may still hold favorable attitudes towards delinquent action under certain

circumstances, and it is these more specific attitudes that define the circumstances in which delinquency is acceptable that are the most important attitudes in the etiology of adolescent delinquency.

The important distinction between attitudes towards behavior and attitudes towards behavior *in context* is consistent with other work in the social sciences that has found that the discrepancy between global and specific attitudes is largest when assessing outcomes that are socially taboo. For instance, Kinder and Sanders (1996) found that while nearly everyone holds attitudes favorable towards the idea of racial equality when using global measures (e.g., are you in favor of or opposed to equal opportunities for blacks?), some of these same individuals held attitudes favorable to discriminatory actions when placed in certain contexts (e.g., are you in favor of or opposed to busing black children into your school district to give them access to better schools?) (see also Bobo, 2001; Kinder and Sears, 1981). Schuman and Johnson (1976) have argued that the discrepancy between global and specific attitudes is a result of the fact that the global attitude items may be largely capturing what respondents believe the broader social approval of a behavior (e.g., society tells me that discrimination is wrong), and not a respondent's true attitudes towards a behavioral action (e.g., I am opposed to policies designed to reduce discrimination). Specific attitude measures provide the situational information that allows individuals to justify departing from the global attitudes and, therefore, are better reflections of their true attitudinal beliefs.

Kinder and Sanders' (1996) discussion of discriminatory attitudes is important because it highlights the complexity by which individuals come to form attitudes towards behaviors: simultaneously viewing a behavior as inappropriate, while at the same time

holding exceptions that are seemingly counter to these more global beliefs when the evaluation of a behavior is framed as an action in context (e.g., racial equality is important, but the whites in my neighborhood have work hard for their schools so I am not in favor of forced busing). This complexity is entirely consistent with the works of Sutherland et al. (1992), Cressey (1954), Akers (1996) and Matsueda (1988, 1997). All of these scholars view individuals as being members of an intricate normative system, where "embedded in the same general normative system may be both the prohibition of an act and definitions that justify the act" (Akers, 1996, p. 239). This means that individuals can simultaneously learn the idea that certain behaviors are wrong, but that there are situations in which such behavior is normatively appropriate. Consider Matsueda's (1997) example of attitudes favorable to theft. He argues that individuals almost always are socialized to believe that stealing from others is wrong (i.e., a global attitude). But even those who view theft as being globally wrong might may hold that attitudinal belief that it is acceptable to steal food when starving (i.e., a specific attitude).

In summary, there is a growing recognition in the social sciences that there is an important distinction between global attitudes—which capture one's attitudes towards the abstract idea of a behavior—and specific attitudes—which capture one's attitudes towards an action in relevant circumstances, with the latter argued to be the better measures of one's true attitudes towards a behavior and, in turn, a better measure of one's potential for action. Despite the fact that this distinction is consistent with the works of preeminent attitude theorists in criminology (Akers, 1998; Matsueda, 1988; Sutherland, 1947), most empirical work assessing delinquent attitudes has frequently overlooked the importance of specific attitudes, and have largely conceptualized (and measured)

delinquent attitudes as one's abstract evaluation of the idea of a delinquent behavior which, as noted above, have yielded weak and inconsistent support for attitudinal perspectives. But acknowledging a distinction between global and specific attitudes would suggest that there is considerable insight to be gained by conceptualizing action relevant attitudes as potentially being more specific raises three important questions for attitude research in criminology.

WHAT IS THE CONTENT AND NATURE OF DELINQUENT ATTITUDES?

Viewing attitudes about delinquency through the lens of global measures suggests that one's true attitudes towards a specific delinquent behavior (e.g., fighting) can be captured using a single item because individuals either view that behavior as appropriate or not. When incorporating context into our conceptualization of attitudes, however, the questions of interest becomes when and in what situations individuals view delinquent conduct as an appropriate course of action (see Matsueda, 1988). Despite the fact that proponents of attitudinal perspectives have defended the importance of exceptions and specific attitudes, scholars have spent relatively little time discussing the content of delinquent attitudes. Matsueda (1988) has stated that the only thing we seem to know about delinquent attitudes is that they are not simply oppositional values that view crime as either right or wrong, but even that may be speculative because most research has failed to simultaneously measure both global and specific attitudes (Carson, 2013; Carson and Esbensen, forthcoming; Megens and Weerman, 2009; see also Maruna and Copes, 2005). Perhaps not surprisingly, then, Matsueda has argued "the most fundamental research problem facing differential association theory involves identifying the content of definitions favorable to crime" (p. 296; see also Maruna and Copes, 2005).

Of particular importance for identifying the content of delinquent attitudes is an assessment of the underlying dimensionality of the delinquent attitude construct (Matsueda, 1988). Identifying the underlying dimensionality of delinquent attitudes would shed light on how individuals come to view delinquency as a potential course of action. Most of the empirical work assessing attitudinal perspectives have implied—or at least assumed—that delinquent attitudes form a unidimensional construct by summing attitudes towards a wide-range of delinquent behaviors together in order to create a single attitude scale (Carson, 2013; Carson and Esbensen, forthcoming; Elliott and Menard, 1996; Megens and Weerman, 2010; Rebellon, 2002; Thornberry et al., 1994). Akers (1996) seems to agree with a unidimensional conceptualization of attitudes, noting that delinquent attitudes are likely a general weakening of moral beliefs that allow individuals to approve of delinquency in certain situations. Matsueda (1988), on the other hand, has asserted that delinquent attitudes are "likely a multidimensional construct" (p. 296). As it stands there is little knowledge on the underlying dimensionality of delinquent attitudes. The majority of research has either not conducted or not presented the results assessing the dimensionality of attitude items (Carson, 2013; Carson and Esbensen, forthcoming; Megens and Weerman, 2010), but have simply assumed unidimensionality due to high Cronbach's alphas. But, as Gardner (1996) demonstrates, a high inter-item reliability does not necessarily mean that the item scale is unidimensional because high alphas can be achieved when some of the items are highly correlated with each other, but not all the items. Further, there is reason to believe that there are at least three ways that the latent construct of delinquent attitudes may be multidimensional. The underlying structure of delinquent attitudes, whether through one of the various forms of multidimensionality or

undimensionality, has important implications for understanding how individuals come to develop attitudes favorable to delinquency. Accordingly, four possibilities will be discussed in greater detail.

First, it may be the case that specific attitudes and exceptions are best measured as distinct, single items. In this way, there may be little to no relationship between each specific attitude, and each definition simply reflects the attitudes that an individual has learned about the appropriateness of a particular behavior in a given situation. Whereas some individuals may learn it is only acceptable to fight when defending oneself, others may learn it is only acceptable to fight when being disrespected. Further, some individuals may only hold one specific definition favorable to crime, while others may learn that it is justifiable to engage in crime in a wide range of circumstances after being exposed to a greater number of specific attitudes favorable to delinquency (Glaser, 1960). If this is the true dimensionality of delinquent attitudes, then the correlation between the individual items should be quite low, indicating that those who hold favorable attitudes under one circumstance would tell us little about the probability of holding favorable attitudes under another circumstance.

A second possibility is that specific-attitudes are multidimensional and form individual latent traits around the type of justification, rationalization or excuse that can be employed under certain circumstances. Sykes and Matza (1957) provided the most detailed discussion on the content of delinquent attitudes, arguing that individuals are more likely to become delinquent when they learn to extend legal justifications for crime to a broad range of circumstances. For instance, individuals may be socialized to believe that delinquent behavior is acceptable but only when one feels the need to seek revenge

or retaliation. If someone feels as if he/she has been wronged, then it may be viewed as justifiable to fight, vandalize or steal in order to get "even". Further, others may believe that delinquency is only acceptable when going along with the behavior of friends. Even further, it is possible that individuals learn that delinquency can be acceptable but only when all other legal alternatives have been exhausted. In this way, attitudes coalesce around the type of justification or rationalizations that can be employed. If a certain situational circumstance is present (e.g., feeling the need to retaliate, presence of friends, no legal recourse) it can allow an individual to justify delinquent behavior—regardless of the offense type—and therefore delinquency is a potential course of action when these justifications can be employed. If attitudes do come together in this way, then specific attitudes that tap into these circumstantial justifications across all crime types should be more highly correlated with each other than with attitudes that do not draw on such justifications.

A third possibility is that specific attitudes form multidimensional latent traits of crime-specific latent attitudes (Matsueda, 1997; Thomas, 2015), which would reflect that individuals come to develop a potential for delinquent action that is largely crime specific. For instance, the items tapping into specific attitudes favorable to fighting maybe highly correlated to other items assessing attitudes toward fighting but relatively weakly correlated with the items tapping into specific attitudes favorable to theft. In this case, these attitudes would form a general latent attitude trait towards fighting, but have a weak potential for theft behavior. This notion seems most consistent with Sutherland's (1947) conceptualization of attitudes, as he asserts that different crime types likely require different definitions. Importantly, it would be almost impossible to identify

crime-specific dimensionality when using traditional global measures of attitudes, because these scales almost always contain just one or two attitude items for each crime-type and therefore do not contain enough attitude items within each form of delinquency to properly assess crime-specific correlations among items.

The fourth possibility of the underlying dimensionality of attitudes is that the specific attitude items come together to form a unidimensional trait. This is consistent with the assumption that most studies make when measuring delinquent attitudes—by summing attitudes towards a wide-range of acts together to create a single composite delinquency attitude scale. For this to be the case, there would need to be a high correlation between all of the specific attitude measures, across offense-types and situational characteristics. This is perhaps the most likely underlying structure of delinquent attitudes, because high correlations across all of the specific attitude measures would simply require that individuals that are likely to approve of one delinquency item are more likely to approve of other delinquency items. Walker and colleagues (2006) have demonstrated that this is likely to be the case when assessing the underlying structure of constructs which are relatively difficult to endorse—i.e., in assessing behaviors in which it is relatively uncommon to hold favorable attitudes, such as delinquency (Matsueda, 1988).

Attitudes are a core construct in criminological theory, which makes identifying the dimensionality of delinquent attitudes is of critical importance. Without identifying the measurement properties of delinquent attitudes, the meaning of the attitude construct is left ambiguous, and criminologists would have little insight into the content and nature of delinquent attitudes. Are delinquent attitudes one concept or multiple? How can

researchers best operationalize delinquent attitudes to reduce bias when estimating its effects on delinquent behavior? The point is that criminologists cannot have a good grasp on one of the fields' most important constructs without an understanding of the measurement properties of that construct. Accordingly, the first research question of this dissertation pertains to the underling structure and dimensionality of the attitude construct, which can be examined in both the PNW Survey and the G.R.E.A.T. data using exploratory factor analysis on the specific attitude items:

RQ1: What is the underlying dimensionality of delinquent attitudes when using specific attitude items?

Hypothesis 1a: Delinquent attitudes form a single, unidimensional trait that reflects one's general approval of delinquent conduct.

Hypothesis 1b: Delinquent attitudes form a multidimensional trait where items coalesce around the types of excuses employed.

Hypothesis 1c: Delinquent attitudes form a multidimensional trait where items coalesce around specific crime-types.

Hypothesis 1d: There will be no identifiable attitude trait, and each attitude item represents an independent attitude favorable to delinquent conduct.

IMPROVING THE PREDICTIVE VALIDITY OF DELINQUENT ATTITUDES

Recognizing the distinction between attitudes towards behavior and attitudes towards behavior in context may do more than provide a better description of delinquent attitudes, it may also increase the predictive validity of attitudes on delinquent behavior. Recall that attitudes are thought to influence behavior because they indicate an

individual's potential for action (Thurstone, 1931). When using global attitude items, researchers are assuming that these measures reflect one's true potential for delinquency; but delinquency, like all behaviors, is embedded in contexts that can influence one's appraisal of a behavior and, in turn, influence the potential of engaging in that behavior. In this way, the context-less global measures that capture evaluations of the abstract idea of a behavior can downwardly bias estimates of the attitude effect by: 1) underestimating the delinquent potential of some individuals holding global attitudes against delinquency and; 2) overestimating the delinquent potential of some individuals holding global attitudes favorable to delinquency.

For instance, consider an assessment of the relationship between attitudes and fighting behavior. Using a global attitude measure would likely result in most individuals reporting that, in general, fighting is "wrong" or "very wrong", suggesting that these individuals have no potential for delinquent action. In actuality, however, these individuals might view fighting as acceptable under certain circumstances. Conversely, all individuals who hold the global attitude that fighting is "not wrong" would be treated as having strong potential for fighting when in actuality there could be significant variation among these individuals as to the number and types of situations in which fighting is viewed as acceptable. In fact, several scholars have the incorporation of contexts may be so central to the measurement of attitudes that there is no reason to suspect that there is any relationship between global measures of attitudes and behavior at all (Prislin and Oullette, 1996; Rokeach and Kliejunas, 1972; Schuman and Johnson, 1976).

Not surprisingly, then, scholars interested in the effect of attitudes on behavior have called for the use of specific attitude measures that ask individuals to evaluate the appropriateness of a behavior under various situational circumstances that are likely to be relevant to that behavior. The idea is that one's potential for action can be more accurately reflected in an assessment of the number and types of circumstances in which individuals approve of antisocial behavior. In this way, 1) having no (or at least very limited) potential for delinquency would be reflected in the disapproval of delinquency under all circumstances; 2) more moderate levels of delinquent potential would be reflected in the approval of delinquent behavior under a few or some circumstances and; 3) high levels of delinquent potential would be reflected in the approval of delinquent behavior in most or all circumstances relevant to delinquency. It is worth noting that this description of the relation of attitudes favorable to delinquency is completely consistent with the Matsueda's (1988) argument when reviewing differential association theory, as well as the work of Sutherland (1947), Akers (1998) and Cressey (1954), all of whom argued that the most important attitudes in the etiology of behavior are the specific attitudes that allowed an individual to rationalize and justify his/her delinquent behavior. Collectively, then, this suggests that whatever scale(s) emerges from the factor analysis to address research question one should be a notably better predictor of delinquency than any global, abstract item for the self-reported offending in both the PNW Survey and G.R.E.A.T. and for all of the hypothetical scenarios in the PNW Survey.

RQ2: Do models incorporating the composite scale(s) using attitudes towards behavior in specific circumstances improve the prediction of delinquent behavior when compared to models including global attitude items?

Hypothesis 2: Composite scale(s) specifying the correct dimensionality of attitudes towards behavior in context will more accurately capture one's potential for delinquent action and therefore be better predictors of delinquent behavior than models employing global measures of delinquent attitudes.

ENCOUNTERING THE "RIGHT" CIRCUMSTANCES:

A final advantage of conceptualizing attitudes as the evaluation of behavior in contexts is that it brings the importance of situational circumstances to the forefront of the study of delinquent conduct. Traditionally, scholars have viewed situational contexts as being important because they provide the objective opportunity that make crimes easier and more rewarding to commit (e.g., the absence of a capable guardian) (Cohen and Felson, 1979; Osgood et al., 1996). Though some scholars have asserted that variations in exposure to objective opportunities are important for understating patterns of delinquency (Osgood et al., 1996; see also Cohen and Felson, 1979; Wikstrom, 2006), others have posited that situational opportunities are ubiquitous (Hirschi, 1969; Sampson and Laub, 1993). For instance, nearly everyone interacts with others and shops at stores, and therefore, everyone is exposed to opportunities for personal and property crimes. But for attitudinal perspectives, situational circumstances are viewed in a different way. Situational contexts are thought to be important largely because they moderate the influence that attitudes have on delinquent behavior. After all, even if the objective opportunities for crime are ubiquitous, the situations that allow an individual to rationalize and justify delinquency are not. Therefore the situations that individuals encounter become an important element in the determination of whether pro-delinquent attitudes translate into actual behavior (Agnew and Peters, 1986).

Why have situational circumstances been relatively neglected in the criminological attitudinal research? One possible explanation is that this gap in the literature stems from the aforementioned failure to distinguish between attitudes towards behavior and attitudes towards behavior in context. If one accepts that action is determined by the abstract evaluation of a behavior, then situational circumstances would largely be irrelevant. The fact that global attitudes are, by definition, context-less suggests that such attitudes are essentially constant across all situations. This notion that attitudes towards delinquency are not contingent on situational circumstances is consistent with Kornhauser's (1978) influential interpretation of attitudinal perspectives, whereby individuals simply either view delinquency as acceptable or not acceptable in virtually all situations.

Importantly, however, this context-less interpretation is not the argument put forth by attitudinal perspectives. Sutherland (1947) argued that the two central factors leading to criminal behavior are the historical socialization of an individual (i.e., their learning), and situational factors, but that these effects should not be viewed as independent, because individuals draw on both their attitudes and the situational context to determine if a certain event constitutes a "crime-committing situation". Sutherland and Cressey (1978) further argued that attitudes and situations are so highly interrelated that "the events in the person-situation complex at the time of the criminal event cannot be separate at the time a crime occurs" (Sutherland and Cressey, 1978, p. 80). Thus, criminal behavior emerges from the intersection between two things: 1) an individual holding attitudes favorable to delinquency in a given situation and; 2) that individual encountering that situation.

The interaction between situational contexts and attitudes is also discussed by Akers (1996). Akers defines definitions as the "attitudinal sets brought to a situation that make law-breaking seem appropriate or inappropriate in *that* situation" (p. 238, emphasis added). He argued that specific definitions act as discriminative stimuli that define crime as acceptable or permissible under certain circumstances, whereby individuals may view crime in a positive light, but only when certain conditions are met. For instance, an individual may come to believe that social status can be gained by fighting someone who is disrespectful, but does not hold such positive views on crime in other situational contexts. This is analogous to Sutherland's (1947) argument and suggests that this individual's potential for delinquency would be limited to circumstances in which he/she is being disrespected: An individual must encounter situational characteristics that allow them to perceive delinquent behavior as acceptable or rewarding for them to cognitively decide to engage in antisocial behavior. If an individual does not encounter such a situation then s/he is likely to refrain from engaging in delinquent conduct (i.e., they would not engage in delinquency because they have not encountered a situation in which delinquency is viewed as a potential course of action).

While the discussions by Sutherland (1947) and Akers (1996) certainly suggests that one's potential for delinquent action can vary from situation to situation, this assertion appears to be at odds with the second hypothesis in this dissertation, which focused on attitudes influencing the potential for general (i.e., pooled) delinquent action. This hypothesis predicts that a composite scale of attitudes should be a strong predictor of general forms of delinquency. How is it that attitudes can affect the general tendency to offend but single items can retain discriminatory power in predicting behavior? Fishbein

and Ajzen (1979) noted that this is a question that seems paradoxical at first glance, but can easily be explained when recognizing that both attitudes and behavior exist on varying levels of specificity: general and more specific. A general behavioral outcome, for example, would be the likelihood that an individual engaged in a certain behavior in the last year. In this case, the behavior (delinquency) and time period (last year) are explicitly stated, but the contextual circumstances are not explicitly stated, meaning that this behavior likely encompasses the behavior across a wide range of circumstances. When interested in specific behavioral outcomes, however, researchers are explicitly interested in the behavior (a specific delinquent act), time period (last year), *and the context* (when being disrespected). The focus thus changes from the likelihood of engaging in a behavior, to the likelihood of engaging in a behavior under a given circumstance, which may lead to different outcome values. Accordingly, Ajzen and Fishbein (2005) have argued that when predicting general or specific behavior, researchers need to ensure that their attitude measures are at the same level of generality or specificity. This notion that researchers should evaluate attitudes and behavior at the same consistent level is known as the *principle of compatibility* (Ajzen, 1977).

Consider a more concrete example as to how the principle of compatibility relates to delinquency. It was noted above that one's general potential for delinquent action is likely to be reflected in the number and type of circumstances in which individuals view delinquency as acceptable. An individual who views fighting as acceptable if no one gets hurt, when helping out friends, and when disrespected is likely to have a greater delinquent potential than an individual who only believes it is acceptable to fight when defending his/her family's honor. Thus, the former individual should have a higher

likelihood of fighting—in general—than the latter. But, according to the principle of compatibility, this does not mean that the former individual has a higher likelihood than the latter of getting into a fight in situations where one's family's honor is challenged. On the contrary, Ajzen and Fishbein (1978) argue that it is the latter individual, despite having a lower general tendency to fight, who is more likely to get into a physical fight in this circumstance. In measurement terms, the principle of compatibility would hold that the specific attitude items should, theoretically, retain discriminatory influence even if they coalesce around a general latent trait.

Having a theoretical base for suspecting discriminatory power does not necessarily mean that there is a statistical reason to suspect that this is the case. In fact, one of the central assumptions of factor analysis (as employed in research question 1) would seem to contradict the notion that individual items retain discriminatory power once accounting for the underlying latent trait(s). The traditional measurement models assume that responses to observed items can be described by the following equation:

$$X_i = \lambda_j + e_{ij}$$

This equation indicates that the observed response to any item is a function of the underlying trait that varies across individuals (λ_j) plus some random error. Typically in criminology, if a large portion of the variance in responses is explained by the underlying factor (which is reflected in large eigenvalues), then the researcher will conclude that the underlying construct is unidimensional. The assumption, then, is that the response patterns to all items are strictly a function of the underlying unidimensional trait. However, this assumption is only true if the factor loadings are equivalent across all of the items, which would indicate that the variation in response patterns across all of the

items is truly just a function of the underlying construct. If, instead, the factor loadings across items are not equivalent, this indicates that one's attitude toward a delinquent behavior in specific context is differentially affected by the general delinquent attitude factor which, in turn, suggests that one's appraisal of delinquency in that context is affected by more than just their general tendency to approve of that behavior. One possibility is that the approval of delinquency in that context is influenced by the circumstances of the situation that are explicitly detailed in that individual item—i.e., the substantive characteristics of the item affect response patterns in ways unaccounted for by the general latent trait(s).

Several measurement scholars have argued that the unequal factor loadings (also referred to as item discrimination) can be indicative of the substantive importance of individual items, and are not just "noisy" nuisances to models, as is implied when assuming away unequal item discrimination (Humphry, 2011; Salzberger, 2011). Humphry (2011) has argued that unequal item discriminations reflect a substantively interesting relationship between individuals and the characteristics of the item—i.e., it suggests that some other external factor, which is not accounted for by the unidimensional trait, is influencing the responses. Walker and colleagues (2006) have suggested that unequal item discriminations may reflect an important difference between statistical and substantive dimensionality. Their argument is that measurement models identifying underlying latent traits are convenient data reduction tools, but it does not mean that individual items are not of substantive interest to scholars.

Turning attention to the specific interest of this dissertation, if the factor loadings are equivalent across all items, then the weighted tendency to approve of a delinquent

behavior would be equivalent across all circumstances. If the factor loadings are not equivalent, however, then the individual items (which, again, ask about different situations and circumstances in which delinquency may or may not be appropriate) are differentially related to any general underlying attitude construct. In other words, individuals may be more or less likely to approve of behaviors in particular contexts than their general tendency towards delinquent approval would predict. Drawing on Humphry's (2011) arguments, this likely reflects some important interaction between those situational circumstances and the individual, because one's likelihood of approving of delinquency is no longer based solely on the underlying trait (which is assumed in traditional measurement models), but is also contingent on the circumstances described in the individual items. If, in fact, there are unequal factor loadings across items, this would provide initial support for the notion that the specific attitude items have discriminatory power. In concrete terms, this may suggest that the contextual circumstances themselves influence individuals' approval/disapproval for delinquent behavior—i.e., attitudes towards delinquency vary within and across individuals as a function of the situational context.

Matsueda (1988) has argued that the incorporation of situations into the differential association model may offer a more complete explanation for delinquent because it can explain why, when encountering the same situation, some individuals react with delinquency but others do not. Allport (1954) championed the importance of attitudes because he believed that attitudes could explain why two individuals react differently when faced with the same situational circumstances. For instance, given the nature of adolescent social life, it would not be surprising if a non-trivial number of

adolescents experienced verbal disrespect from others, but not all of these adolescents would respond with violent behavior. From an attitudinal perspective, attitudes explain why some individuals would respond to verbal disrespect by fighting while others do not, because individuals draw on their subjective attitudes to determine an appropriate behavioral response given the circumstances. Sutherland and Cressey (1974) refer to this as the "differences in receptivity", and suggest that the influence that the situation has is conditioned by one's prior learned definitions.

Thus, the understanding of the attitude-behavioral relationship can be improved by incorporating the exposure to situational characteristics (Agnew and Peters, 1986). Accordingly, the third and final research question deals with the person-situation interaction discussed by Sutherland (1947) and Akers (1996) describing how situational circumstances moderate the relationship between attitudes and behavior by treating each individual hypothetical scenario as a unique context which may result in delinquency (i.e., examine the willingness to offend for each scenario independently). More specifically, this study seeks to test two hypotheses implied in attitudinal perspectives.

RQ 3: Do specific attitude items have discriminatory power in predicting whether an adolescent will engage in delinquency in a specific context?

Hypothesis 3: *When encountering situations that allow for the opportunity to engage in delinquency, individuals will be more likely to report a willingness to offend if they hold a favorable toward that behavior in that specific context.*

3a. This relationship will emerge even when controlling for whatever attitude construct emerges from the analyses for research question 1.

3b. This relationship should be specific to this item – items that speak to the appropriateness of behavior in other contexts should not be related to the behavior because it constitutes the "wrong" contexts.

Table 1 provides a summary of all of the hypotheses of this dissertation.

Table 1. Summary of Research Questions and Hypotheses

RQ 1.	The Dimensionality of Delinquent Attitudes *H1a. Delinquent attitudes form a single, unidimensional trait that reflects one's general approval of delinquent conduct.* *H1b. Delinquent attitudes form a multidimensional trait where items coalesce around the types of excuses employed.* *H1c. Delinquent attitudes form a multidimensional trait where items coalesce around specific crime-types.* *H1d. There will be no identifiable attitude trait, and each attitude item represents an independent attitude favorable to delinquent conduct.*
RQ 2.	The Predictive Validity of Specific versus General Attitudes *H2. Composite scale(s) specifying the correct dimensionality of attitudes towards behavior in context will more accurately capture one's potential for delinquent action and therefore be better predictors of delinquent behavior than models employing global measures of delinquent attitudes.*
RQ 3.	The Discriminant Power of Specific Attitudes *H3a. The individual specific attitude will have an effect even when controlling for whatever attitude construct emerges from the analyses for research question 1.* *H3b. The significant effects should be specific to this item – items that speak to the appropriateness of behavior in other contexts should not be related to the behavior because it constitutes the "wrong" contexts.*

CHAPTER 3: DATA AND METHODS

Two sources of data are used to test the hypotheses of the current investigation. First, a survey designed explicitly to test the three research questions of this dissertation was administered to 11th graders in a large public high school in the Pacific Northwest (PNW). Second, longitudinal data from the Gang Resistance Education and Training (G.R.E.A.T.) evaluation are used to assess the robustness of the findings in the PNW Survey among a larger and more diverse sample.

Survey of Adolescents in PNW

Because no secondary data existed that simultaneously contained measures on global attitudes, specific attitudes, self-reported offending, and situational opportunities to offend, a survey was created to specifically answer the three research questions described in Chapter 2. School officials from a large public high school in the Pacific Northwest agreed to the administration of this survey. This high school, located in a suburb of a major metropolitan city, is ethnically/racially diverse (see sample statistics in Table 2). School administrators were most concerned that the survey administration did not interfere with curriculum goals. Therefore, they allowed access to 11th grade students, all of whom have an advisory (study hall) period during each school day. School officials expressed confidence that attendance would be high due to the school's strict attendance policy. There were 311 students nested within 20 11th grade advisory classes registered at the high school that the survey was administered. Students were not incentivized to participate in the survey in any way.

School officials assisted in the development of the survey instrument to ensure that students would be able to comprehend the questions. Further, a small sample of high

school students (n = 8) were recruited at a shopping mall and compensated to pilot the survey and provide feedback on the instrument's wording and content. Overall, the pilot sample reported that the survey was clearly worded and easy to understand, though did recommend some changes to the wording of the questions to make it easier for adolescents to understand. Once these changes were made, the primary investigator at the University of Maryland and the school officials assisting in the survey were confident in moving forward with the administration of the instrument. A copy of the survey instrument is presented in Appendix A. The survey and the administration procedures were all approved by the Institutional Review Board at the University of Maryland.

The survey was administered in April 2014. A week prior to survey, parents were sent a letter detailing the purpose of the study and giving them the opportunity to deny their child's participation (i.e., passive consent). On the day of the survey administration, the teachers asked the students to turn in the parental opt-out forms (n = 4), and those students were not given a copy of the survey instrument. The teachers of the advisory periods were given a script and detailed instructions by the primary investigator (see Appendix B). Moreover, the school officials who worked closely with the investigators held several meetings with faculty detailing the survey procedures. The surveys were handed out by the teachers who read instructions to the students on how to complete the self-administered survey. The front page of the survey was a student consent form, which detailed the purpose of the study, ensured students of their rights and asked for students to either agree or disagree to take part in the study. Students had the entire 22-minute class period to respond to the questionnaire, and no teachers reported that any students failed to complete the survey due to time constraints. Two hundred and ninety four of the

311 registered students were present on the day of the administration, however, not all of the students provided useable information. Specifically, two parents opted their children out of the survey, 31 students exercised their right to not take any part of the survey, and an additional 38 students did not provide completed surveys and were therefore excluded from the analyses (e.g., only completed a portion of the attitude questions). This translates into a response rate of about 75%, which is consistent with prior studies using similar survey designs with high school students (Kandel, 1975). Demographic characteristics and descriptive information of the control variables are presented in Table 2.

Table 2. Descriptive Statistics for Survey of Youth in PNW

	Mean (SD)	Range
Self-Reported Fighting	.14 (--)	0-1
Self-Reported Theft	.16 (--)	0-1
Fighting Scenario 1- Unprovoked	.12 (--)	0-1
Fighting Scenario 2- Verbal Disrespect	.58 (--)	0-1
Fighting Scenario 3- Physical Assault	.87 (--)	0-1
Theft Scenario 1- At Mall	.11 (--)	0-1
Theft Scenario 2- Major Retail Store	.17 (--)	0-1
Theft Scenario 3- Treated unfairly at Store	.25 (--)	0-1
Self-Control	7.54 (1.97)	2-12
Parental Attachment	8.56 (2.41)	2-12
School Achievement	4.04 (.80)	1-5
Unstructured Socializing	7.51 (6.14)	0-20
Age	16.69 (.64)	16-18
Male	.48 (--)	0-1
White	.31 (--)	0-1

MEASURES

The purpose of this study is to assess the more specific attitudes that adolescents hold towards delinquent behaviors. Though there are many sub-offenses that go into the more general concept of delinquency (e.g., vandalism, truancy, substance use), this study assesses two forms of delinquent conduct: fighting and theft. The decision to restrict the survey (and subsequent analyses) to these two behaviors is largely practical: Given that there were time constraints on the administration of the instrument, adding a more diverse range of delinquent behaviors would have reduced the likelihood that the respondents could have completed the survey. Fighting and theft were chosen as the two behaviors to use because they are two of the most common delinquent behaviors among adolescents that involve a victim (Smart et al., 2004). Moreover, these two forms of delinquency were the most common forms of antisocial conduct used in prior work assessing individual delinquent behaviors (Agnew, 1994; Reed and Rose, 1998). Accordingly, the following sections will describe how attitudes and behavior are measured for these two delinquent behaviors. Because this dissertation is not solely interested in behavior as an outcome and of attitudes as predictors, the measures will be described beginning with the operationalization of attitudes—the key construct of interest in this study—and will then describe the operationalization of delinquent behaviors.

Global Attitudes

Respondents were asked to report their global attitudinal beliefs towards fighting and stealing. The survey asked respondents to report how much they agreed with the following statements: "*It is wrong for someone my age to get into a physical fight*" and "*It is wrong for someone my age to steal something from a person or store*". These

questions are similar to prior studies assessing delinquent attitudes (Agnew, 1994; Thornberry et al., 1994) and represent global attitudinal beliefs because they do not specify contextual circumstances that mitigate/aggravate the "wrongness" of delinquency, but simply ask adolescents to report how they feel in general towards those behaviors. Six response options were given comprising a Likert scale: 1 = strongly agree, 2 = agree, 3 = somewhat agree, 4 = somewhat disagree, 5 = disagree and 6 = strongly disagree. These values were reverse coded to be consistent with the specific attitude measures. Thus, higher values on the global attitude measure correspond to greater disapproval towards the behavior.

Specific Attitudes in Circumstances

Because little quantitative work exists that assesses and reports specific attitudes/exceptions, several sources of information were used to inductively identify specific attitudes that may be most prevalent among adolescents. For instance, when working to construct specific attitude questions for violence, ethnographic work assessing violent attitudes was reviewed (Anderson, 1999; Topalli, 2005). Through this review, eight specific attitude questions were developed that cover a broad range of circumstances highlighted in ethnographic works while also being appropriate for the 22-minute class period. Immediately following the global attitude questions, respondents are asked how much they agree with the following statements: 1) "*Fighting is just part of being a teenager, anyone should fight whenever they feel the need to*"; 2) *"If you don't think anyone is going to get seriously hurt, it is sometime okay to fight"*; 3) *"If someone is talking bad about you behind your back it is sometimes okay to fight them"*; 4) "*If someone is disrespecting you to your face it is sometimes okay to fight them*"; 5) "*If*

someone is disrespecting a member of your family (i.e., brother or sister) it is sometimes okay to fight them"; 6) "*If you are defending your group of friends from another group it is sometimes okay to fight*" and; 7) "*If you need to fight back to defend yourself it is sometimes okay to fight*". All responses to these statements were on a six-point Likert scale ranging from 1 = strongly agree to 6 = strongly disagree.

It is worth noting that many of the fighting attitude items use relatively vague language when asking respondents to evaluate the appropriateness of delinquency. As a result, respondents are able to ascribe their own definitions to the circumstances, and then evaluate the behavior based on their own subjective definition. For example, when asked whether it is appropriate to get into a physical fight when experience "disrespect", individuals may differ considerably in what they deem as signs of disrespect (e.g., verbal assaults versus improper eye contact). This parallels Sutherland's (1947) idea of variations in the definition of situations. While examining how adolescents differ in what they define as "disrespectful" would be interesting, it is outside the purview of the current study to exhaustively capture the various circumstances in which adolescents might feel disrespected. Rather, the interest in this study is how adolescents would evaluate fighting if they, for example, felt they had been disrespected.

Considerably less ethnographic work has been conducted on theft behaviors, but some does exist (Steffensmeier and Ulmer, 2005). To supplement this work, online message boards about stealing were reviewed to inform what reasons individuals gave for engaging in theft behavior. As with the specific attitudes towards fighting, eight questions were created based on this review. Respondents were asked how much they agree with the following statements: 1) "*Teenagers can't afford many cool things, so it is sometimes*

okay to steal"; 2) "*If you work really hard but still can't afford something, it is sometimes okay to steal*"; 3) "*If your friends want to steal something, it is sometimes okay to go along with it so you don't stop them from having a good time*"; 4) "*If you know that a person/store can afford it and won't be hurt by it, it is sometimes okay to steal from persons or stores*"; 5) "*If a person or store does something and you feel like you want to get back at them, it is sometimes okay to steal from them*"; 6) "*If there are no other ways to get something that you are not old enough to buy (e.g., alcohol, cigarettes) it is sometimes okay to steal it*" and; 7) "*If you can't afford something that you really need (e.g., food, clothes) it is sometimes okay to steal it*". Again, all responses to these statements were on a six-point Likert scale ranging from 1 = strongly agree to 6 = strongly disagree. Thus, the specific attitude measures for both fighting and stealing differ from the global attitude measures in that they provide more detail on the situational circumstances surrounding the delinquent behavior.

One limitation of the stealing measure is that it confounds theft from a person and theft from a store. To be sure, this is problematic of virtually all surveys in delinquency, which do not distinguish between stealing from stores or persons and simply ask "How wrong would it be to steal something worth less than $50?" (see the G.R.E.A.T. example below). In fact, we seem to know relatively little about differences in attitudes towards theft as it pertains to persons versus stores, so the degree to which this influences the results is unknown. Steffensmeier and Ulmer's (2005) ethnography of a career burglar suggests that at least some offenders do not view all victims as the same, but a full exploration of this notion has not been explored quantitatively, to my knowledge.

Another limitation that relates to both the fighting and theft attitude items is that the measures may not exhaustively capture all of the excuses adolescents use to justify behavior. I made every effort to draw on the excuses that repeatedly came up in the preliminary reviews of specific attitudes. For fighting, many of the specific attitudes reported in ethnographies were related to feeling the need to defend oneself, feelings of disrespect (either behind one's back or to one's face), and/or viewing fighting as necessary to support friends or family. Therefore, these items dominated the attitudes towards fighting scale. For theft, there was a broader range of excuses, but the excuses that stood out as most common were selected. I do not intend for the items to represent an exhaustive list of all possible excuses adolescents may use, and encourage future qualitative analyses to provide a more comprehensive understanding of specific delinquent attitudes.

Self-Reported Delinquency

Self-reported delinquency is assessed using two items. Respondents are asked: "*Since the start of the school year, how many times have you been in a physical fight*" and "*how many times have you stolen something from a person or a store worth less than $50*".[2] These items were measured on an ordinal scale ranging from 0 = zero times, 1 = once, 2 = twice, 3 = 3-4 times, and 4 = 5+ times. The responses to these two self-reported

[2] These delinquency measures appear to be valid for several reasons. First, the wording of the items is nearly identical to previously validated delinquency measures, such as those derived from the NYS (Elliott and Menard, 1986) and have been validated in prior work (Thornberry and Krohn, 2000). Nevertheless, the appropriateness of the measures can also be assessed by relating known correlates of offending to these items—what is known as criterion validity. The results support the validity of these measures. Using bivariate correlations, gender ($r = .24$, $p < .05$, $r = .22$, $p < .05$), self-control ($r = .22$, $p < .05$, $r = .10$, $p < .15$), parental attachment ($r = -.21$, $p < .05$, $r = -.18$, $p < .05$) and school achievement ($r = -.28$, $p < .05$, $r = .18$, $p < .05$) are significantly related to fighting and stealing, respectively, in the expected directions. Moreover, the bivariate correlations also indicate that fighting and stealing are significantly related to one another ($r = .40$, $p < .05$). Finally the results presented below shows that there is almost always a strong and significant relationship between self-reported offending and WTO.

delinquency items were recoded as binary indicators where a value of 1 indicates that they engaged in such behavior and a value of 0 indicates that they did not. The decision to recode the self-reported delinquency items into binary indicators is for both theoretical and practical reasons. Hindelang et al. (1979) have convincingly argued that it is the distinction between those who offend and those who do not that is most interest to criminologists. Moreover, they have shown that measurement error is of increasing concern once moving beyond the 0/1 distinction (see also Osgood et al., 2002). In addition, few respondents in the PNW Survey reported engaging in fighting (7%) and stealing (9%) on more than one occasion. The data indicate that 15% of adolescents reported being in a physical fight and 16% reported stealing since the beginning of the school year.

Behavioral Intention Vignettes

To further assess the relationship between attitudes and behavior, respondents were presented with hypothetical vignettes assessing willingness to offend for both fighting and theft. The use of hypothetical vignettes offers an important addition to the current study for several reasons. First, because the PNW Survey relies on a single, cross-section of data, the temporal ordering of the attitude-behavior relationship remains unknown. Maruna and Copes (2005) have noted that this issue of temporal ordering has plagued research on attitudes, and that much of the research supportive of attitudinal perspectives may simply be reflecting the fact that behavior influences attitudes. To address this concern, Maruna and Copes (2005) have championed for the use of hypothetical vignettes because, as they note, even if behavior does affect attitudes, a significant relationship between attitudes and willingness to offend would suggest that

attitudes may influence behavior in the future. In their theory of planned behavior, Ajzen and Fishbein (1979) have argued that behavioral intentions are the key intervening mechanisms between attitudes and behavior, because attitudes ultimately shape how individuals plan to act when facing certain situational contexts. Second, the use of the hypothetical vignettes may also add important insight into the consistency between attitudes and behavior contingent on situational circumstances. To be clear, it was noted above that from attitudinal perspectives individuals should only engage in antisocial behavior if they encounter situational circumstances consistent with those attitudes. But as will be demonstrated below, many of the adolescents who hold attitudes favorable to delinquency report that they have not encountered such situations. This leads to the important question of how these individuals would have acted if they were presented with certain situational opportunities. In this way, the hypothetical vignettes provide an avenue to assess this questioning by having respondents imagine they are in a certain situation and asking how they believe they would act given those circumstances.

Due to time constraints in survey administration, only three vignettes were presented to the adolescents per crime type. Though this eliminated the ability to provide hypothetical scenarios for each circumstance discussed, the vignettes did differ in the situational circumstances that were presented, allowing for a test of both research questions 2 and 3. For instance, the three hypothetical scenarios for fighting were:

1) *First, please imagine that you have had a bad day at school. As you are walking down the street with your friends, you see a classmate that you really do not like walking toward you.*

2) *Now, please imagine that instead of just walking by you, this classmate begins to call you names and disrespecting you as they walk by.*
3) *Next, please imagine that instead of just walking by you and calling you names, as he/she walks by this classmate pushes you to the ground and threatens to beat you up.*

For theft, the three hypothetical scenarios were:

1) *Next, please imagine that you are hanging out at the mall with your friends. As you are walking through the store you see something that you really like but cannot afford to buy. You know that if you decided to take it you would NOT be caught.*
2) *Next, please imagine that you are hanging out at the mall with your friends. As you are walking through the store you see something that you really like but cannot afford to buy. The store is a major retail store, and you know that the store wouldn't even notice if you stole it. You know that if you decided to take it you would NOT be caught.*
3) *Next, please imagine that you are hanging out at the mall with your friends. While there, you try to return something that you bought that was broken when you opened it, but the manager of the store refuses to allow you to return it saying that he thinks you broke it yourself. You spent a lot of money on this and really want it, and know you will not be able to afford a new one for quite some time. You know that if you decided to take it you would NOT be caught.*

Thus, the hypothetical vignettes offer differing circumstances and ask the respondent to report on how likely it is that they would engage in the behavior under consideration, given those circumstances—e.g., their willingness to offend (WTO).[3] It is noteworthy that all of the hypothetical scenarios (for both fighting and theft) specify that the individual is with friends at the time of the situation. This was done because adolescents are often with friends after school and when at the mall (the situations specified in the vignettes), and therefore incorporating friends into the scenarios would increase the "realness" of the vignettes. Of course, some may be concerned that the mere presence of friends can provide sufficient motivation for offending, but research suggests that this is not the case. Reynolds and colleagues (2013) have recently demonstrated that the mere presence of friends does not influence the risk-taking tendencies, but rather, only have an effect if they offer an encouragement for the behavior. The scenarios used in the current investigation do not state any such encouragement. Taken together, although the inclusion of friends in the scenarios confounds the situational circumstances and the presence of peers, it was believed that the benefits outweighed the costs in this matter. Nevertheless, future work should further disentangle this relationship.

When testing the influence of delinquent attitudes on the willingness to offend in general (i.e., RQ2), all of the vignettes will be used in a pooled analysis while accounting

[3] As with the self-reported offending measure, questions over the validity of the hypothetical vignettes. First, hypothetical vignettes with various scenario content have been a staple of criminological research over the last several decades (Exum and Bouffard, 2010; Grasmick and Bursik, 1990). To assess criterion validity, I estimated the bivariate correlations between the WTO and several known correlates of delinquency. For both three fighting scenarios, on average, males (.19. $p < .05$), those lower in self-control ($r = .17$, $p < .05$), those displaying less parental attachment ($r = -.09$. $p < .05$) and those with lower school achievement (-.19, $r = .05$) display a greater willingness to get into fights. For theft, there are significant bivariate correlations between gender ($r = .15$, $p < .05$), self-control ($r = 12$, $p < .05$), parental attachment ($r = -.11$, $p < .05$) and school achievement ($r = -.11$, $p < .05$) and willingness to steal. Further evidence on the validity of the WTO measures can be garnered by relating the WTO to prior delinquent behavior. For both fighting ($r - .42$, $p < .05$) and stealing ($r = .47$, $p < .05$) the correlations between prior behavior and WTO are statistically significant.

for the interdependence in observations. The hypothesis in this analysis is that individuals who rank higher on the latent tendency for delinquency should, on average, be more likely to report a willingness to engage in delinquent conduct. When testing the discriminatory power of individual items, just the second and third vignettes for each behavior will be used, because the first vignette for fighting and theft do not offer much information regarding the situational characteristics that allow for the appropriate test of the discrimination hypothesis. Responses to vignettes were recorded on a four-point Likert-scale ranging from 1 = not likely at all to 4 = very likely. These scenarios are recoded into binary variables where a value of 0 indicates that an individual is "not likely at all" to offend and a value of 1 indicates that an individual would consider it. The decision to code the willingness to offend outcomes as binary indicators was made for several reasons. First, it is consistent with the conceptualization of attitudes as reflecting "action potential"—e.g., the distinction between those who have no potential versus some potential. Second, with the exception of the third fighting scenario, the largest distinction among individuals was those who reported "not likely at all" and "not very likely". This was particularly true for the three scenarios assessing the willingness to steal. Third, the binary coding of willingness to offend is consistent with prior work in criminology which categorizes offenders as being either willing to consider a crime or not (Bachman et al., 1992; Nagin and Paternoster, 1993). Nevertheless, I estimated all of the outcomes as ordered variables and the results were consistent with the findings presented below. Because logit coefficients are easier to interpret than the coefficients in ordered logit models, the former are presented in text. Descriptive information on the willingness to offend measures is presented in Table 2. As expected, the data indicate that individuals

become more willing to fight when the hypothetical opponent becomes more aggressive—whereas just 13% of the sample reports that they would fight unprovoked (scenario 1), 87% reported that they would fight when defending themselves (scenario 3). The willingness to steal is considerably lower, but follows a trend that one might expect. Eleven percent of respondents reported that they would steal just when hanging out at the mall with no other contextual information, 17% reported that they would steal if they were hanging out at a major retail store, and 25% reported that they would steal from a store that they believe treated them unfairly.

It is worth noting that the hypothetical vignettes used in this current study provide less detail than vignettes used in some other studies in the field of criminology (see Exum and Bouffard, 2010). This was done for several reasons. First, for the first vignettes for each behavior, the scenarios were intentionally designed to provide little detail in order to examine one's willingness to offend under any circumstances. Second, with regard to the other scenarios, there was an important need to strike a balance between providing enough detail to set up the context of each scenario while also keeping the scenarios short enough so that respondents had time to answer them and simple enough that they would understand them. In this regard, it was determined that the scenarios presented above successfully achieved this balance.

Controls

Although much of this dissertation is descriptive in nature, attitudes will be used to predict self-reported offending behavior and willingness to offend (scenarios) in regression models. In these analyses, several variables are controlled for to address

concerns that the relationship between attitudes and behavior may be spurious due to competing theoretical constructs.

Social Bonds

Hirschi (1969) has dismissed the importance of attitudes in the facilitation of delinquent behavior. He argues that attitudes positively approving of delinquent behavior are rare, but rather, delinquency is more likely to result from individuals holding only weak moral beliefs against delinquency. Moreover, his social bond theory suggests that weakly held moral beliefs result largely from being weakly bonded to societal institutions. Accordingly, in order to account for the possibility that the attitude effects are spurious due to weak social control, social bonds are controlled for in the analyses predicting delinquent behavior. *Parental attachment* is a composite scale of two items in which individuals are asked how much they agree with the following statements: 1) "*I care what my parents think about me"* and; 2) *"When I have a problem I feel like I can talk to my mom and/or dad about it"*. Responses ranged from 1 = Strongly disagree to 6 = Strongly agree, and therefore higher values represent higher levels of parental attachment. *School achievement* is measured using a single item inquiring about the respondent's average grade in classes, with responses ranging on a five-point scale from 5 = A to 1 = F. On average, respondents indicate that they somewhat agree to agree with the individual parental attachment items (mean = 8.56, SD = 2.41), and report a B grade average (mean = 4.04, SD = .80).

Self-Control

Self-control was purported by Gottfredson and Hirschi (1990) to be the sole cause of crime and analogous behaviors, and has consistently been shown to be one of the

strongest predictors of delinquency (Pratt and Cullen, 2000). It is therefore imperative to control for self-control was assessing the predictive significance of attitudes on behavior. *Self-control* is a composite scale of two items that tap into the respondent's tendency to act impulsively—which is arguably the most important component of Gottfredson and Hirschi's self-control concept (Paternoster and Pogarsky, 2009; Thomas and McGloin, 2013). Specifically, individuals were asked how much they agree with the following statements: 1) *"I often act spur of the moment"* and*;* 2) *"When I make decisions, I tend to go with my gut without thinking about the consequences"*. Responses to the self-control items ranged from 1 = strongly agree to 6 = strongly disagree. Thus, higher values on the self-control composite indicate higher levels of self-control. On average, individuals received a score of 7.54 on the composite self-control measure (SD = 1.97).

Unstructured Socializing

Attitudinal perspectives hold opportunities are important because situational circumstances allow individuals to active their attitudes and define the contexts in terms of their prior normative socialization. In fact, Sutherland (1947) explicitly rejected the notion that situations are important because they provide objective opportunities for crime (p. 7). This view has been challenged by Osgood and colleagues (1996) who challenged the perspectives of Sutherland (1947) and Akers (1985) and argued that adolescent delinquency emerges simply because deviance is easy and fun when hanging out with friends without adult supervision. In other words, adolescents do not need attitudes or specific situational circumstances to engage in delinquency, but delinquency emerges spontaneously when socializing with friends in an unstructured setting. Thus, unstructured socializing is controlled for in this dissertation using a single item that has

been used extensively in prior work (Augustyn and McGloin, 2013; Haynie and Osgood, 2005; Thomas and McGloin, 2013). Respondents were asked "*About how many hours per week do you spend just hanging out with friends when no adults are around*?" This question is asked as an open-ended frequency, which allows individuals to write in their estimated number of hours hanging out informally with friends. However, because some individuals respond with extreme—and sometimes unrealistic values—this variable is top-coded at 20 hours per week. Descriptive statistics presented in Table 1 indicate that respondents, on average, reported spending 7.51 hours per week hanging out with friends in informal settings (SD = 6.14), which is similar to prior work assessing the extent of unstructured socializing among adolescents (see Augustyn and McGloin, 2013; Thomas and McGloin, 2013).

Demographics

Because all of the surveyed respondents were in the 11th grade at the time of the survey, there is little variation in age across respondents. Nevertheless, *Age* is a continuous variable representing the raw age of the respondent. *Male* is a binary indicator of the respondent's gender where 1 = Male and 0 = Female. *White* is a binary indicator of race/ethnicity where a value of 1 indicates that the respondent self-identified as white and a value of 0 indicated that the respondent self-identified as a racial category other than white (Black, Hispanic, Asian, mixed/other). The sample is 47% male, 31% white and, on average, 16 years of age (mean = 16.69, SD = .64).

G.R.E.A.T. Evaluation

Other data sets exist that provides measures that can address some of the research questions of interest—notably research questions 1 and 2—and therefore can act as a

supplement to the PNW Survey. In particular, the G.R.E.A.T. evaluation is a longitudinal study that contains measures on global/specific attitudes and self-reported offending behavior. The G.R.E.A.T. program was a school-based delinquency prevention program funded by the Bureau of Alcohol Tobacco and Firearms. After the implementation of the program, program designers sought to investigate the effectiveness of the program using a quasi-experimental research evaluation in six cities across the United States. The six cities were selected based on: 1) the presence of a viable G.R.E.A.T. program; 2) geographic location (i.e., diversity of regions) and; 3) the willingness of police departments and school districts to evaluate the effectiveness of the program. In each school, classrooms were assigned to either receive the G.R.E.A.T. program or not. In total, 22 schools with 153 classrooms and more than 3,000 students took part in the pre-test version of the surveys. The G.R.E.A.T. Evaluation required active parental consent, of which about 2,045 students received. Of these students who received active consent, 1,761 completed the first year follow-up, and comprise the first wave of the longitudinal G.R.E.A.T. sample (see Esbensen, 2003). The current study begins with wave 3, when respondents were in grades 8 and 9, because rates of delinquency were relatively low at earlier waves (see Osgood and Schreck, 2005; Schreck et al., 2006), and continues to the final wave (wave 6). After data loss due to missing values on the main variables of interest, the analytic sample is comprised of 1,610 individuals in wave 3, 1,438 in wave 4, 1,323 in wave 5, and 1,314 in wave 6.[4]

As will be described in detail below, the measures used in the G.R.E.A.T. evaluation are not identical to those in the PNW Survey—and may not necessarily be

[4] An attrition analysis was conducted to determine the differences among individuals who were lost in the sample since wave 3. T-tests reveal that those lost over time were more likely to be nonwhite and older.

ideal—but it nonetheless provides an opportunity to address some of the concerns associated with the PNW Survey. First, because the PNW Survey was administered to a single high school, there may be concerns over the generalizability of the findings. Accordingly, assessing some of the research questions using a larger and more geographically diverse sample may prove informative. Second, another limitation of the PNW Survey is the limited age range of the respondents—all students in the PNW Survey were 11th graders and therefore of similar age. The G.R.E.A.T. evaluation offers a longitudinal dataset that follows adolescents from ages 12 to 17 and therefore can provide useful information in examining attitudes—and their relationship with delinquent behavior—across wider age range of adolescents. Still, as noted above, there are also important limitations to the G.R.E.A.T. data, most notably the less than ideal measures of both global and specific attitudes. Therefore, one should be cautious in placing greater weight on one data set over the other and should draw conclusions based on the totality of the findings from both sources of data, as both have their own unique strengths and weaknesses, and therefore complement each other well. Descriptive information of the G.R.E.A.T. sample is presented in Table 3.

Table 3. Descriptive Statistics for G.R.E.A.T. Evaluation

	Wave 3 N = 1,610	Wave 4 N = 1,438	Wave 5 N = 1,323	Wave 6 N = 1,314	
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Range
Self-Reported Fighting	.46 (--)	.40 (--)	.32 (--)	.27 (--)	0-1
Self-Reported Theft	.21 (--)	.20 (--)	.16 (--)	.15 (--)	0-1
Attachment to Mother	25.04 (6.86)	24.74 (6.86)	24.86 (6.77)	24.77 (6.59)	5-35
Self-Control	8.72 (2.42)	8.57 (2.42)	8.18 (2.32)	8.02 (2.35)	3-15
School Commitment	4.16 (.93)	4..12 (.94)	4.12 (.86)	4.07 (.90)	1-5
Unstructured Socializing	5.22 (6.42)	5.90 (6.52)	6.14 (6.51)	7.27 (6.74)	0-20
Age	13.18 (.65)	14.19 (.67)	15.16 (.62)	16.09 (.61)	11-18 (across all waves)
Male	.47 (--)	.47 (--)	.46 (--)	.46 (--)	0-1
White	.52 (--)	.54 (--)	.55 (--)	.56 (--)	0-1

MEASURES

Global Attitudinal Beliefs

Traditionally, global attitudinal beliefs are measured using the question: "How wrong is it for someone your age to…", which allows respondents to report on the general wrongness of a delinquent act. Unfortunately, the G.R.E.A.T. data do not contain

these traditional global attitudinal measures. However, this data set does contain items that ask respondents to report on how guilty they would feel if they did engage in specific delinquent acts. In particular, respondents were asked "How guilty or badly would you feel for hitting someone?" and "How guilty or badly would you feel for stealing something worth less than $50?" Arguably, guilt can serve as a proxy for how "wrong" an individual believes it is to commit these delinquent acts.. Responses to these questions were on a three-point scale where the values were 1 = not very guilty/badly, 2 = somewhat guilty/badly, and 3 = very guilty/badly.

Obviously, these measures capturing global attitudes are not ideal. It would be preferred to have global attitude measures that are similar to those in the PNW Survey, asking individuals about their overall attitudes towards a behavior. Indeed, inquiring about how guilty someone would feel about a behavior does not directly translate to the conceptualization of global attitudes described above. Still, this operationalization is consistent with the manner in which others have discussed global attitudes. Sykes and Matza's (1957) neutralization theory begins with the notion that individuals report feelings of guilt about engaging in behavior, which they state is evidence that most adolescents hold global attitudes against antisocial behavior. Therefore, though these measures are admittedly not ideal, they do have some face validity; and given that the G.R.E.A.T. Evaluation is one of the few data sets containing specific attitude items, there is value in testing the hypotheses using these measures. This is particularly true in the current investigation because the G.R.E.A.T. Evaluation offers longitudinal data across a broader age range of adolescents that is not captured in the PNW Survey.

Specific Attitudes in Contexts

The G.R.E.A.T. evaluation contains several of measures that may capture an individual's specific attitudes towards fighting and stealing. Respondents are asked how much they agree with the following statements: 1) "*It is okay to get into a physical fight if they hit you first;* 2) *"It is okay to get into a physical fight if you have to stand up for or protect your rights* and*;* 3) "*It is okay to get into a physical fight if they are threatening to hurt your friends or family*"; 4) *"It is okay to beat someone up if they don't show you respect"* and; *"It is okay to beat someone up if they threaten you"*. There are also three items assessing specific attitudes towards theft in the G.R.E.A.T. evaluation: 1) *"It is okay to steal from someone who is rich and can easily afford it;* 2) *" It is okay to take little things from a store without paying for them since stores make so much money that it won't hurt them* and; 3) *"It is okay to steal something if that's the only way you could ever get it"*. Response options for all measures are on a five-point Likert scale where 1 = strongly disagree, 2 = disagree, 3 = neither agree/disagree, 4 = agree and 5 = strongly agree. These values were reverse coded to stay consistent with the ordering of the options present throughout the study, such that higher values correspond to greater disapproval towards delinquency.

Self-Reported Offending

In the G.R.E.A.T. evaluation, respondents are asked to report on their delinquent activity in a wide range of behaviors in the prior year. To be consistent with the PNW Survey, as well as the specific attitude measures, the analyses examine only the self-reported delinquency for fighting and theft. Respondents are asked "*How many times in the last year have you hit someone with the idea of hurting them*" "*been involved in a*

gang fight" and "*stole something worth less than $50*"? These items are all recorded initially as open ended frequencies, but are recoded as binary indicators. Specifically, the two fighting measures are summed together to create a general fighting scale, and then recoded as a 0/1 indicator where a value of 1 indicates that the respondent got into a fight and a value of 0 indicates that they did not. The data indicate that delinquent behavior has a tendency to decrease over time, with 40% of adolescents reporting fighting at wave 3 and 27% reporting fighting at wave 6.For the stealing measure, individuals who report stealing something worth less than $50 at least once are given a value of 1 and those who do not are given a value of 0. Theft behavior follows a similar decreasing trend as the fighting behavior, with 19% reporting stealing at wave 4 and 14% reporting fighting at wave 6.

Controls

As with the PNW Survey, the data from the G.R.E.A.T. evaluation will also be used in regression models to predict self-reported delinquency and willingness to offend. To reduce concerns of omitted variable bias the same variables will be controlled for as in the first data set.

Social Bonds

Attachment to mother is a composite of five measures inquiring about the respondent's relationship to his/her parents that have been used to assess parental attachment in previous studies (Thomas and McGloin, 2013). On a seven-point Likert scale, respondents are asked the following statements about describing their relationship with their mother figure: 1) *"Can talk about anything";* 2) *"Always trusts me";* 3) *"Always understands me"*; 4) *"Always ask for her advice* and; 5) *"Always praises me*

when I do well". At each wave this composite measure ranges from 5 to 35, with higher values indicating higher levels of maternal attachment. Maternal attachment remains relatively stable across waves with an average score of about 25 across all waves (see Table 3). *School commitment* is using a single item assessing how much respondents agree with the statement "*Grades are very important to me"*, where response options again range from 1 = strongly disagree to 5 = strongly agree. As with the maternal attachment measure, school commitment remains relatively stable across all waves, with individuals, on average, indicating that they agree with the statement that grades are important (i.e., score of 4) (see Table 3).

Self-Control

A composite of three items are used to assess an individual's self-control. Respondents are asked how much they agree with the following statements: 1) *"I often act spur of the moment without stopping to think";* 2) *"I often do what brings me pleasure now, even at the cost of some distant goal"* and; 3) *"I'm more concerned with what happens to me in the short run than in the long run"*. Responses ranged from 1 = strongly disagree to 5 = strongly agree. Thus, the summative composite self-control scale at each wave ranges from 3 to 15, where higher values indicate lower levels of self-control. On average, self-control slightly increases across the waves, beginning with an average score of 8.72 (SD = 2.42) in wave 3 to an average of 8.02 (SD = 2.35) in wave 6.

Unstructured Socializing

The unstructured socializing measure in the G.R.E.A.T. evaluation is nearly identical to that used in the PNW Survey. Specifically, individuals are asked: "Do you spend time hanging around your current friends not doing anything in particular where no

adults are present?" followed by the question: "If yes, how many hours do you spend doing this during an average week?" This open-ended frequency is top-coded at 20 hours. Time spent with friends in unstructured settings increases at each wave, averaging 5.22 hours (SD = 6.42) per week at wave 4 and increasing to 7.28 hours (SD = 6.74) per week at wave 6.

Demographics

Age is a continuous variable allowing individuals to report their age in years. As with the Attitude Survey, however, most respondents in the G.R.E.A.T. evaluation are in the same grade and therefore there is limited variation in age. The average age of the respondents is 13 (mean = 13.17, SD = .65) and the average age is 16 years old at wave 6 (mean = 16.07, SD = .61). *Male* is a binary indicator of self-reported gender where a value of 1 = male and a value of 0 = female. Finally, *White* is a dichotomous variable indicating whether the respondent is white (= 1) or non-white (= 0). Descriptive statistics indicate that the analytic sample is 52% male and 47% white.

Before proceeding, it is worth highlighting that the PNW Survey and the G.R.E.A.T. Evaluation have unique strengths and weaknesses. For example, though the G.R.E.A.T. Evaluation has the obvious advantage of being longitudinal in nature, the PNW Survey has the advantage of including better measures of both global and specific attitudes. Thus, while it might be tempting to for readers to place greater weight on one data set over the other, it is instead recommended that the data sources be viewed as complimentary attempts to answer the research questions of interest, and that the conclusions get made when weighing the totality of the findings for both data sets.

Analytic Plan

This dissertation is guided by three research questions. As such, the description of the analytic plan will be separated by research question.

RQ1: THE CONTENT AND DIMENSIONALITY OF DELINQUENT ATTITUDES IN CONTEXT

The first question of interest in this dissertation addresses what Matsueda (1988) referred to as "the most fundamental research problem facing" attitudinal perspectives (p. 296), which is an assessment of the content and dimensionality of delinquent attitudes. This analysis will proceed in two stages. First, descriptive statistics on both the global and specific attitude items will be presented with a particular interest in the comparison between the distribution of the responses to the global attitudinal items and the distribution of the responses to attitudes towards delinquency in context.

Second, this dissertation will use exploratory factor analysis to examine the underlying dimensionality of an "attitudes towards delinquency in context" construct. Because there are theoretical reasons to believe that delinquent attitudes are: 1) unidimensional; 2) independent specific items (i.e., items are uncorrelated); 3) represent techniques of neutralization constructs or; 4) are offense-specific latent traits—i.e., there is no a priori reason to suspect a certain form of dimensionality-- exploratory factor analysis, rather than confirmatory factor analysis, is conducted to identify how and which of the specific attitude items load together and, in turn, the dimensionality of delinquent attitudes. When conducting exploratory factor analysis (EFA), scholars have traditionally used Pearson correlations to assess the relationship among items. One problem, however, is that EFA using Pearson correlations assume that the items comprising of the scale are

at least interval or ratio items. When using Pearson correlations the values of 1, 2, 3, and 4 represent distinct continuous rankings on an underlying scale, but when using ordinal items the only information that is provided is the number of subjects in each of the categories. If Pearson correlations are used on ordinal items "the relationship between measures would be artificially restricted due to the restrictions imposed by categorization, since all subjects situation in the interval that limits each of the categories would be considered as being in the same category, and therefore, they would be assigned the same score with a resulting reduction in variability" (Holgado–Tello et al., 2010, p. 154). Thus, when using ordinal data Pearson correlations reduce the magnitude of coefficients obtained among observed variables because categorization reduces variation. This reduction in variation leads to an underestimate in the degree of association between observed variables and, in turn, a decrease in factor weightings obtained from the factorization of the correlation matrix because there is not only random error but also category error effects (Saris et al., 1998; DiStefano, 2002). Indeed, several studies have demonstrated that employing EFA using Pearson correlations misidentifies the number of factors on a latent scale. Holgado-Tello and colleagues (2010) used a Monte Carlo simulation study to examine the effects of using Pearson correlations on ordinal data. They created three different data sets that had a differing number of underlying dimensions (3, 4, and 5) and then estimated the dimensionality of the underlying latent constructs using traditional EFA. The results indicated that, in each instance, EFA using Pearson correlations underestimated the true number of latent factors present in the data (see also Gilley and Uhlig, 1993). Dollan (1994) demonstrated that the problems of using Pearson correlations on ordinal data are exacerbated with higher levels of skewness and

kurtosis (a likely issue when assessing delinquent attitudes), but even under ideal circumstances parameter estimates and standard errors are underestimated.

In order to address these concerns, Jöreskog and Sörbom (1996) have recommended the EFA using polychoric correlations, as it provides consistent and robust estimates of factor structure. The polychoric correlation is used when variables are continuous and linearly related but, contrary to the requirements of Pearson correlations, are divided into a series of categories (Holgado-Tello et al., 2010). If the underlying latent trait(s) that the ordinal items scale on are normally distributed, it is assumed under the polychoric model that the combined distribution of any two items is a normal bivariate distribution with a correlation ρ, however Coenders et al. (1997) have shown that the polychoric correlation method is robust with respect to violations to the bivariate normality assumption. Unlike EFA using Pearson correlations in which researchers have relied primarily on the maximum likelihood method, the polychoric correlation method uses the weighted least squares method, a particular case of the generalized least squares procedure. Despite these differences in estimation procedures, EFA using polychoric correlations is interpreted in a manner that is similar to standard EFA.

Accordingly, the specific attitude items in both the Survey of Adolescents in PNW and the G.R.E.A.T. evaluation data will be factor analyzed using polychoric correlations. This analysis can be conducted in Stata using the user-written "polychoric" command. Moreover, though using a maximum likelihood extraction method is beneficial because it "allows for the computation of a wide-range of indices of goodness of fit" (Fabriger et al., 1999, p. 277), maximum likelihood estimation is inappropriate when the observable data are not normally distributed, as is the case with delinquent attitudes

(Costello and Osborne, 2005). Accordingly, this study relies on the principal axis factoring extraction method, which is the preferred method when conducting factor analysis with non-normal data (Fabriger et al., 1999). The goal of this analysis is to: 1) determine whether specific delinquent attitudes form a unidimensional trait or multidimensional attitude traits and; 2) if multidimensional, assessing which items load on which underlying constructs (i.e., as individual items, techniques of neutralization or offense-specific latent constructs). I do this first by assessing the results of an unrotated factor analysis. If the eigenvalues and item loadings leave some indication that the attitude construct might be multidimensional, then I will proceed by rotating the factors using oblique rotation.

RQ2: THE PREDICTIVE POWER OF GLOBAL VERSUS SPECIFIC ATTITUDES MEASURES

Operationalizing delinquent attitudes as a latent trait and specifying the correct dimensionality of the construct should increase variability in delinquent attitudes. It also reduces measurement error in the primary explanatory variable by extracting only the shared variance from the indicators when creating the factor scores. This can result in unbiased and consistent estimates of the attitude parameters (Asher, 1974). Note, however, that when the dependent variable (y) is not measured as a latent characteristic, as is the case in the current study (see below), the point estimates are correct but the standard errors of the estimates are inflated, resulting in lower t-statistics. Still, even with measurement error in the dependent variable, the point estimates will remain unbiased, as long as the error in the independent variable is accounted for, as is the case when employing latent measurement models (Asher, 1974).

The relationship between latent delinquent attitudes and offending behavior is examined using logit regression models. The operationalization of the dependent variable will be contingent on the results of RQ1. For instance, if it is found that the specific attitude items load on a single latent trait, then the analyses will use a single logit model to predict the observed probability of engaging in delinquent conduct. If the results indicate that delinquent attitudes are multidimensional around crime-type, then two logit models will be ran using the offense-specific attitude items to predict a particular offense type (e.g., fighting and theft). If, however, the specific attitude items coalesce around the type of excuse employed, then the dependent variable will be coded as a single value where a value of 1 indicates the a tendency to engage in delinquency in general and a value of 0 does not. This is because finding that attitudes form latent traits around the excuse employed transcends specific offense types. For the PNW Survey, this analysis will be cross-sectional in nature, whereas for the G.R.E.A.T. data this will be estimated using pooled lagged logit models—wave 4 delinquency regressed on wave 3 attitudes, wave 5 delinquency regressed on wave 4 attitudes and wave 6 delinquency regressed on wave 5 attitudes.

Next, because of concerns of temporal ordering and Ajzen and Fishbein's (2005) argument that attitudes should be used to predict behavioral intentions, the delinquent attitude scale will be used to predict intentions to offend using the scenarios for each crime type with the PNW data. In the analyses addressing the second research question, all of the scenarios will be pooled in a manner consistent with the identified dimensionality (see above) while accounting for interdependence of observations, because a central thesis of most latent trait models is that individuals who score higher on

the latent value should have a higher probability of offending *across all items or contexts*. Moreover, using all of the items arguably capture one's more general willingness to engage in antisocial behavior.

The results of these models will be used to examine the second hypothesis: that the specific attitude measures are better predictors of delinquent behavior when compared to the global measures. An evaluation of this hypothesis will be done in several ways. First, beginning with the assumption that attitudes are in fact related to behavior, a comparison of the standardized regression coefficients will be assessed, with the prediction that the specific measures will have a larger standardized effect on behavior. Second, comparisons of model fit will be analyzed across the regressions using the global measure and those using the specific measure. The fact that these models are not nested presents challenges to comparisons of model fit, however. To be sure, when comparing two nested models the likelihood ratio test has an asymptotical chi-squared distribution and, therefore, can be used to determine if the saturated model significantly improves model fit when compared to the baseline model. When the models are not nested, however, the data do not necessarily reflect a chi-square distribution, and therefore significance tests cannot be conducted with confidence (see Bentler and Satorra, 2010). Nevertheless, several different fit indices can be used to compare model fit between two non-nested models and can shed insight into whether the specific attitude measures improve model fit, though these are not significance tests in that they do not provide a value as to the probability that the models are different. These include pseudo Pseudo R-Squared, Akraike Information Criterion (AIC), Bayesian Information Criterion (BIC) and log-likelihood values. It is predicted that the Pseudo R-Squared will be larger, and the

AIC, BIC and log-likelihood values will be smaller in the models using the construct comprised of the specific attitude measures. Note, that both the global and specific attitude items are coded so that higher values correspond to greater *disapproval* towards delinquency, and therefore, the relationship between attitudes and delinquency is predicted to be negative.

RQ3: THE INTERSECTION BETWEEN ATTITUDES AND SITUATIONAL CIRCUMSTANCES

The intersection between attitudes and situational circumstances proposed by Sutherland (1947) and Akers (1996) has several implications for the study of crime and delinquency. First, it suggests that the factor loadings of the individual items may not be equal across all items. This would suggest that the specific items are unequally related to the latent factor across individuals which, in turn, would indicate that individuals have differential response patterns to specific items than would be predicted by the latent trait—in other words, that individuals lower in the latent attitude towards delinquent conduct may be more likely to respond favorably to the item than the latent trait would predict. If this is the case then it would suggest that models that allow the factor loadings to vary across items would be better fits to the data than models in which the factor loadings are constrained to be equal, a hypothesis which can be tested in LISREL. Second, if it is found that unconstrained factor loadings improve model fit, then I can proceed to test a primary assertion\ that is implicit in Sutherland and Akers' theories attitudes should predict why individuals react differently when faced with the same situational circumstances.

A fundamental premise of attitudinal perspectives—across a range of fields—is that attitudes can explain why different individuals act differently in the same situations. This is particularly salient for the understanding of delinquent behavior. Many individuals experience ridicule, teasing, and bullying during adolescence, but only a small portion of adolescents actually respond to such disrespect with physical violence. The vignette studies can be used to address question RQ3 because all adolescents are given the same scenarios and therefore, asked to imagine themselves in the same specific situations. Thus, predicting individual intentions to offend using the specific attitude items would provide insight on how different individuals would respond to the same situations. To do this, the second and third scenarios for each crime types are used independently to examine whether the specific attitudes predict willingness to offend under those circumstances. Specifically, for fighting, the measures tapping into attitudes towards disrespect and defending oneself are used to predict willingness to offend under those circumstances in separate regression models. For theft, the specific measures assessing attitudes towards stealing from someone who can afford it (i.e., a major retail store) and from someone who the respondent wants to get back at were used to predict the willingness to offend under those scenario conditions, also in separate regression models.

To test the notion that specific items have discriminating effects, I estimate three models for each of the scenarios of interest. The first model examines the relationship between the single, situation specific item and willingness to engage in delinquency, while controlling for a vector of covariates. The second model estimates the effect of this situation specific item while also controlling for the latent factor comprised of attitudes

towards delinquent behavior, but excluding that individual item. This controls for one's general tendency to approve of that behavior to test the hypothesis that the individual item is predictive of the willingness to offend above and beyond this latent factor. To be sure, consider one of the central assumptions of latent trait theories—that variation in responses is simply a reflection of individual differences in underlying latent traits (Lord and Novich, 1965). This assumption of reflective latent trait models would suggest that any specific item can be removed from the factor, and that specific item would still lose its independent importance once the factor is controlled. If the factor is of importance under certain circumstance, however, it would suggest that there is some characteristic of the item that has a discriminating effect on the outcome (Hambellton and Cook, 1977). In other words, if the individual specific attitude items have an independent effect on WTO after controlling for the latent attitude construct, it would provide evidence in favor of the notion that attitudes have discriminatory power. The third model will estimate the effect of that situation specific item while controlling for each of the other items individually (i.e., decomposed from the general latent trait). If situations retain discriminatory power, then the item corresponding to that circumstance should be related to the willingness to offend but the other individual items should not. In total, these analyses provide statistical tests of the discriminatory power of attitudes towards delinquency in contexts.

CHAPTER 4: RESULTS

Descriptive Relationship Between Global and Specific Attitudes

PNW SURVEY

Table 4 provides descriptive information on individual responses to the global deviance items. The results indicate that the overwhelming majority of adolescents report disapproval of delinquent behavior. In total, nearly 80% of the sample at least somewhat agrees with the statement that getting into a physical fight is wrong. Similar negative global attitudes are found when inquiring about theft behavior, where the mean score of 5.27 (SD = 1.08) corresponds to adolescents, on average, reporting that they "agree" to "strongly agree" with the statement that stealing is wrong. The modal and median response to global attitudes towards theft is "strongly agree", and around 92% of the sample report that they at least "somewhat agree" with the statement that stealing from others is wrong. Thus, the results in the PNW Survey corroborate prior work which indicates that adolescents overwhelmingly disapprove of delinquent conduct, which would suggest that adolescents in this sample have little to no potential for delinquent action.

Table 4. Descriptive statistics of global attitudes towards delinquency in PNW Survey

It is wrong for someone my age to…	*Strongly Disagree (%)*	*Disagree (%)*	*Somewhat Disagree (%)*	*Somewhat Agree (%)*	*Agree (%)*	*Strongly Agree (%)*	*Mean (SD)*
Get into a physical fight	2.70	5.41	12.16	26.13	30.18	23.42	4.46 (1.27)
Steal something from a person or store	.90	2.70	4.05	10.36	23.87	58.11	5.28 (1.08)

If these global measures are reflective of attitudes towards delinquency in context, then the distribution of responses for the specific items should be similar to the global measures, and there should be a high correlation between the global and specific items. On the contrary, when assessing the specific attitudes that ask respondents to evaluate the appropriateness of a behavior when providing a context, we see that the adolescents in the PNW Survey express greater approval for delinquent behavior. Tables 5 and 6 report the descriptive information for specific attitudes favorable to fighting and theft, respectively. Whereas about the same proportion of individuals report disapproval towards fighting because it is "just part of being a teenager", if "no one gets hurt" and if someone is "talking about you behind your back" (71-74%), the disapproval is significantly lower in the other attitude measures. For instance, the mean level of approval for fighting when you are "disrespected you to your face", "someone disrespects

your family" and "defending friends" are all around the "somewhat agree" category, with over 50% of the respondents reporting that they somewhat approve of fighting when their family is disrespected or they are defending friends. The circumstance in which adolescents most widely approve of fighting is when one physically defends oneself. The mean score of 1.93 indicates that, on average, adolescents "agree" with the statement that it is okay to get into a fight if you are defending yourself, and just 11% of the sample report disapproval towards fighting in that circumstance.

Table 5: Descriptive statistics of specific fighting attitude items in PNW Survey

It is sometimes okay for someone my age to…	*Strongly Agree (%)*	*Agree (%)*	*Somewhat Agree (%)*	*Somewhat Disagree (%)*	*Disagree (%)*	*Strongly Disagree (%)*	*Mean (SD)*	*r with global measure*
Get into fights because it just part of being a teenager	3.60	9.91	12.61	16.22	31.98	25.23	4.37 (1.46)	.39
Get into fights as long as no one gets hurt	3.15	10.81	12.61	20.72	30.63	22.07	4.31 (1.39)	.42
Fight someone who talks behind your back	4.95	4.95	19.82	18.02	33.33	18.92	4.27 (1.38)	.49
Fight someone who disrespect	8.11	13.06	25.68	11.71	26.13	14.86	3.78 (1.55)	.52

you to your face								
Fight someone who disrespects your family	17.12	23.42	23.42	9.91	18.02	8.11	3.13 (1.57)	.52
Get into a fight if you're defending friends	8.11	16.22	31.53	13.51	22.07	8.56	3.51 (1.42)	.45
Get into a fight if you're defending yourself	50.00	27.03	12.16	4.50	3.60	2.70	1.93 (1.25)	.33
It is never okay to get into a fight	5.86	16.22	17.57	20.27	25.68	14.41	3.87 (1.48)	-.46

Table 5 also reports the correlations between the specific attitude items and the global fighting measure. If the distributions of the global fighting measure and the specific items are similar, then one would anticipate a high correlation between the items. Instead, the results suggest that the correlations between the global measure and specific items are weak to moderate, ranging from .33 for the defending yourself item, to .52 for the item assessing the appropriateness of fighting when someone disrespects your family. Taken together, the results indicate that the variability in attitudes towards fighting in

specific contexts may not be adequately captured with the use of global attitude measures.

Table 6: Descriptive statistics of specific theft attitude items in PNW Survey

It is sometimes okay for someone my age to…	*Strongly Agree (%)*	*Agree (%)*	*Somewhat Agree (%)*	*Somewhat Disagree (%)*	*Disagree (%)*	*Strongly Disagree (%)*	*Mean (SD)*	*r with global measure*
To steal just to get cool things	.45	.90	3.60	8.11	25.68	61.27	5.41 (.91)	.53
To steal to get things you cannot afford	.45	3.15	5.41	5.41	27.48	58.11	5.31 (1.06)	.47
To steal if you're just going along with friends	.90	2.70	9.46	8.11	27.03	51.80	5.13 (1.38)	.44
To steal if you know the person/store can afford it	2.25	1.80	5.41	7.66	29.73	53.15	5.20 (1.55)	.42
To steal from a person/store to get back at them	1.80	1.35	5.41	7.21	32.43	51.80	5.23 (1.08)	.47

To steal things that teenagers are not allowed to buy (e.g., alcohol, cigarettes)	1.35	4.50	3.60	3.15	20.27	67.12	5.38 (1.15)	.42
To steal something that you need (e.g., food, clothes) if you cannot afford it	4.05	7.66	19.37	10.81	23.42	34.68	4.46 (1.51)	.45
It is never okay to steal from a person or store	37.39	22.97	12.61	9.46	6.31	11.26	2.58 (1.71)	-.27

The descriptive statistics of the specific attitude items capturing theft are presented in Table 6. The differences in the distribution of responses between the global and specific attitude items are less dramatic when assessing stealing behavior, as most adolescents report disapproval towards stealing even when providing contextual information. There are, however, some differences worth noting. First, whereas just 7%

of adolescents report some global approval towards theft, there are some circumstances in which a larger percentage approves of theft. For instance, 13% of adolescents report that stealing can be acceptable if one is just going along with their friends, and over 31% of the sample report that stealing can be acceptable if one needs, but cannot afford, food or clothes. Despite the fact that the means are similar across global and specific theft items, the correlations between these items again are only moderate, ranging from .42 to .53, suggesting that there is considerable variability in individual response patterns across the global and specific items.

Table 7: Descriptive statistics on global delinquent attitudes in G.R.E.A.T. Evaluation

How guilty would you feel for…	Not Very Guilty	Somewhat guilty	Very Guilty	Mean (SD)
Hitting someone	16.56	29.25	54.19	2.27 (.76)
Stealing something worth less than $50?	18.96	35.04	46.00	2.38 (.75)

G.R.E.A.T. EVALUATION

Descriptive analyses using the G.R.E.A.T. data are presented in Tables 7 and 8. These analyses are restricted just to the third wave of the G.R.E.A.T. evaluation, but the results are substantively similar across waves and largely corroborate the findings in the PNW sample. To be sure, the information presented in Table 7 indicates that adolescents largely hold global attitudes against delinquency. The mean scores of 2.27 for fighting and 2.38 for theft suggest that adolescents in the G.R.E.A.T. data report that, on average,

they would feel guilty engaging in either of those behaviors. Around 83% of adolescents report that they would at least feel somewhat guilty hitting someone, and 81% report that they would feel guilty stealing something worth less than $50.

Table 8. Descriptive statistics on specific fighting attitudes in G.R.E.A.T. Evaluation

It is sometimes okay to…	*Strongly Agree (%)*	*Agree (%)*	*Neither Agree nor Disagree (%)*	*Disagree (%)*	*Strongly Disagree (%)*	*Mean (SD)*	*r with global measure*
Get into a physical fight if they hit you first	26.36	30.14	21.64	13.00	8.86	2.47 (1.25)	.38
To get into a fight to protect your rights	24.13	31.76	26.77	11.06	6.28	2.43 (1.15)	.33
To get into a fight if they threaten to hurt your friends or family	24.95	30.29	25.59	12.76	6.41	2.45 (1.18)	.35
To get into a fight if they do not show you enough respect	2.64	4.64	22.20	42.18	28.34	3.89 (.96)	.34
To get into a fight if they threaten you	12.13	17.49	34.12	23.34	12.92	3.07 (1.08)	.41

As with the PNW study, there is evidence in the G.R.E.A.T. data that attitudes may be contextually dependent. For instance, Table 8 indicates that over 50% of adolescents in the G.R.E.A.T. data report that fighting is acceptable in instances in which you are (1) hit first, (2) defending your rights and (3) if someone threatens friends or family; further, approximately 30% report that they approve of fighting if one is threatened first. The correlations between these specific attitude items and the global fighting measure are relatively weak, ranging from .33 to .41. As with the PNW data, Table 9 indicates that the differences between global and specific measures in the G.R.E.A.T. data are less drastic for theft, with around 74% of adolescents reporting disapproval towards theft across all three of the stealing items. The correlations between the three specific theft items and the global measure are moderate, hovering around .50.

Table 9: Descriptive statistics of specific theft attitudes in G.R.E.A.T. Evaluation (Wave 3)

It is sometimes okay…	*Strongly Agree (%)*	*Agree (%)*	*Neither Agree nor Disagree (%)*	*Disagree (%)*	*Strongly Disagree (%)*	*Mean (SD)*	*r with global measure*
Steal from someone who is rich and can replace it	1.43	4.93	19.20	38.26	36.19	4.03 (.94)	.50
Steal little things from stores since it won't hurt them	1.00	4.99	17.62	38.23	38.16	4.08 (.92)	.52
Steal something if that's the only way you could get it	1.79	6.80	19.03	35.05	37.34	4.00 (1.00)	.48

Taken together, this descriptive information speaks to the content and complexity of delinquent attitudes. Though adolescents appear to overwhelmingly disapprove of delinquency globally, there are several situational circumstances in which adolescents view the action of delinquency as acceptable. This is particularly true in more extreme situations such as defending oneself and attaining needs that one cannot afford. Moreover, in both the PNW and G.R.E.A.T. data adolescents appear to be more approving of fighting than they are of theft, which is reflected in the fact that adolescents view fighting as acceptable in more circumstances than they do of theft behavior. While these findings provide some important information into the circumstances in which individuals view delinquency as acceptable, a greater understanding of the content of

delinquent attitudes can be gained by exploring the underlying dimensionality of the specific attitude items.

Table 10. Results of unrotated polychoric factor analysis in PNW Survey

	Factor 1 Factor Loadings (λi)	Factor 2 Factor Loadings (λi)
Fighting Just Part of being Teenager	.47	.36
Okay to Fight if No one Gets Hurt	.62	.40
Okay to Fight if Talking Behind Your Back	.70	.44
Okay to Fight if Disrespecting You to Your Face	.71	.51
Okay to Fight if Disrespecting Your Family	.67	.55
Okay to Fight if Defending Friends	.63	.32
Okay to Fight if Defending Yourself	.49	.36
Okay to Steal to Get Cool Things	.87	-.28
Okay to Steal if You Work Hard but Still Cannot Afford Things	.83	-.36
Okay to Steal if Just Going Along with Friends	.79	-.41
Okay to Steal if They Can Afford to Replace It	.81	-.40
Okay to Steal to Get Back at Someone	.82	-.17

Okay to Steal if You are Not Old Enough to Buy It	.80	-.27
Okay to Steal if it is Something You Need (e.g., food, clothes)	.66	-.37
Eigenvalue	6.21	2.02

The correlations among the specific attitude items are presented in the Appendix, but it is worth noting that there is considerable variation across items, ranging from .21 to .88 in the PNW Survey and .32 to .87 in the G.R.E.A.T. data. However, there does appear to be a consistently strong(er) relationship among the theft items, ranging from .64 to .81 among the PNW sample and .82 to .87 among the G.R.E.A.T. sample. Using these polychoric correlation matrices, an exploratory factor analysis was conducted to assess the underlying dimensionality of the attitude in context construct. The results of the factor analysis for the PNW Survey are presented in Table 10. All of the delinquency items load on the first factor, which has an eigenvalue of 6.21 and explains 74% of the variance in the responses across items. However, the factor loadings for the first factor appear to be somewhat larger among the theft items than among the fighting items. The second factor has an eigenvalue of 2.02 and explains 23% of the variance across items. For the second factor, all of the fighting items have positive factor loadings which are greater than .30, but almost all of the theft items have negative factor loadings. Thus, the unrotated polychoric factor analysis provides some indication that delinquent attitudes may be a multi-dimensional construct. Zwick and Velicer (1986) have suggested several tests to determine how many factors to extract, including parallel analysis, minimum average partial, scree plots and Kaiser's eigenvalue greater than 1 rule. All of these methods

suggest that two factors should be extracted. Because there is indications that the attitude construct may be multidimensional, I explored the relationship among items further by rotating the two factors using oblique rotation. Oblique rotation was used over orthogonal rotation because the latter assumes (and forces) that there is no correlation between any two factors. While this is a justifiable assumption in many cases, it is likely that those who hold attitudes favorable towards delinquency under some circumstances also hold attitudes favorable to delinquency in other circumstances, even if attitudes are multidimensional. Therefore, it is preferable to allow any factors to correlate, and therefore factor analysis using promax rotation is used in this study.

Table 11. Results of rotated polychoric factor analysis in PNW Survey

	Factor 1 Factor Loadings (λi)	Factor 2 Factor Loadings (λi)
Fighting Just Part of being Teenager	.02	.59
Okay to Fight if No one Gets Hurt	.05	.72
Okay to Fight if Talking Behind Your Back	.08	.78
Okay to Fight if Disrespecting You to Your Face	-.02	.87
Okay to Fight if Disrespecting Your Family	-.06	.90
Okay to Fight if Defending Friends	.12	.63

Okay to Fight if Defending Yourself	-.02	.61
Okay to Steal to Get Cool Things	.85	.11
Okay to Steal if You Work Hard but Still Cannot Afford Things	.90	.01
Okay to Steal if Just Going Along with Friends	.91	-.06
Okay to Steal if They Can Afford to Replace It	.92	-.06
Okay to Steal to Get Back at Someone	.74	.17
Okay to Steal if You are Not Old Enough to Buy It	.80	.10
Okay to Steal if it is Something You Need (e.g., food, clothes)	.79	-.08
Eigenvalue	6.26	5.36

The factor loadings after rotation are presented in Table 11, and provide some evidence that the items come together to form *offense-specific* delinquent attitudes. The factor loadings of the fighting items on factor one are small, never crossing .10. Conversely, the theft items exceed this threshold, ranging from .85 to .92. This would suggest that factor 1 reflects delinquent attitudes favorable to theft behavior. Using this same criterion, the second factor seems to reflect delinquent attitudes favorable to fighting. The fighting items have factor loadings that range from .74 to .92, while the theft items have substantially smaller than the loadings corresponding to the fighting items, with the highest loading being .17. Thus, the results seem to challenge the often

assumed unidimensionality of the delinquent attitude construct, and suggesting instead that delinquent attitudes form offense-specific traits.

Table 12. Results of unrotated polychoric factor analysis in G.R.E.AT. Evaluation

	Factor 1 Factor Loadings (λi)	Factor 2 Factor Loadings (λi)
Okay to Fight to Defend Yourself	.75	.40
Okay to Fight for Rights	.71	.46
Okay to Fight to Defend Friends or Family	.72	.44
Okay to Fight if Disrespected	.76	.18
Okay to Fight if Threatened	.80	.25
Okay to Steal to Little Things	.75	-.51
Okay to Steal from Rich Who Can Afford it	.72	-.50
Okay to Steal Things You Need if Only Way to Afford it	.77	-.45
Eigenvalue	2.93	2.81

Table 13. Results of rotated polychoric factor analysis in G.R.E.AT. Evaluation

	Factor 1 Factor Loadings (λi)	Factor 2 Factor Loadings (λi)
Okay to Fight to Defend Yourself	.76	.11
Okay to Fight for Rights	.95	-.04
Okay to Fight to Defend Friends or Family	.91	-.05
Okay to Fight if Disrespected	.51	.29
Okay to Fight if Threatened	.77	.13
Okay to Steal to Little Things	.06	.83
Okay to Steal from Rich Who Can Afford it	-.02	.96
Okay to Steal Things You Need if Only Way to Afford it	.01	.93
Eigenvalue	3.95	3.88

A polychoric exploratory factor analysis with was also conducted in the G.R.E.A.T. data, and the results can be seen in Table 12. Factor one has an eigenvalue of 4.55 and explains 79% of the variance in item responses, while the second factor has an eigenvalue of 1.35 and explains 20% of the variance in item responses. As with the PNW Survey, the fighting values are all positive and greater than .25 for the second factor while the theft values are negative, suggesting that the items may not simply reflect a unidimensional structure. Indeed, the results of a minimum average partial, parallel analysis, scree plot, and Kaiser's rule all indicate that two factors should be extracted in this data. I rotated the factors using oblique rotation, with the results presented in Table

13. The results of the rotated factor analysis suggest that the items coalesce around offense-specific attitudes towards delinquency. The loadings of the fighting items range from .51 to .95 in the first factor, while the loadings of the theft items are either negative or never get above .10, suggesting that the first factor represents an underlying tendency to approve of fighting behavior. Conversely, the loadings of the fighting items for factor 2 range from -.05 to .34, while the theft items range from .83 to .96. These results, then, are relatively consistent with the findings in the PNW Survey, finding some preliminary evidence that attitudes appear to form around offense-specific underlying traits. Accordingly, two separate factors were retained in both data sets representing attitudes favorable to delinquency: One represents attitudes favorable to theft, and one represents attitudes favorable to fighting with a correlation between factors of .38. As a result, these two factors will be used to predict offense specific outcomes in the regression models presented below.[5]

[5] As noted in text, one of the advantages of the G.R.E.A.T. data is that it allows for an examination of specific attitudes across a broader age range of adolescents. I assessed whether the dimensionality of delinquent attitudes changed across different age ranges. The finding that delinquent attitudes coalesce around crime-specific latent attitudes is found across all waves of the G.R.E.A.T. data, with the items displaying similar factor loadings across these waves. The results of these factor analyses are available upon request.

The Predictive Validity of Delinquent Attitudes: Global versus Specific Measures

PNW SURVEY

Predicting Self-Reported Offending

Table 14. Logit Regression Predicting Fighting Behavior in PNW Survey

	b (*SE*)	b (*SE*)
Global Attitudes Towards Fighting	-.03 (.17)	-- (--)
Specific Attitudes	-- (--)	-.45* (.13)
Self-Control	.21† (.12)	.22† (.12)
Parental Attachment	-.18* (.09)	-.16† (.09)
School Achievement	-.76** (.29)	-.83** (.31)
Unstructured Socializing	.04 (.03)	.04 (.03)
Male	1.22*** (.48)	1.11* (.48)
Age	.33 (.32)	.20 (.34)
White	.35 (.46)	.13 (.47)
Psuedo-R2	.19	.24
AIC	167.89	160.61
BIC	198.56	191.23
Log-Likelihood	-74.95	-71.31

Model 1 in Table 14 presents the results of a logit regression using the global fighting item to predict fighting behavior in the previous year in the PNW Survey, once controlling for a host of control variables. The results indicate that a global attitude favorable to fighting does not have a statistically significant relationship with fighting behavior ($b = -.03$, $p = .856$). Four variables are statistically significant in this model, three of which draw on control perspectives of crime and deviance. Individuals with lower levels of self-control are more likely to report engaging in violence, at a marginally significant level ($b = .21$, $p = .08$). Moreover, individuals who report a stronger attachment to parents ($b = -.18$, $p < .05$) and those who display greater school achievement ($b = -.76$, $p < .01$) are less likely to report getting into a physical fight. Finally, males also display a greater tendency to fight when compared to females (1.22, $p < .001$). These results suggest that attitudes play little influence on engaging in fighting behavior. Model 2 in Table 14 estimates the same equation, but replaces the global attitude measure with the latent factor score using specific attitudes towards fighting items. When using the latent factor, attitudes favorable to fighting are a statistically significant predictor of delinquent behavior ($b = -.45$, $p < .05$). In particular, the odds ratio ($e^{-.45} = .64$) indicates that a standard deviation increase in attitudes against fighting reduces the odds that someone gets into a fight by 36%. For the most part, the same control variables are significant in Model 2, though their effects are slightly changed. Specifically, the parental attachment coefficient drops from .18 to .16 and, in model 2, is marginally significant ($p < .10$). The protective effect of school achievement becomes slightly stronger, changing from .76 in the global attitude model to .83 in the model using the latent factor score. Finally, when compared to Model 1 ($b = 1.22$), the

effect of gender on fighting is slightly reduced when incorporating the latent attitude factor score (b = 1.11), though in both models the effect is statistically significant. In sum, whereas the use of a global attitude item would lead one to conclude that attitudes are not predictive of fighting behavior, the use of specific attitude items seem to suggest that attitudes are important predictors of fighting.

To further assess the utility of specific attitude measures, model fit statistics are compared across Models 1 and 2. Notice first that the Pseudo R-Squared value increases from .19 in the global model to .24 in the specific model, indicating that there is about a 25% increase in the explained variance in the model using the specific attitude towards fighting measure. Further, the AIC and BIC in Model 2 are both smaller than the information criterion obtained in Model 1, again providing support that the specific attitude measure provides a better fit to the data. Finally, as with the information criterion, the log-likelihood is also smaller in the model using specific attitudes towards fighting when compared to the model using a global measure. Thus, with regards to fighting, the results provide support for hypothesis 2 that the factor comprised of specific fighting attitudes is a better predictor of behavior than the global attitude item.

Table 15. Logit Regression Predicting Theft Behavior in PNW Survey

	b (*SE*)	b (*SE*)
Global Attitudes	-.79***	--
	(.18)	(--)
Specific Attitudes	--	-1.73***
	(--)	(.28)
Self-Control	.01	-.03
	(.12)	(.38)
Parental Attachment	-.16†	-.24*
	(.09)	(.11)
School Achievement	.23	.39
	(.30)	(.35)
Unstructured Socializing	.08*	.07†
	(.03)	(.04)
Male	.90*	.93†
	(.45)	(.52)
Age	.11	.03
	(.33)	(.38)
White	-.08	-1.08†
	(.47)	(.63)
Psuedo-R2	.23	.37
AIC	171.81	131.07
BIC	202.48	161.73
Log-Likelihood	-76.91	-61.82

Table 15 focuses on the analogous effects for theft. Model 1 estimates the effect of a global attitude towards theft measure on delinquency. In this model, global attitudes

towards theft are a relatively strong and statistically significant predictor of theft behavior ($b = -.79$, $p < .001$). Specifically, a standard deviation increase in global attitudes towards theft is associated with a 57% reduction in the odds of stealing. Three of the control variables are significant in this model. Individuals who report a stronger attachment to parents are significantly less likely to commit a theft ($b = -.16$, $p = .09$). Individuals who spend more time in unstructured activities with friends are significantly more likely to report committing a theft ($b = 08$, $p < .05$) as are males ($b = .90$, $p < .05$). Model 2 in Table 14 estimates the same equation but using the factor score comprised of theft items. As with the global measure, the specific attitude factor is a statistically significant predict of theft behavior ($b = -1.73$, $p < .001$), with an effect size that is notably larger than the global measure. Specifically, a standard deviation increase in attitudes unfavorable to theft is associated with an 83% reduction in the odds of committing a theft behavior. For the most part, the inclusion of the latent factor has a minimal effect on the control variables compared to the model using the global item, but there are two exceptions. The protective effect of parental attachment increases in Model 2 ($b = -.24$, $p < .05$) when compared to Model 1 ($b = -.16$, $p < .10$). Most drastically, however, is the substantial increase in the size of the race estimate, which changes from a value of -.08 in Model 1, to a value of -1.08 in Model 2, the latter of which is significant at a .10 level. As with the model using the global attitude item, males are more likely to commit theft when compared to females with a comparable effect size ($b = .93$, $p < .10$), though this effect is only marginally significant, and the effect of unstructured socializing is also reduced to marginal significance, but the effect size remains similar to the estimate in Model 1 ($b = .07$, $p = .07$).

The model using the global attitude toward theft measure predicts 23% of the variance in theft behavior, while the model using the specific attitude toward theft measure predicts 37% of the variance in theft. The other model fit statistics tell a similar story. Both the AIC and BIC are smaller in Model 2 (131.07 and 171.81, respectively) than in Model 1 (161.73 and 202.48, respectively). Finally, the log-likelihood estimate is also smaller in the model using the specific attitude measure (-61.82) when compared to the model using the global measure (-76.91). Taken together, the results are consistent with the predictions made in hypothesis 2: specific attitude measures are better predictors of behavior compared to global attitude measures, at least with respect to the PNW Survey.

Predicting the Willingness to Offend

Table 16. Logit Regression Predicting Willingness to Fight in PNW Survey

	b (*SE*)	b (*SE*)
Global Fighting Attitude	-.34***	--
	(.07)	(--)
Specific Fighting Attitudes	--	-.56***
	(--)	(.06)
Self-Control	.10*	.04
	(.04)	(.04)
Parental Attachment	.00	-.02
	(.03)	(.03)
School Achievement	-.26*	-.17***
	(.12)	(.11)
Unstructured Socializing	.02†	.01
	(.01)	(.01)
Male	.13	.34*
	(.15)	(.15)

Age	-.10	-.01
	(.13)	(.04)
White	-.36*	-.21
	(.16)	(.15)
Prior Fighting	.48 *	.30†
	(.21)	(.19)
Psuedo-R2	.08	.13
AIC	818.08	787.64
BIC	862.56	831.86
Log-Likelihood	-399.04	-383.72

One criticism of the above analyses is that the cross-sectional nature of the PNW Survey makes it difficult to determine the causal ordering of the attitude-delinquency relationship. One way to address this concern when collecting cross-sectional data is to employ hypothetical scenarios that examine individuals' willingness to offend in the future. As noted above, Fishbein and Ajzen (1979) have actually argued that this is the most appropriate method for assessing attitude perspectives because it captures an individual's potential for future action.

Drawing on this rationale, Tables 16 and 17 compares the effects of the global and specific attitude measures on the willingness to engage in both crime types. Model 1 in Table 16 presents a pooled logit analysis examining the effects of global attitudes against fighting on the willingness to fight in three different hypothetical scenarios. The results indicate that global attitudes against fighting are a significant predictor of the willingness to fight ($b = -.34$, $p < .001$), with a standard deviation increase associated with a 35% reduction in the odds of being willing to fight. Several control variables are significant in this model. Adolescents with lower levels of self-control are more likely to be willing to fight ($b = .09$, $p < .05$), as are those with a prior tendency to get in fights (b

= .50, p < .05). The results also suggest that both whites (b = .36, p < .05) and individuals with greater academic achievement (b = .26, p < .05) are less willing to fight. Model 2 in Table 16 assesses the same equation but replaces the global item with the general factor. The general latent trait of attitudes against fighting is a significant predictor of willingness to fight (b = -.56, p < .001). The standardized effect using the specific attitude composite measure is larger than that of the global measure, with a standard deviation increase in attitudes against fighting being associated with a 43% decrease in the willingness to fight. Interestingly, once accounting for the latent attitude factor, the statistical significance of many control variables vanishes. The effect of self-control on willingness to fight reduces from a significant effect of .10 in Model 1 to a non-significant effect of .04 in the model using the latent factor score. Similarly, the race effect is reduced to non-significance when using the latent factor score, reducing from -.36 in Model 1 (p < .05) to -.21 in Model 2 (p > .10). Further, the effect of prior fighting behavior is also substantively reduced from .48 in Model 1 to .30 in Model 2, the latter of which is just marginally significant (p = .09). Conversely, unlike in Model 1 the gender effect is statistically significant when using the specific attitude factor, suggesting that males are more likely to report a willingness to fight when compared to females (b = .34, p < .05). Thus, using the specific latent attitude score instead of the global attitude item does not just alter the effect of attitudes on behavior, it also influences the conclusion one makes concerning the control variables, as well.

An assessment of the model fit statistics indicates that the model using the latent trait measure of fighting attitudes is a better fit of the willingness to offend data. The Pseudo R-Squared value in Model 1 is .08, but the use of the latent trait measure

increases the explained variance to .13, an increase of nearly 63%. Moreover, the AIC (787.64) and BIC (831.86) are both smaller in Model 2 when compared to the AIC (818.08) and BIC (862.56) in Model 1. Finally, as one might expect, the log-likelihood estimates are also smaller in the model using the latent trait measure of attitudes against fighting when compared to the global measure (-383.82 versus -399.84). In sum, all of the model fit statistics tell a similar story—the use of a factor scale comprised of specific attitudes items leads to a better fit to the data.

Table 17. Logit Regression Predicting Willingness to Steal in PNW Survey

	b (*SE*)	b (*SE*)
Global Fighting Attitude	-.41***	--
	(.13)	(--)
Specific Fighting Attitudes	--	-1.05***
	(--)	(.15)
Self-Control	.04	.06
	(.10)	(.10)
Parental Attachment	-.01	-.05
	(.07)	(.03)
School Achievement	-.08	-.03
	(.21)	(.22)
Unstructured Socializing	.01	.01
	(.03)	(.03)
Male	.22	.26*
	(.32)	(.34)
Age	.09	.12
	(.21)	(.21)
White	.32	-.21
	(.34)	(.37)
Prior Theft	1.69***	.81*
	(.37)	(.37)
Psuedo-R2	.20	.29
AIC	490.80	440.11
BIC	535.21	484.52
Log-Likelihood	-235.40	-210.06

Table 17 compares global and specific models on the effect of willingness to steal. The results of Model 1 indicate that the global attitudes against theft are a significant predictor of the willingness to offend ($b = .41$, $p < .001$). Specifically a standard deviation increase in global attitudes against theft is associated with a 36%

reduction in the willingness to commit theft. The only control variable that is related to the willingness to commit theft in the PNW Survey is a prior tendency to steal ($b = 1.68$, $p < .001$). The results in Model 2 indicate that the factor composed of specific attitudes against theft is also a significant predictor of willingness to steal ($b = 1.05$, $p < .001$), but the standardized effect is substantially larger than the global measure. A standard deviation increase in latent attitudes against theft is associated with a 77% reduction in the willingness to commit theft. Unlike the models estimated willingness to fight, the use of the specific attitude factor for theft does not greatly alter the size and significance of most of the control variables, but there are some noteworthy exceptions. To be sure, as with Model 1, the only confounder that is significant in Model 2 is a prior tendency to steal, but the size of this effect is less than half of what the effect was in Model 1 ($b = .81$, $p < .05$). Moreover, the race coefficient is in the opposite direction in Model 2 ($b = -.21$) when compared to Model 1($b = .32$), but neither effect is statistically significant.

The model fit statistics assessing the willingness to steal tell a similar story as the fighting models: The model using the factor comprised of specific items improves model fit. Specifically, the explained variance increases from .20 to .28 when using the latent measure of specific theft attitudes. Moreover, Table 17 indicates that the AIC and BIC are smaller in Model 2 compared to Model 1, as is the log-likelihood statistics. Taken together, these results support hypothesis 2 that the latent measure of specific attitudes is a better measure when compared to global attitudinal measures.

Table 18. Logit Regression Predicting Fighting Behavior in the G.R.E.A.T. Data

	b(*SE)*	b(*SE*)
Global Fighting Attitude	-.44***	--
	(.04)	(--)
Specific Fighting Attitudes	--	-.33***
	(--)	(.05)
Self-Control	.05**	.04*
	(.02)	(.02)
Parental Attachment	-.01	-.01†
	(.02)	(.01)
School Commitment	-.08	-.14*
	(.05)	(.05)
Unstructured Socializing	.01	.01
	(.01)	(.01)
Male	.35***	.28***
	(.09)	(.08)
Age	-.22***	-.23***
	(.04)	(.04)
White	-.01	.02
	(.09)	(.08)
Prior Fighting	1.47 ***	1.48***
	(.08)	(.08)
Psuedo-R2	.16	.19
AIC	3657.42	3626.84
BIC	3719.26	3688.59
Log-Likelihood	-1818.71	-1803.42

Though the results of the PNW Survey are informative, the cross-sectional nature and limited age-range may be affecting the observed relationships. Accordingly, a pooled

lagged regression assessing the influence of attitudes on fighting and theft, using data from the G.R.E.A.T. evaluation, are presented in Tables 18 and 19, respectively. These data have a wider age range (13-17) and allow me to control for the prior tendency to engage in deviance. Model 1 presents the pooled effects for the global fighting measure, which is a statistically significant predictor of fighting in the G.R.E.A.T. data. ($b = -.44$, $p < .001$). A standard deviation increase in the global attitude towards fighting is associated with a 29% reduction in one's tendency to fight, after accounting for a host of control variables. Several other variables are statistically significant predictors of fighting in this model: individuals with lower levels of self-control are more likely to get into a fight ($b = .05$, $p < .01$), as are males ($b = .35$, $p < .001$) and individuals who got into a fight in the prior year ($b = 1.47$, $p < .001$). Finally, the results indicate that older adolescents are less likely to get into a fight when compared to younger adolescents ($b = -.22$, $p < .001$). Model 2 estimates the same equation but uses the specific fighting factor, which is a statistically significant predictor of fighting (-.33, $p < .001$). The standardized effect of the specific fighting measure is slightly larger than the global measure: specifically, a standard deviation increase in attitudes unfavorable to fighting is associated with a 34% decrease in the odds of getting into a fight in the next observation period. For the most part, the size and significance of the control variables are similar across the two models. Self-control ($b = .04$, $p < .05$), attachment to mother ($b = -.01$, $p = .06$) and age ($b = -.23$, $p < .001$) are all related to fighting behavior, with the size of these effects being similar to those estimated in Model 1. Moreover, males ($b = .28$, $p < .001$) and those with a prior history of fighting ($b = 1.48$, $p < .001$) are also more likely to get into a fight, and the sizes, which is also consistent with the findings using the global attitude item. There is

one important difference among the control variables in Model 2 when compared to Model 1: the protective effect of school commitment is nearly twice as large in the model using the latent factor score compared to the global attitude item ($b = -.14$, $p < .05$) and, unlike in Model 1, this effect is statistically significant.

The data indicate that both the global and specific fighting measures are related to fighting, and the strength of the effects is comparable. Accordingly, several fit statistics are evaluated to determine if the model fit is improved when using the specific fighting measure. The Pseudo R-Squared in Model 2 is slightly larger (.19) than the Pseudo R-Squared in Model 1 (.16), suggesting that the specific fighting measure explains a little more variation in fighting. The other fit statistics indicate that Model 2 is a better fit to the data. The AIC (3626.84) and BIC (3688.59) are both smaller in models using the specific attitudes towards fighting measure than when using the global measures (3657.42 and 3719.26, respectively). Finally, the estimated log-likelihood is also smaller in Model 2 (LL = -1803.42) when compared to Model 1 (LL = -1818.71), providing further evidence that the former is a better fit to the data. Thus, though less drastic than those in the PNW Survey, the results provide some evidence in support of hypothesis 2.

Table 19. Logit Regression Predicting Theft Behavior in the G.R.E.A.T. Data

	b (*SE*)	b (*SE*)
Global Theft Attitude	-.36***	--
	(.04)	(--)
Specific Theft Attitudes	--	-.37***
	(--)	(.05)
Self-Control	.06**	.04*
	(.02)	(.02)
Parental Attachment	-.02*	-.01†
	(.01)	(.02)
School Commitment	-.12**	.08
	(.05)	(.05)
Unstructured Socializing	.02*	.01
	(.01)	(.01)
Male	.35***	.28***
	(.09)	(.08)
Age	-.17***	-.23***
	(.04)	(.04)
White	.05	.02
	(.09)	(.8)
Prior Theft	1.58***	1.48***
	(.08)	(.08)
Psuedo-R2	.18	.19
AIC	2670.33	2660.50
BIC	2732.42	2722.49
Log-Likelihood	-1325.18	-1320.25

Table 19 presents the results for stealing in the G.R.E.A.T. data. Model 1 indicates that the global theft measure is a statistically significant predict of stealing behavior ($b = -.36$ $p < .001$), with a standard deviation increase in global attitudes being

associated with a 33% decrease in the probability of committing theft. Several of the control variables are statistically significant in Model 1: Higher levels of self-control ($b = .06$, $p < .001$), maternal attachment ($b = -.02$, $p < .01$), and school commitment ($b = -.12$, $p < .01$) are all associated with odds of committing theft, while those who spend more time hanging out with friends in unstructured settings ($b = .02$, $p < .01$) younger adolescents ($b = -.17$, $p < .001$), males ($b = .35$, $p < .001$), and those with a prior tendency to steal ($b = 1.58$, $p < .001$) have a higher probability of offending. In Model 2, the specific theft attitude is also a statistically significant predictor of the odds of stealing (-.37, $p < .001$). The effect of this measure on stealing is slightly smaller when compared to the global measure—a standard deviation increase in attitudes against stealing is associated with a 31% reduction in the odds of stealing. The size and significance of the control coefficients is similar in Model 2 as in Model 1.

The model fit statistics suggest that Model 2 provides only a slightly better fit to the data when compared to Model 1. The Pseudo R-Squared values are .18 for the model using the global measure, and .19 for the model using the composite scale comprised of specific attitudes toward theft. The AIC (2660.50 versus 2670.33), BIC (2722.49 versus 2732.42), and log-likelihood values (-1325.18 versus -1320.25) in Model 2 is smaller than that of Model 1, suggesting that the factor comprised of specific attitudes against theft provides a better fit to the data. Still, however, the size of the coefficient, and the model statistics, are comparable across the two models, suggesting that the specific theft measure may not provide a substantially better fit to the data in the G.R.E.A.T. data.

In summary, across all models the effect of the standardized specific attitude measure on delinquency are comparable to the global measure, and various fit statistics

indicated that the specific measure provided a better fit to the data. There are several caveats to this conclusion, however. First, in some cases the differences in strength of the effect and model fit were not large. Second, the contrast between the global and specific measures was larger in the PNW than in the G.R.E.A.T. data. There are several plausible explanations for why this is the case, which will be discussed in the final chapter. Nevertheless, the results were fairly consistent, providing some preliminary support for hypothesis 2.

The Discriminatory Power of Situational Circumstances

Situational circumstances were a central element of Sutherland's (1947) differential association theory, in which he argued that delinquent conduct requires both definitions favorable to crime, and the exposure to situations that match those definitions. This interaction between attitudes and situations led to the hypothesis in research question 3: attitudes favorable to delinquency in a specific situation can explain why some people offend and others do not when experiencing that same situation.

The implication of this is that the specific circumstances themselves retain discriminatory ability—in other words, the specific attitude items interact with individuals and are therefore important above and beyond their relationship to a more general latent trait. This assumption can be tested by seeing if allowing the factor loadings to vary improves model fit when compared to constraining the factor loadings to be constant across items. I test this by first estimating a structural equation model in LISREL in which the factor loadings are constrained to be equal. I then estimate the same model, but allow the factor loadings to vary freely. Next, I compare the model fits of the constrained and constrained models to determine if there is evidence of differential factor

loadings. If the chi-square statistic is statistically significant, it would suggest that allowing the factors loadings to vary significantly improves the fit to the data. Substantively, this would suggest that there are differential item discriminations. The results indicate that allowing the factor loadings to vary improves the fit of the model for both fighting (chi-square = 84.05, $p < .001$) and theft (chi-square = 33.21, $p < .001$). Thus, this provides some initial indication that delinquent attitudes have discriminating power. I now proceed to examine whether there is more direct evidence of discriminating attitudes by assessing the relationship between the specific attitude items and the WTO across different scenarios.

The Effect of Situational Experiences on Behavior—The Conditioning Effect of Attitudes

Four of the six scenarios used in the PNW Survey correspond directly to an attitude also measured in that survey. Specifically, individuals are inquired about their likelihood of getting into a physical fight after being 1) disrespected to your face and; 2) being physically accosted, and individuals are asked to report their likelihood of theft when: 1) have the chance to steal from a major store who can afford to replace what they steal and; 3) stealing from a store after the manager wrongfully fails to let them return something and treats them with disrespect (e.g., getting back at the store). If attitudes have discriminatory power, the specific items pertaining to delinquency in these situations should be predictive of deviance above and beyond the general latent traits of fighting and theft attitudes. To test this, three models are estimated for each of the four scenarios: 1) prediction WTO with the specific attitude only; 2) predicting WTO with the specific attitude while also controlling for the latent attitude towards that behavior,

removing that item that corresponds to that specific situation and; 3) controlling for all of the specific attitudes relevant to that crime-type. Because these models are similar to those estimated in RQ2, discussions of the results will not focus on the control variables, but will focus solely on the influence of the different attitude items.

Table 20. Discriminatory Effect of Attitudes Towards Fighting When Being Disrespected on WTO When Being Disrespected

	Model 1 *Specific Attitude Only*	Model 2 *Specific Attitude and Latent Factor*	Model 3 *All Specific Attitudes*
	b (*SE*)	b (*SE*)	b (*SE*)
Attitude Towards Fighting When Disrespected	-.82*** (.14)	-.69*** (.26)	-.49** (.22)
Latent Attitude Towards Fighting[a]	-- (--)	-.45† (.24)	-- (--)
Attitude Towards Fighting Anytime	-- (--)	-- (--)	-.16 (.16)
Attitude Towards Fighting if No One Hurt	-- (--)	-- (--)	.09 (.18)
Attitude Towards Fighting When Talk Behind Back	-- (--)	-- (--)	-.10 (.23)
Attitude Towards Fighting When Disrespecting Family	-- (--)	-- (--)	-.17 (.19)
Attitude Towards Fighting When Defending Friends	-- (--)	-- (--)	-.12 (.16)
Attitude Towards Fighting When	-- (--)	-- (--)	-.70*** (.19)

Defending Yourself			
Self-Control	.16†	.15	.07
	(.09)	(.09)	(.18)
Parental Attachment	.02	.03	.02
	(.08)	(.08)	(.11)
School Achievement	-.03	-.02	-.33
	(.23)	(.23)	(.40)
Unstructured Socializing	.03	.04	.00
	(.03)	(.05)	(.04)
Male	.54*	.64	.16
	(.30)	(.36)	(.60)
Age	-.24	-.23	.21
	(.28)	(.29)	(.40)
White	-.53	-.59	-.57
	(.39)	(.37)	(.64)
Prior Fighting	1.64*	1.39*	.58
	(.72)	(.72)	(.65)

[a] Attitudes towards fighting when disrespected was removed when constructing this factor

The results of the analyses are presented in Tables 20 through 23. Model 1 in Table 19 assesses the willingness to fight when someone is disrespectful to your face, using just an individual's attitude towards fighting when being disrespected as a predictor. The results indicate that the specific attitude towards fighting when being disrespected is statistically significant predictor of the willingness to fight when being disrespected ($b = -.82$, $p < .001$). Model 2 in Table 20 assesses whether the specific attitude towards fighting when being disrespected retains predictive power after accounting for the latent attitude towards fighting. The latent attitude towards fighting

factor is of marginal statistical significance when predicting the willingness to fight ($b = -.45$, $p = .09$), but the specific attitude towards fighting when being disrespected retains predictive power ($b = -.69$, $p < .001$). Finally, Model 3 examines the predictive power of the specific attitude towards fighting when being disrespected while controlling for all of the other attitudes individually. If specific attitudes have discriminatory power, then the attitude towards fighting when disrespected should predict the willingness to fight, but the others should not. The results provide some support for this notion: The specific attitude towards fighting when disrespected is a significant predictor of the willingness to fight ($b = -.49$, $p < .01$). Moreover, the other specific attitudes are unrelated to the willingness to fight when disrespected, with the sole exception of attitudes towards fighting when defending oneself ($b = -.70$, $p < .001$). While this was not hypothesized, it may not be surprising given that scholars have found that some individuals interpret fighting when disrespected as being equivalent to defending oneself from physical violence (Anderson, 1999).

Table 21. Discriminatory Effect of Attitudes Towards Fighting When Being Disrespected on WTO When Defending Oneself

	Model 1 *Specific Attitude Only*	Model 2 *Specific Attitude and Latent Factor*	Model 3 *All Specific Attitudes*
	b (*SE*)	b (*SE*)	b (*SE*)
Attitude Towards Fighting When Defending Self	-.67*** (.17)	-.49** (.17)	-.44** (.18)
Latent Attitude Towards Fighting[a]	-- (--)	-.82* (.33)	-- (--)
Attitude Towards Fighting Anytime	-- (--)	-- (--)	-.05 (.22)
Attitude Towards Fighting if No One Hurt	-- (--)	-- (--)	-.22 (.30)
Attitude Towards Fighting When Talk Behind Back	-- (--)	-- (--)	.07 (.27)
Attitude Towards Fighting When Disrespecting Family	-- (--)	-- (--)	-.06 (.20)
Attitude Towards Fighting When Defending Friends	-- (--)	-- (--)	-.05 (.16)
Attitude Towards Fighting When Disrespected	-- (--)	-- (--)	-.60† (.36)
Self-Control	.06 (.12)	.01 (.12)	-.02 (.13)
Parental Attachment	-.04 (.10)	-.01 (.10)	-.01 (.11)
School	-.47	-.36	-.32

Achievement	(.33)	(.33)	(.40)
Unstructured Socializing	.10* (.03)	.09† (.05)	.07 (.05)
Male	.47 (.48)	.57 (.48)	.70 (.52)
Age	.15 (.37)	.14 (.37)	.05 (.41)
White	-.69 (.47)	-.71 (.49)	-.52 (.65)
Prior Fighting	.28 (.87)	.44 (.38)	.29 (.39)

[a]Attitudes towards fighting when defending yourself was removed when constructing this factor

Table 21 assesses whether attitudes towards physically defending oneself is a discriminative predictor of the willingness to fight when pushed. Model 1 indicates that this specific attitude is a significant predictor of the willingness to fight when controlling for a host of individual characteristics ($b = -.67$, $p < .001$). Model 2 estimates the same equation but now controls for the latent attitude factor. The results indicate that the latent attitude towards fighting is a significant predictor of willingness to fight ($b = -.87$, $p < .001$), but the specific attitude towards fighting when defending oneself retains statistical significance ($b = -.49$, $p < .01$), suggesting that the specific attitude has an effect above and beyond the latent factor. Finally, Model 3 predicts the willingness to fight using all of the specific fighting attitudes independently. Consistent with the notion that specific items have discriminatory power, the only predictor of willingness to fight when defending oneself that reaches traditional levels of statistical significance is attitudes

towards fighting when defending oneself (b = -.44, p < .001), but attitudes towards fighting when being disrespected is marginally significant (b = -.60, p < .10).

Table 22. Discriminatory Effect of Attitudes Towards Stealing From Someone Who Can Afford It on WTO in Large Store

	Model 1 *Specific Attitude Only*	Model 2 *Specific Attitude and Latent Factor*	Model 3 *All Specific Attitudes*
	b (*SE*)	b (*SE*)	b (*SE*)
Attitude Towards Stealing When No One Hurt	-.60** (.20)	-.32 (.24)	-.26 (.29)
Latent Attitude Towards Stealing[a]	-- (--)	-.57* (.30)	-- (--)
Attitude Towards Stealing Anytime	-- (--)	-- (--)	.43 (.45)
Attitude Towards Stealing If Work Hard But Can't Afford	-- (--)	-- (--)	-.31 (.37)
Attitude Towards Stealing if Going Along with Friends	-- (--)	-- (--)	-.53† (.27)
Attitude Towards Stealing To Get Back at Someone	-- (--)	-- (--)	.31 (.30)
Attitude Towards Stealing to Get Things Not Old Enough To Buy	-- (--)	-- (--)	-.36 (.26)
Attitude Towards Stealing if in Need	-- (--)	-- (--)	-.03 (.20)

Self-Control	.09	.03	.04
	(.13)	(.13)	(.13)
Parental Attachment	-.01	.01	-.05
	(.10)	(.10)	(.11)
School Achievement	-.39	-.18	-.28
	(.31)	(.33)	(.35)
Unstructured Socializing	.10*	-.01	.01
	(.03)	(.04)	(.04)
Male	.32	.08	.70
	(.47)	(.48)	(.52)
Age	.28	.26	.21
	(.37)	(.37)	(.38)
White	.06	.06	-.07
	(.51)	(.51)	(.55)
Prior Stealing	2.11***	1.92***	1.95***
	(.54)	(.55)	(.61)

[a]Attitudes towards stealing when no one is hurt was removed when constructing this factor

Tables 22 and 23 test the discriminatory power of circumstance specific theft attitudes on the willingness to steal. Model 1 in Table 22 examines whether the willingness to commit steal from a major store who can afford it, using just the specific attitude as a predictor. The results indicate that the specific attitude towards stealing from someone who can afford to replace it is a significant predictor of the willingness to steal from a large store ($b = -.60$, $p < .001$). Model 2 estimates the same equation but controls for the attitudes towards theft factor to determine if the specific attitude towards stealing from someone to get back at them has discriminatory power. The theft factor is a strong and statistically significant predictor of the willingness to steal in this scenario ($b = -.57$, $p < .001$), but the specific attitude towards theft when getting back at someone is not ($b =$

.32, p > .10), suggesting that this attitude does not retain discriminatory power. Model 3 now estimates the equation while using all of the specific attitudes as a predictor. The results indicate that none of the specific attitudes reach traditional levels of significance, but stealing when going along with friends is a marginally significant predictor (b = -.54, p < .10). Of course, the scenario specifies that the individual is with his/her friends at the time of the act, so it is possible that the inclusion of that parameter is conflating the discriminatory effect of the specific attitude towards stealing from someone who can afford it. Nevertheless, even when removing the specific attitude towards stealing when going along with friends the effect is not significant.

Table 23. Discriminatory Effect of Attitudes Towards Stealing To Get Back at Someone on Willingness to Steal From Someone who is Disrespectful

	Model 1 *Specific Attitude Only*	Model 2 *Specific Attitude and Latent Factor*	Model 3 *All Specific Attitudes*
	b (*SE*)	b (*SE*)	b (*SE*)
Attitude Towards Stealing To Get Back at Someone	-1.02** (.23)	-.61* (.25)	-.64* (.29)
Latent Attitude Towards Stealing[a]	-- (--)	-.90*** (.28)	-- (--)
Attitude Towards Stealing Anytime	-- (--)	-- (--)	-.11 (.38)
Attitude Towards Stealing If Work Hard But Can't Afford	-- (--)	-- (--)	-.19 (.32)
Attitude Towards Stealing if Going Along with Friends	-- (--)	-- (--)	-.16 (.27)

Attitude Towards Stealing If Not Hurt	-- (--)	-- (--)	-.29 (.27)
Attitude Towards Stealing to Get Things Not Old Enough To Buy	-- (--)	-- (--)	.07 (.27)
Attitude Towards Stealing if in Need	-- (--)	-- (--)	-.10 (.17)
Self-Control	.14 (.11)	.06 (.12)	.14 (.11)
Parental Attachment	-.08 (.09)	-.05 (.10)	-.07 (.09)
School Achievement	.25 (.27)	.40 (.29)	.19 (.35)
Unstructured Socializing	.01 (.03)	-.01 (.03)	.01 (.04)
Male	-.04 (.40)	-.06 (.42)	.21 (.44)
Age	.03 (.32)	.11 (.35)	.14 (.34)
White	.12 (.43)	.14 (.45)	.03 (.45)
Prior Stealing	1.96*** (.51)	1.41** (.54)	1.34* (.58)

[a]Attitudes towards stealing to get back at someone was removed when constructing this factor

Finally, Table 23 assesses the discriminative effect of attitudes towards stealing to get back at someone on the willingness to steal when being wronged by a store. Model 1

shows that the specific attitude alone is a significant predictor of the willingness to steal when treated poorly by a manager ($b = 1.02$, $p < .001$). Model 2 includes the latent attitudes towards stealing factor, and finds that both the latent factor ($b = -.90$, $p < .001$) and the specific attitude towards stealing when getting back at someone ($b = -.61$, $p < .05$) predict the willingness to steal in this situation, providing some evidence of discrimination. Finally, Model 3 predicts willingness to steal when treated poorly by a manager when accounting for all of the specific attitudes about theft. In support of the notion of discrimination, the results indicate that the only specific attitude predictive of the willingness to steal in this scenario is the attitude towards stealing when getting back at someone ($b = -.64$, $p < .05$).

On the whole, findings regarding the question as to whether circumstance specific attitudes retain discriminatory power are mixed and depend on the crime-type and attitude. To be sure, all of the models assessing the willingness to fight indicate that the circumstance specific items have discriminatory effects above and beyond the more general attitude against fighting. With stealing, however, the only theft attitude that was a significant predictor of the willingness to commit theft was stealing something to get back at someone. This may not be unexpected, however, as the factor loadings of the theft items were much more similar than the items assessing attitudes towards violence. Table 24 provides a summary of all of the findings pertaining to each research question and hypothesis.

Table 24. Summary of Findings

	Research Question and Prediction	PNW Survey		G.R.E.A.T.	
RQ 1.	The Dimensionality of Delinquent Attitudes				
	H1a. Delinquent attitudes form a single, unidimensional trait that reflects one's general approval of delinquent conduct.	Weak Support		Weak Support	
	H1b. Delinquent attitudes form a multidimensional trait where items coalesce around the types of excuses employed.	No Support		No Support	
	H1c. Delinquent attitudes form a multidimensional trait where items coalesce around specific crime-types.	Support		Support	
	H1d. There will be no identifiable attitude trait, and each attitude item represents an independent attitude favorable to delinquent conduct.	No Support		No Support	
		Fighting	Theft	Fighting	Theft
RQ 2.	The Predictive Validity of Specific versus General Attitudes				
	H2. Composite scale(s) specifying the correct dimensionality of attitudes towards behavior in context will more accurately capture one's potential for delinquent action and therefore be better predictors of delinquent behavior than models employing global measures of delinquent attitudes.	Support	Support	Weak Support	Weak Support
RQ 3.	The Discriminant Power of Specific Attitudes				
	H3a. The individual specific attitude will have an effect even when controlling for whatever attitude construct emerges from the analyses for research question 1.	Support	Mixed Support	--	--
	H3b. The effects should be specific to this item – items that speak to the appropriateness of behavior in other contexts should not be related to the behavior because it constitutes the "wrong" contexts.	Support	Mixed Support	--	--

CHAPTER 5: DISCUSSION

Criminologists often view and measure attitudes as the wholesale (dis)approval of delinquent conduct, but this portrayal of attitudes as the abstract evaluation of delinquent behavior is at odds with extant research on attitudes in other fields, and also with the theoretical processes described in prominent attitude theories (Akers, 1998; Sutherland, 1947). In this dissertation, I argued that the proper conceptualization and operationalization of delinquent attitudes requires an appraisal of behavior that incorporates contextual information—i.e., attitudes towards behavior in given contexts. This view of delinquent attitudes moves beyond simple questions of if individuals view delinquent behavior as appropriate, and instead asks when and under what circumstances delinquency is an appropriate course of action. Drawing on this framework allows for a more complex understanding of the attitude-delinquency relationship, and can help address some of the major gaps in the extant literature, including the underlying dimensionality of delinquent attitudes, the predictive validity of attitudes on delinquent conduct and the importance that situations play in the attitude-delinquency relationship.

Using a sample of 223 adolescents from a large high school in the Pacific Northwest and data from the G.R.E.A.T. evaluation, the analyses revealed several important findings. First, delinquent attitudes appear to form crime-specific, multidimensional constructs. Over 25 years ago Matsueda (1988) argued that one of the most fundamental questions facing researchers is the identification of the content and dimensionality of delinquent attitudes, but little work has been done to answer this call. In fact, most work has simply assumed in their conceptualization and operationalization of the construct that delinquent attitudes form a unidimensional trait, reflecting

individuals general (dis)approval towards antisocial conduct. My finding that attitudes coalesce around specific crime-types has several implications for both future research and theory. First, scholars have long acknowledged the consequences of misspecifying the dimensionality of underlying constructs (see Gardner, 1996). When researchers misspecify a multidimensional construct as unidimensional, this includes unshared variance (e.g., measurement error) into the rank ordering of the respondents. Most often this results in downwardly biased effects of a construct on an outcome of interest (Gardner, 1996). This, of course, may be contributing to the results in prior work finding a small, and oftentimes non-significant, effect of attitudes on behavior. Second, this finding has implications for our theoretical view of the process by which individuals come to hold attitudes favorable to delinquent conduct. It has been suggested that delinquent-relevant attitudes largely reflect a "general weakening of moral beliefs" (Akers, 1996; Hirschi, 1969), resulting either from poor socialization or from the transmission of general delinquent attitudes (e.g., it is sometimes okay to break the law). As Matsueda (1989) notes, if delinquent attitudes are formed in this way, then delinquent attitudes should be a unidimensional construct, because a "general weakening of moral beliefs" cannot explain why an individual would favor one form of delinquent behavior over another, or delinquency in one context, but not another. The results here, however, indicate that delinquent attitudes form a multidimensional construct, which suggests that the acquisition of delinquent attitudes is more nuanced and complex. Of course, this study is not able to detail how exactly individuals come to form these crime-specific attitudes (e.g., through socialization from peers, parents, etc.), and future work is

encouraged to fill this gap in the literature employing both quantitative and qualitative approaches.

Finally, the crime-specific nature of delinquent attitudes may prove useful in understanding the qualitative nature of adolescent delinquency—e.g., in understanding differences in the types of delinquent acts individuals engage in. Matsueda (1989) has argued that one limitation of a unidimensional delinquent attitude construct is that it would not be able to account for why some adolescents engage in certain crimes but not others (see also Warr, 2002). The fact that delinquent attitudes were found to be crime-specific in the current analyses may suggest that delinquent attitudes are well-suited to explain why adolescents can have limited offending repertoires. For instance, recent research has suggested that there is substantial variation among adolescents in the extent to which they display specialization in offending (Niewbeerta et al., 2011; Thomas, 2013). Steffensmeier and Ulmer (2003) argued that attitudinal perspectives such as differential association and social learning theory were well-suited to explain differences in offending versatility (see also Thomas, 2015), but this notion has not been tested empirically. The point is, the fact that both delinquent attitudes and delinquent behavior appear to be complex and nuanced may suggest that there is a relationship between the two, and future researchers are encouraged to explore how attitudes affect which delinquent behaviors adolescents are willing (and unwilling) to commit.

A second finding of the current study concerns the improved predictive power when using a latent scale comprised of specific attitudes rather than single global attitude items. The use of global attitude items has dominated criminology, despite the fact that scholars in related fields such as sociology, psychology, and economics have long cited

the limitations of these measures (Ajzen, 1989; Fazio, 1982; Fishbein and Ajzen, 2005). A large number of these criminological inquiries have found weak and non-significant attitude effects on delinquency, leading many scholars to reject the hypotheses made by attitudinal perspectives. But if the measures used to assess delinquent attitudes lack construct validity, then the findings themselves are called into question. In this dissertation, I argued that the global attitude items reflect an individual's abstract evaluation of a behavior whereas the specific attitude scales reflect an individual's tendency to view delinquency as an appropriate course of action in relevant contexts, and that the latter measures that are more theoretically consistent with attitudinal perspectives (Matsueda, 1988; Sutherland, 1947; Sutherland and Cressey, 1978). The argument that attitudes towards delinquent behavior cannot be adequately measured absent of context is not a novel idea, but is rather central to attitudinal perspectives. Sutherland's (1947) notion that delinquency results from a person-situation complex essentially requires an assessment of attitudes embedded within contexts (Matsueda, 1988), yet much of the prior work proposing to test his theory has not employed such measures. Of course, it can be costly to employ measures of attitudes towards behaviors in varying contexts particularly in large-scale surveys—i.e., using seven items to measure attitudes towards theft as opposed to just a single item—which may explain the reliance of global attitude items in previous research. But, this cost is arguably outweighed by the substantive gains. The current results suggested that models using these more specific attitudes often produced larger effect, sometimes substantially so, and led to improved model fit.

Moreover, the nature of the analyses can address questions of the causal effect of attitudes on behavior. These questions of causality usually take two forms. First, that

attitudes affect behavior, but behavior also affects attitudes (Rebellon, 2014). This idea of a reciprocal relationship between attitudes and behavior, however, is fully consistent with the attitudinal perspectives described above, as these perspectives do not preclude the idea that attitudes can be affected by behavior (Akers, 1996; Matsueda, 1997). The second form of criticism, however, is that it is just behavior that affects attitudes, and attitudes have little to no effect on future behavior (Felson, 2014; Hirschi, 1969). This challenge poses significant problems for attitudinal perspectives, but is clearly not supported in the current study. To be sure, analyses of the G.R.E.A.T. data used lagged models that control for prior offending behavior, meaning that the effect of attitudes on self-reported offending behavior was estimated while accounting for prior behavioral tendencies. Similarly, the models assessing WTO in the PNW Survey were also estimated when controlling for self-reported offending. In all of these models, the effects of attitudes on behavior were relatively large and statistically significant, particularly for the models using the specific attitude factor scores, suggesting that the attitude-behavior relationship does not solely reflect the influence of behaviors on attitudes. Still, given that this is one of the first studies to examine the attitude-behavior relationship using specific attitude items, future research is encouraged to more fully examine the reciprocal nature of specific attitudes and behavior in order to provide more insight on this important theoretical relationship.

The idea of using multiple items with varying situational circumstances to measure a construct has relevance beyond attitudinal perspectives. Many theoretical perspectives invoking social explanations of delinquency are measured using one item per behavior, which similarly implies that that single item accurately captures the

underlying construct across the full spectrum of circumstances in which individuals find themselves, but there is no reason to suspect that this is the case. For example, empirical tests of deterrence theory are often conducted by relating subjective perceptions of risk to behavior. The weak empirical relationship between risk perceptions and behavior has led some scholars to conclude that individuals do not consider formal sanction risks before engaging in behavior (Pratt et al., 2006). Subjective perceptions of risk are almost always measured using a single item for each behavior (e.g., how likely is it that you will get arrested if you steal from a store?). But perceptions of risk may be complex just like attitudes, and therefore can be more accurately captured by inquiring about the risk of arrest across a wide range of situations for each behavior of interest. The point is that there has been a growing interest among criminologists in estimating complex statistical models to improve identification when testing criminological theory, but an equally important endeavor is a more careful consideration of how to best operationalization the key constructs of interest that act as the inputs in these models (Sullivan and McGloin, 2014).

It is worth noting, however, that the discrepancies between the global attitude item and the factor comprised of specific attitudes were not as large in the G.R.E.A.T. data as observed with the PNW Survey. There are several plausible explanations as to why this is the case. It could simply reflect the sample employed (e.g., using 11^{th} graders from just a single high school)—perhaps there is something unique about the sample used in the PNW Survey that is driving the large relationship, or that the results are weaker because of the lagged regressions and controls for prior delinquency in the G.R.E.AT. Evaluation. Alternately, considerably fewer specific attitudes were measured in the

G.R.E.A.T. evaluation than in the PNW Survey, which may be masking greater variability in attitudes. Another possibility has to do with the ordering of the questions in the G.R.E.A.T. evaluation. Respondents in the G.R.E.A.T. evaluation were asked about their global evaluations of delinquency *after getting asked about specific exceptions to the behavior*. In this way, respondents may have been primed by reading the specific attitude items to consider possible exceptions. Ideally when testing the differences in global versus specific attitudes, global attitudes would be asked about prior to specific attitudes, since specific items prime respondents about differing contexts. All of this is speculative, however, and future research that expands to additional datasets may provide insight on the robustness of the findings.

The third, and final, finding in this dissertation concerns the discriminating effect of situational circumstances on the facilitation of behavior. While the importance of situational circumstances has been implied by Sutherland (1947) and Akers (1996), their specific role in the facilitation of delinquency has not been examined. Sutherland (1947) seems to have suggested that situations are a necessary element of delinquency, and that individuals will only engage in delinquency when they encounter a situation in which they view delinquency as acceptable (see also Sutherland and Cressey, 1974). Drawing on this idea, I hypothesized that the attitudes one holds relevant to that specific circumstance should hold discriminatory power over the WTO, above and beyond the combination of other specific attitudes. The results provided support for this hypothesis for fighting behavior but the results were mixed for theft. With regard to the first set of findings, the results suggested that that attitudes towards fighting in a specific circumstance retain discriminatory power when predicting behavior under certain

conditions, suggesting that even individuals low on the latent attitude towards fighting scale may report a potential to fight if the right circumstance is encountered. This might indicate that the manner in which individuals come to form excuses and justifications for fighting are not just specific around the crime-type, but also the situational circumstances. For theft, however, just one of the two individual items had discriminatory power, as was evidenced by the equal factor loadings and the fact that the individual one theft attitude did not predict willingness to steal beyond what was captured by the latent attitudes towards theft trait. In this way, one's potential for theft action may not vary considerably across different situational characteristics; instead, one's potential for committing theft is adequately captured using just the underlying latent trait. This may speak even further to the complexity of delinquent attitudes—after all, there may be greater variation across adolescents in the excuses used to justify the use of physical violence when compared to stealing someone's property.

The findings on the role of situational contexts also have more general implications for the field of criminology. Though routine activity theorists have suggested that situations can influence delinquent conduct independent of the characteristics of individuals (Cohen and Felson, 1979; Osgood et al., 1996), other scholars have argued that the interaction between situations and individual characteristics is more complex. For instance, in their general theory of crime, Gottfredson and Hirschi (1990) drew on the idea of routine activity theory that objective opportunities are important, but also suggested that they will only result in delinquency when encountered by individuals with lower levels of self-control. Gottfredson and Hirschi seem to imply that the probability of engaging in delinquency among individuals is relatively stable

across situational contexts. The findings here question that implication, providing some evidence suggesting that the probability of offending is not relatively stable across all. This, however, does mean that self-control is unimportant for understanding criminal conduct, just that the intersection between self-control and situational circumstances may be more nuanced than previously discussed among criminologists. For instance, psychologists have found that individuals' tendencies to act impulsively can change considerably across situations because self-control is not a stable trait that one has, but rather is a limited resource that becomes harder to enact the more it is used and in situations which require greater control (see Baumeister, Vohs and Tice, 2007). The point is that situations play a prominent role in Gottfredson and Hirschi's self-control theory, but the nuances of the self-control-situation relationship has been relatively neglected in the literature. Indeed, the findings here that suggest that there is not between-individual stability in the willingness to offend may suggest that a more nuanced explanation of how situational characteristics affect self-control and, in turn, delinquency is a worthwhile endeavor for criminologists.

Limitations

As with any study, the current investigation is not without its limitations. First, although the PNW Survey provides a rich array of information on attitudes, situational experiences, offending behavior, and willingness to offend, it is limited in that it is cross-sectional and relies on a single high school from the Pacific Northwest. Many of the findings were corroborated when using the G.R.E.A.T. evaluation, a longitudinal and more representative data set, which provides some reassurances into the validity of the data deriving from the PNW Survey. Nevertheless, one should be very cautious

generalizing the findings of these analyses to other adolescents, as analyses across a wider array of samples should precede any firm conclusions on the relationship between attitudes, situations, and behavior. A second limitation of this study is that it is unlikely that the PNW or the G.R.E.A.T. data captured the full array of circumstances in which individuals view delinquency as acceptable. This is particularly problematic in the G.R.E.A.T. data, which contain just five items measuring specific fighting attitudes, and three items capturing specific theft attitudes. While the measures employed in both data sets are an improvement from the global items, more exploratory research should be conducted to determine when and in what situations adolescents view delinquency as acceptable. Structured qualitative interviews may be particularly well-suited to fill this void in the literature because they can allow individuals to provide greater detail about situations and circumstances in which they view criminal conduct as appropriate or inappropriate (see Steffensmeier and Ulmer, 2005).

A third limitation is that the analyses were limited to just fighting and theft. This decision was practical in the PNW Survey, as the allotted time for survey administration did not allow for other forms of delinquency to be captured adequately. In the G.R.E.A.T. evaluation, the only other behavior that contained specific attitude items was lying to parents. Concerns over the reliance on fighting and theft may be particularly problematic when assessing of the dimensionality of delinquent attitudes. Rather than delinquent attitudes coalescing around very specific crime-types (such as fighting and theft) it may be that attitudes coalesce around broader crime-types such as violent and property crimes. It is not possible with the available data fully know that attitudes towards these behaviors are in fact crime-specific in the manner implied in the analyses,

ideally, more detailed data are needed that capture specific attitudes across a broader range of offense types to provide a more comprehensive test of the crime-specific notion.

Fourth, the scenarios in the PNW Survey did not cover all of the specific attitudes that were inquired about in the survey. Accordingly, it is not clear at the present time whether the results assessing the discriminatory validity of individual items would be consistent with the inclusion of more scenarios, and researchers are encouraged to explore the situation-specific effects of attitudes across a broader range of circumstances. Finally, because the interest of the current investigation is on adolescent delinquency, caution should be used before generalizing the findings to adult offenders. Several scholars have suggested that the causes of adolescent delinquency and adult offending may be different (Piquero et al., 2003), particularly as it concerns some of the constructs most relevant to differential association and social learning theories (e.g., peers). Nevertheless, there may be reasons to suspect that the dynamic relationship between attitudes and situations may be particularly relevant for explaining desistance from offending. Individuals may come to view fighting when being disrespected as more inappropriate as one ages, or may encounter such situations less frequently. This, of course, is just speculation, but it does remain a fruitful avenue of research as scholars embark on the ambitious task of disentangling the role that attitudes play on offending behavior.

Despite these limitations, this dissertation nonetheless serves as both a substantive and methodological contribution to the criminological literature, and in turn, opens several avenues of research that can fill important gaps in the literature. Substantively, this dissertation reiterates the complexity of delinquent attitudes, viewing this construct

as affecting one's potential for delinquency not through the global approval of antisocial behavior, but as the evaluation of the appropriateness of delinquency in specific circumstances. This is important because it provides at least some specificity to the content of delinquent attitudes. To be sure, one of the primary criticisms of attitudinal perspectives is that that they are often quite vague in what the content of definitions favorable to crime looked like (Kornhauser, 1978). Though Sykes and Matza (1957) and Matsueda (1988, 1997) undoubtedly provided some more detailed theoretical insight on this front, a quantitative exploration of the complexity of attitudes has rarely been conducted. Still, this dissertation should be viewed as a first step in this regard, and much more work can and should be conducted to provide a more complete description of delinquent attitudes. Indeed, this dissertation focused primarily on the contexts of situations that allow an individual to rationalize deviance, but it is possible (if not likely) that other information goes into an individual's evaluation of a behavior. For instance, Steffensmeier and Ulmer's (2005) ethnography of a career burglar provided some indication that individuals consider the characteristics of potential victims when evaluating the appropriateness of a behavior—i.e., offenders were willing to steal from young males but viewed stealing from the elderly as wrong. The point is that attitudes may be even more complex than discussed in this dissertation. Perhaps the most useful endeavor, then, is structured qualitative interviews that allow individuals to openly discuss how, when, and against whom delinquency is viewed as appropriate. Moreover, conducting such interviews can also guide future quantitative work seeking to measure and test attitudinal perspectives. The complimentary relationship between quantitative and qualitative research is well-established in the field of sociology, where qualitative

insights have been seminal in the development of questionnaires used for quantitative analyses (Bauman and Adair, 1992). As criminologists have become increasingly more concerned about the validity of their measures (Sullivan and McGloin, 2014), the use of qualitative methods can play a particularly salient role in the development of attitudinal questionnaires.

In fact, the methodological contribution of this dissertation derives largely from reviewing and employing qualitative methods. The prevailing attitudinal measures in criminology have been global in nature, suggesting that adolescents view specific forms of delinquency as either right or wrong. But it is evident in the existing qualitative work that delinquent attitudes are more nuanced. Accordingly, I developed a scale to measure attitudes favorable to fighting and theft that, for the most part, performed better in statistical models when compared to the more traditional measures. Future work interested in the effect of delinquent attitudes on behavior should consider these findings, and are encouraged to use a scale consisting of more specific attitude items. Having said that, however, this study was one of the first to employ such a scale, and more work is needed to improve the validity and reliability of attitudinal measures. Continued work in the development of attitudinal measures may eventually lead to a well-developed and widely accepted scale for this important construct, such as those found in the field of psychology for intelligence (Wechsler, 1939), impulsivity (Patton et al., 1995) and self-efficacy (Chen, Gully and Eden, 2001). The development of valid and reliable scales will only serve to further improve the methodological quality of attitudinal studies, and I hope that this dissertation encourages future work in this area.

APPENDIX

Appendix A. Polychoric correlations of attitude items in PNW Survey

	XF1	XF2	XF3	XF4	XF5	XF6	XF7	XF8	XT1	XT2	XT3	XT4	XT5	XT6	XT7	XT8
XF1. Fight Anytime	--															
XF2. Fight if No one Hurt	.62	--														
XF3. Fight if Talking Behind Back	.48	.60	--													
XF4. Fight if Disrespecting to Face	.43	.58	.79	--												
XF5. Fight if Disrespecting Family	.50	.60	.69	.80	--											
XF6. Fight if Defending Friends	.34	.55	.56	.52	.62	--										
XF7. Fight if Defending Yourself	.27	.38	.40	.55	.56	.51	--									
XF8. Never Okay to Fight	.28	.40	.33	.46	.49	.44	.52	--								
XT1. Steal if You Want Cool things	.39	.43	.51	.45	.42	.41	.26	.31	--							

XT2. Steal if You Work Hard But Can't Afford	.31	.37	.44	.39	.35	.39	.22	.30	.88	--						
XT3. Steal if Going Along with Friends	.21	.33	.39	.30	.31	.35	.22	.28	.80	.81	--					
XT4. Steal if they can afford it	.27	.30	.37	.32	.30	.37	.22	.23	.81	.80	.81	--				
XT5. Steal if it is to Get Back at Someone	.28	.40	.51	.45	.46	.49	.22	.40	.73	.72	.74	.75	--			
XT6. Steal if You are Not Old Enough to Buy	.32	.44	.46	.44	.36	.41	.24	.24	.76	.75	.78	.76	.73	--		
XT7. Steal Things You Need (e.g., food, clothes)	.14	.28	.46	.26	.22	.30	.29	.33	.68	.70	.63	.66	.61	.64	--	
XT8. Never Okay to Steal	.21	.24	.21	.26	.17	.14	.24	.23	.40	.40	.30	.39	.35	.34	.53	--

Appendix B. Polychoric correlations of attitude items in the G.R.E.A.T. Data

	XF1.	XF2.	XF3.	XF4.	XF5.	XT1.	XT2	XT3.
XF1. Fight to defend Yourself	--							
XF2. Fight for your rights	.77	--						
XF3. Fight to Defend Friends or Family	.76	.78	--					
XF4. Fight if you get disrespected	.49	.45	.48	--				
XF5. Fight if you get threatened	.69	.65	.75	.68	--			
XT1. Steal from the rich if you know they can afford it	.37	.32	.37	.59	.47	--		
XT2. Take little things	.36	.31	.36	.60	.48	.87	--	
XT3. Steal something if it is the only way you can get it	.40	.34	.38	.57	.47	.82	.84	--

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