The introduction of this section will discuss the development of the life-course perspective in the late 1970s and its influence on modern research on criminal trajectories. The introduction will focus on explaining the various concepts in the life-course perspective, such as onset, desistence, and frequency, as well as the arguments against this perspective. Finally, the introduction of this section will review the current state of research regarding this perspective.

Introduction

This introduction will present one of the most current and progressive approaches toward explaining why individuals engage in criminal activity, namely developmental theories of criminal behavior. Developmental theories are explanatory models of criminal behavior that follow individuals throughout their life course of offending, thus explaining the development of offending over time. Such developmental theories represent a break with past traditions of theoretical frameworks, which typically focused on the contemporaneous effects of constructs and variables on behavior at a given point in time. Virtually no theories attempted to explain the various stages (e.g., onset, desistence) of individuals’ criminal careers, and certainly no models differentiated the varying factors that are important at each stage. Developmental theories have been prominent in modern times, and we believe that readers will agree that developmental theories have added a great deal to our understanding and thinking about why people commit criminal behavior.
Developmental theories, which are also to some extent integrated, are distinguished by their emphasis on the evolution of individuals’ criminality over time. Developmental theories tend to look at the individual as the unit of analysis, and such models focus on the various aspects of the onset, frequency, intensity, duration, desistence, and other aspects of the individual’s criminal career. The onset of offending is when the offender first begins offending, and desistence is when an individual stops committing crime. Frequency refers to how often the individual offends, whereas intensity is the degree of seriousness of the offenses he or she commits. Finally, duration is the length of an individual’s criminal career.

Experts have long debated and examined these various aspects of the development of criminal behavior. For example, virtually all studies show an escalation from minor status offending (e.g., truancy, underage drinking, smoking tobacco) to petty crimes (e.g., shoplifting, smoking marijuana) to far more serious criminal activity, such as robbery and aggravated assault, and then murder and rape. This development of criminality is shown across every study that has ever been performed and demonstrates that, with very few exceptions, people begin with relatively minor offending and progress toward more serious, violent offenses.

Although this trend is undisputed, other issues are not yet resolved. For example, studies have not yet determined when a police contact or arrest becomes “early” onset. Most empirical studies draw the line at age 14, so that any arrest or contact prior to this time is considered early onset. However, other experts would disagree and say that this line should be drawn earlier (say 12 years old) or even later (such as 16 years old). Still, however it is defined, early onset is one of the most important predictors of future criminality and chronic offending of any of the measures we have in determining who is most at risk for developing serious, violent offending behavior.

Perhaps the most discussed and researched aspect of developmental theory is that of offender frequency, which has been referred to as “lambda.” Estimates of lambda, or average frequency of offending by criminals over a year period, vary greatly. Some estimates of lambda are in the high single digits and some are in the triple digits. Given this large range, it does not do much good in estimating what the frequency of most offenders are. Rather, the frequency depends on many, many variables, such as what type of offenses the individual commits. Perhaps if we were studying only drug users or rapists, it would make sense to determine the average frequency of offending (or lambda), but given the general nature of most examinations of crime, such estimates are not useful. Still, the frequency of offending even within crime type varies so widely across individuals that we question its use in understanding criminal careers.

Before we discuss the dominant models of developmental theory, it is important to discuss the opposing viewpoint, which is that of complete stability in offending. Such counterpoint views assume that the developmental approach is a waste of time because

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the same individuals who show antisocial behavior at early ages (before age 10) are those who will exhibit the most criminality in the teenage years, their 20s, their 30s, 40s, and so on. This framework is most notably represented by the theoretical perspective proposed by Gottfredson and Hirschi in their model of low self-control.

**Antidevelopmental Theory: Low Self-Control Theory**

In 1990, Travis Hirschi, along with his colleague Michael Gottfredson, proposed a general theory of low self-control as the primary cause of all crime and deviance; this is often referred to as the general theory of crime. This theory has led to a significant amount of debate and research in the field since its appearance, more than any other contemporary theory of crime.

Like other control theories of crime, this theory assumes that individuals are born predisposed toward selfish, self-centered activities and that only effective child-rearing and socialization can create self-control. Without such adequate socialization (i.e., social controls) and reduction of criminal opportunities, individuals will follow their natural tendencies to become selfish predators. The general theory of crime assumes that self-control must be established by age 10. If it has not formed by that time, then, according to the theory, individuals will forever exhibit low self-control. This assumption of the formation of low self-control by age 10 or before is the oppositional feature of this theory to the developmental perspective. Once low self-control is set by age 10, there is no way to develop self-control afterward, the authors assert. In contrast, developmental theory assumes that people can indeed change over time.

Like others, Gottfredson and Hirschi attribute the formation of controls to socialization processes in the first years of life; the distinguishing characteristic of this theory is its emphasis on the individual’s ability to control himself or herself, which is formed before age 10. That is, the general theory of crime assumes that people can take a degree of control over their own decisions and, within certain limitations, “control” themselves. The general theory of crime is accepted as one of the most valid theories of crime. This is probably due to the parsimony, or simplicity, of the theory because it identifies only one primary factor that causes criminality—low self-control. But low self-control may actually consist of a series of personality traits, including risk-taking, impulsiveness, self-centeredness, short-term orientation, and quick temper. Recent research has supported the idea that inadequate child-rearing practices tend to result in lower levels of self-control among children and that these low levels produce various risky behaviors, including criminal activity. It is important to note that this theory has a developmental component,

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Figure 9.1 Gottfredson and Hirschi’s Theory of Low Self-Control

Assumes all individuals are born lacking self-control and are selfish

**Bad Child-Rearing**
- Inconsistent discipline
- Neglect/lack of supervision
- Physical abuse
- Providing bad models of behavior
- Emotional/mental abuse

**Good Child-Rearing**
- Fair and consistent discipline
- Consistent monitoring
- Emotional support
- Building responsibility and accountability
- Good role models

**Low Self-Control** (identifiable before age 10)
- Self-centeredness
- Short-term orientation
- Failure to consider future consequences of actions
- Avoidance of difficult task and hard work
- Short temper/impulsive
- Risk taking
- Gives in readily when opportunities for crime arise

**Criminal offending and all forms of deviant behavior**

**High Self-Control** (must be established by age 10)
- Ability to work hard and delay gratification
- Inhibited by potential consequences of actions
- Long-term orientation
- Not as tempted by opportunities to commit crime

**Able to resist temptations to commit crime and other forms of deviance**
in the sense that it proposes that self-control develops during early years from parenting practices; thus, even this most notable antidevelopment theory actually includes a strong developmental aspect.

In contrast to Gottfredson and Hirschi’s model, one of the most dominant and researched frameworks of the last 20 years, another sound theoretical model shows that individuals can change their life trajectories in terms of crime. Research shows that events or realizations can occur that lead people to alter their frequency or incidence of offending, sometimes to zero. To account for such extreme transitions, we must turn to the dominant life-course model of offending, which is that of Sampson and Laub’s developmental model of offending.

**Sampson and Laub’s Developmental Model**

Perhaps the best known and researched developmental theoretical model to date is that of Robert Sampson and John Laub. Sampson and Laub have proposed a developmental framework that is largely based on a reanalysis of original data collected by Sheldon and Eleanor Glueck in the 1940s. As a prototype developmental model, individual stability and change is the primary focus of their theoretical perspective.

Most important, Sampson and Laub emphasized the importance of certain events and life changes, which can alter an individual’s decisions to commit (or not commit) criminal activity. Although based on a social control framework, this model contains elements of other theoretical perspectives. First, Sampson and Laub’s model assumes, like other developmental perspectives, that early antisocial tendencies among individuals, regardless of social variables, are often linked to later adult criminal offending. Furthermore,

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some social structure factors (e.g., family structure, poverty, etc.) also tend to lead to problems in social and/or educational development, which then leads to crime. Another key factor in this development of criminality is the influence of delinquent peers or siblings, which further increases an individual’s likelihood for delinquency.

However, Sampson and Laub also strongly emphasize the importance of transitions, or events that are important in altering trajectories toward or against crime, such as marriage, employment, or military service, drastically changing a person’s criminal career. Sampson and Laub show sound evidence that many individuals who were once on a trajectory or path toward a consistent form of behavior, in this case, serious violent crime, suddenly (or gradually) halted their path due to such a transition or series of such transitions. In some ways, this model is a more specified form of David Matza's theory of drift, which we discussed in Section VII, in which individuals tend to grow out of crime and deviance due to the social controls imposed by marriage, employment, and so on. Still, Sampson and Laub’s framework contributed much to the knowledge of criminal offending by providing a more specified and grounded framework that identified the ability of individuals to change their criminal trajectories via life-altering transitions, such as the effect that marriage can have on a man or woman, which is quite profound. In fact, recent research has consistently shown that marriage and full-time employment significantly reduced the recidivism of California parolees, and other recent studies have shown similar results from employment in later years.7

Moffitt’s Developmental Taxonomy

Another primary developmental model that has had a profound effect on the current state of criminological thought and theorizing is Terrie Moffitt’s developmental theory/taxonomy, proposed in 1993.8 Moffitt’s framework distinguishes two types of offenders: adolescence-limited and life-course persistent offenders. Adolescence-limited offenders make up most of the general public and include all persons who committed offenses when they were teenagers and/or young adults. Their offending was largely caused by association with peers and a desire to engage in activities that were exhibited by the adults that they are trying to be. Such activities are a type of rite of passage and quite normal among all people who have normal social interactions with their peers in teenage or young adult years. It should be noted that a very small percentage (about 1 to 3%) of the population are nonoffenders, who quite frankly do not have normal relations with their peers and therefore do not offend at all, even in adolescence.

On the other hand, there exists a small group of offenders, referred to in this model as life-course persistent offenders. This small group, estimated to be 4 to 8% of offenders—albeit the most violent and chronic—commit the vast majority of the serious violent offenses in any society, such as murder, rape, and armed robbery. In contrast to the adolescence-limited offenders, the disposition of life-course persistent offenders toward offending is caused by an entirely different model: an interaction between neurological problems and the disadvantaged/criminological environments in which they are raised.


For example, if an individual had only neurological problems or only a poor, disadvantaged environment, then that individual would be unlikely to develop a life-course persistent trajectory toward crime. However, if a person has both neurological problems and a disadvantaged environment, then that individual would have a very high likelihood of becoming a chronic, serious, violent offender. This proposition, which has been supported by empirical studies, suggests that it is important to pay attention to what happens early in life. Because illegal behaviors are normal among teenagers or young adults, more insight can be gained by looking at the years prior to age 12 to determine who is most likely to become chronic, violent offenders. Life-course persistent offenders begin offending very early in life and continue to commit crime far into adulthood, even middle age, whereas adolescence-limited offenders tend to engage in criminal activity only during teenage and young adult years. Moffitt’s model suggests that more than one type of development explains criminality. Furthermore, this framework shows that certain types of offenders commit crime due to entirely different causes and factors.

### Policy Implications

There are many, perhaps an infinite number, of policy implications that can be derived from developmental theories of criminality. Thus, we will focus on the most important, which is that of prenatal and perinatal stages of life because the most significant and effective interventions can occur during this time. If policymakers hope to reduce early risk factors for criminality, they must insist on universal health care for pregnant women, as well as their newborn infants through the first few years of life. The United States is one of the few developed nations that does not guarantee this type of maternal and infant medical care and supervision. Doing so would go a long way to avoiding the costly damages (in many ways) of criminal behavior among youth at risk.

Furthermore, there should be legally mandated interventions for pregnant women who are addicted to drugs or alcohol. Although this is a highly controversial topic, it appears to be a “no-brainer” that women who suffer from such addictions may become highly toxic to the child(ren) they carry and should receive closer supervision and more health care. There may be no policy implementation that would have as much influence on reducing future criminality in children as making sure their mothers do not take toxic substances while they are pregnant.

Other policy implications include assigning special caseworkers for high-risk pregnancies, such as those involving low birth weight or low Apgar scores. Another advised intervention would be to have a centralized medical system that provides a “flag” for high-risk infants who have numerous birth or delivery complications, so that the doctors who are seeing them for the first time are aware of their vulnerabilities. Finally, universal preschool should be funded and provided to all young children; studies have shown this leads to better performance once they enter school, both academically and socially.

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8See Tibbetts and Piquero, “Influence of Gender.”


10Ibid.

11Ibid.

12Ibid.

13Ibid.
Ultimately, as the many developmental theories have shown, there are many concepts and stages of life that can have a profound effect on the criminological trajectories that lives can take. However, virtually all of these models propose that the earlier stages of life are likely the most important in determining whether an individual will engage in criminal activity throughout life or not. Therefore, policymakers should focus their efforts on providing care and interventions in this time period.

Conclusion

This introduction presented a brief discussion of the importance of developmental, life-course theories of criminal behavior. This perspective is relatively new, becoming popular in the late-1970s, compared to other traditional theories explored in this text. Ultimately, this is one of the most “cutting-edge” areas of theoretical development, and life-course theories are likely to be the most important frameworks in the future of the field of criminological theory.

Then we examined the policy implications of this developmental approach, which emphasized the need to provide universal care for pregnant mothers, as well as their newborn children. Other policy implications included legally mandated interventions for mothers who are addicted to toxic substances (e.g., alcohol, drugs) and assignment of caseworkers for high-risk infants/children, such as those with birth or delivery complications. Such interventions would go a long way toward saving society the many problems (e.g., financial, victimization, etc.) that will persist without such interventions. Ultimately, a focus on the earliest stages of intervention will pay off the most and will provide the “biggest bang for the buck.”

Section Summary

- Developmental or life-course theory focuses on the individual and following such individuals throughout life to examine their offending careers. In-depth consideration of such changes during the life course is of the highest concern, especially regarding general conclusions that can be made about the factors that tend to increase or decrease the risk that they will continue offending.
- Life-course perspectives emphasize such concepts as onset, frequency of offending, duration of offending, seriousness of offending, desistance of offending, and other factors that play a key role in when individuals offended and why the did so—or didn’t do so—at certain times of their lives.
- There are many critics of the developmental/life-course perspective, particularly those who buy into the low self-control model, which is antidevelopmental in the sense that this model assumes that propensities for crime do not change over time but rather remain unchanged across life.
- One of the developmental models that has received the most attention is that by Sampson and Laub, which emphasizes transitions in life (e.g., marriage, military service, employment, etc.) that alter trajectories either toward or away from crime.
Moffitt’s developmental theory of chronic offenders (which she labeled life-course persistent offenders) versus more normal offenders (which she labeled adolescence-limited offenders) is the developmental model that has received the most attention over the last decade, and much of this research is supportive of the interactive effects of biology and environment combining to create chronic, habitual offenders.

KEY TERMS

Adolescence-limited offenders
Developmental theories
Life-course persistent offenders
Moffitt’s developmental theory/taxonomy
Trajectory
Transitions

DISCUSSION QUESTIONS

1. What characteristic distinguishes developmental theories from traditional theoretical frameworks?

2. What aspects of a criminal career do experts consider important in such a model? Describe all of the aspects they look at in a person’s criminal career.

3. Discuss the primary criticisms regarding the developmental perspective, particularly that presented by Gottfredson and Hirschi. Which theoretical paradigm do you consider the most valid? Why?

4. What transitions or trajectories have you seen in your life or your friends’ lives that support Sampson and Laub’s developmental model? What events encouraged offending or inhibited it?

5. Given Moffitt’s dichotomy of life-course persistent offenders and adolescence-limited, which of these should be given more attention by research? Why do you feel this way?

WEB RESOURCES

Developmental Theories of Crime
http://www.apsu.edu/oconnort/crim/crimtheory06.htm

Terrie Moffitt’s Theory
www.wpic.pitt.edu/research/famhist/PDF_Articles/APA/BF16.pdf

Sampson and Laub’s Model
Similar to the observed strong and positive relationship between past and future offending (Gottfredson and Hirschi, 1990; Nagin and Paternoster, 1991; Paternoster et al., 1997; Robins, 1966, 1978; Wilson and Herrnstein, 1985), the age at which a first offense occurs (i.e., onset) is an important factor in predicting the future offending of individuals. Studies have consistently found that early onset is one of the best predictors of serious, high-rate offending in adolescence and adulthood (Blumstein et al., 1986; Dunford and Elliott, 1984; Elliott et al., 1984; Farrington, 1986; Farrington et al., 1990; LeBlanc and Fréchette, 1989; Loeber and LeBlanc, 1990; Nagin and Farrington, 1992a, 1992b; Patterson et al., 1992; Reiss and Roth, 1993; Sampson and Laub, 1993; Tolan, 1987; Wolfgang, 1983; Wolfgang et al., 1987). Furthermore, the association between early onset and persistent
offending appears across historical periods, geographical areas (e.g., London, Philadelphia, Boston, Racine, Montreal, and Dunedin), various forms of measuring deviant behavior (e.g., official, retrospective, prospective, etc.), and various methods of operationalizing onset (e.g., first offense, first arrest, first conviction, etc.).

Understanding early onset has profound implications for the study of juvenile, as well as adult, offending. By identifying the unique factors contributing to early onset, researchers and policy makers may better understand the offending patterns of some of the most serious offenders in society, as well as develop effective intervention strategies (Farrington and Hawkins, 1991; Loeber et al., 1991; Moffitt, 1993; Patterson et al., 1992).

Although understanding that early onset is important for the explanation of future offending, what determines early onset is an entirely different question. Knowledge of such determinants would enable researchers and policy makers to more accurately predict who is most at risk for early onset and persistent offending (Moffitt, 1993). Thus, the ability to identify determinants and processes in the development of early onset has profound implications for the prevention and control of a large portion of serious offending. Although few question these implications, Farrington et al.’s (1990) recent review of the literature surrounding early onset concluded that little is known about the causes of early onset.

In an effort to shed light on this issue, Moffitt (1993) recently presented a developmental taxonomy to establish a theoretical framework that distinguishes the etiology of early onset (i.e., “life-course-persistent”) from that of late onset (i.e., “adolescence-limited”). Life-course-persistent offenders begin their participation in antisocial behavior during early childhood and continue their participation in crime throughout the life course when most other offenders desist. The cause of antisocial behavior for the life-course persisters, according to Moffitt, is the result of an interaction between neuropsychological impairments and poor social environments. This “double hazard” of perinatal risk and social disadvantage increases the risk for deviant behavioral outcomes (Brennan and Mednick, 1997:272).
For Moffitt, a defining characteristic of life-course-persistent offenders is their early onset of offending. Adolescence-limited offenders, on the other hand, become antisocial for the first time during adolescence, but desist by young adulthood. For these offenders, the causes of crime coincide with the physical changes occurring around puberty, which to these youngsters signal that they should be entitled to adult social status. In essence, their delinquency is caused by the “social mimicry” of the antisocial style of life-course-persistent youths (Moffitt, 1993:686).

The present study seeks to test Moffitt’s (1993) interactional hypothesis for the development of early onset. First, we examine if the risk of neuropsychological deficit-disadvantaged environment interaction predicts early onset, as anticipated by Moffitt. Second, we examine Moffitt’s (1993, 1994) prediction that life-course-persistent patterns of offending are limited almost exclusively to males (e.g., Moffitt et al., 1994:283, 296). Although Moffitt (1994) suggests the causal process leading to membership in the life-course-persistent group should be the same for both sexes, fewer early onset girls than early onset boys should exist because of differences in the prevalence or degree of exposure to the predictors.

Moffitt’s Interactional Hypothesis

The Causes of Early Onset

Moffitt (1993:679) claims early offending is caused by an increased vulnerability to neuropsychological problems in early childhood interacting with disadvantaged environments. In the outline of her theory, Moffitt (1993:680) theorizes that perinatal complications, such as low birth weight, produce neuropsychological deficits in the infant’s central nervous system. These deficits manifest themselves in a variety of ways, including temperament difficulties, cognitive deficits, and poor test scores. Often, these children find themselves in deficient social environments. They are theorized to be at highest risk for persistent antisocial behavior.

This hypothesis is consistent with recent findings that show support for biosocial interactions in predicting offending patterns, in general, and violent offending, in particular (Brennan et al., 1997; Kandel et al., 1990; Kandel and Mednick, 1991; Lewis et al., 1979; McGauhey et al., 1991; Moffitt, 1990; Piquero and Tibbetts, 1999; Raine et al., 1994, 1997b; Ross et al., 1990). In fact, to date, there is no evidence that contradicts this hypothesis (Brennan and Mednick, 1997:276). Early results from Moffitt’s (1990) ongoing New Zealand study showed that young boys with both low neuropsychological test scores and adverse home environments had a mean aggression score more than four times greater than that of boys with either neuropsychological problems or adverse homes alone (see also Moffitt et al., 1994). In the only longitudinal test of her theory, in which prospective measures of neuropsychological status were used to predict antisocial outcomes, Moffitt et al. (1994) found that poor neuropsychological scores were associated with early onset of delinquency for males, and predicted high levels of offending thereafter. However, poor neuropsychological scores were not related to late (i.e., adolescence) onset of offending. In a related piece, Moffitt et al. (1996) found that life-course-persistent path males differed from adolescence-limited path males in convictions or violent crime, personality profiles, school leaving, and bonds to family. For each of these markers, the life-course-persistent path males fared worse (i.e., the life-course-persistent males had more convictions for violent crime, had worse personality profiles, left school early, and had lower bonds to family than the adolescence-limited path males).

To reemphasize, for Moffitt, it is the interaction between a child’s vulnerabilities to neuropsychological disorders and poor social
environments that produces early onset, and not necessarily the independent influence of these determinants. The strongest predictors of early onset are measures of individual and family characteristics: cognitive abilities, school achievement, mental disorders, familial factors, socioeconomic status, temperament, lack of control, and so on (e.g., Henry et al., 1996). Vulnerability to neuropsychological problems is likely caused by such factors as heritability, low birth weight, early brain injury, complications at birth, etc. (Coren, 1993; Denno, 1990; Moffitt, 1993; Raine et al., 1994). Vulnerabilities to neuropsychological disorders are often perpetuated by the poor social environments in which many of these individuals reside (Chomitz et al., 1995; Hughes and Simpson, 1995; Moffitt, 1993, 1997).

Moffitt et al. (1994) claim that problem behavior begins early in childhood because neuropsychological dysfunctions disrupt normal development, and these deficits increase vulnerability to the criminogenic aspects of disadvantaged rearing environments. According to Moffitt (1993:682), these children “evoke a challenge to even the most loving and patient families.” This assertion is consistent with studies showing that low birth weight infants negatively influence the behavior of their caretakers (Tinsley and Parke, 1983).

With regard to low birth weight children, they are often clustered in lower social classes and in families with dismantled social structures, both of which increase their risk of experiencing higher rates of physical health problems, mental disorders, and depression (Hack et al., 1995; National Research Council, 1993:42). As a result, the parents of these children often lack the resources, time, cognitive abilities, and adequate disciplining practices “high-risk” children require (Moffitt, 1993). Although Moffitt (1993:681) uses the term “criminogenic environment” for most of her discussion, she implies that this is synonymous with a disadvantaged environment: “Vulnerable infants are disproportionately found in environments that will not be ameliorative because many sources of neural maldevelopment co-occur with family disadvantage.” In addition, Moffitt (1993:680–685) claims that important measures of this type of disadvantaged environment include socioeconomic status and family structure. In fact, studies predicting early onset or persistent, serious, and violent offending, or both, have used both socioeconomic status (Patterson et al., 1992) and poor familial environment (Raine et al., 1997b; Werner, 1987) as indicators for disadvantaged environments.

In the current investigation, low birth weight serves as a proxy for neuropsychological deficit. To be used in research assessing Moffitt’s theory, low birth weight must first be associated with negative life outcomes, especially outcomes that take the form of criminal behavior. To the extent that this is true, an argument must be made for considering low birth weight an adequate proxy for risk of neuropsychological deficit. We now turn to a brief synopsis of this literature, particularly in its relation to Moffitt’s theory, in general, and criminal/aggressive behavior, in particular.

**Low Birth Weight**

One strong and consistent indicator of increased risk for neuropsychological disorders is low birth weight. For many years, low birth weight has been considered a major obstetrical and pediatric problem (Taylor, 1976:108; see also Behrman et al., 1971; Paneth, 1995). Cigarette smoking by the mother, lack of prenatal care, drug/alcohol use by the mother during pregnancy, low socioeconomic status, poor diet, and mother’s low educational level have all been found to be determinants of low birth weight (Coren, 1993; Denno, 1990; Moffitt, 1993; Shiono and Behrman, 1995). Low birth weight has been found to be associated with other birth complications, such as bleeding during pregnancy, placenta previa, abortion and still-birth history, etc. (Coren,
The developmental sequelae for many low birth weight infants are varied. In fact, one review of the literature documented that low birth weight infants were three times more likely than controls to evidence neurological sequelae (McCormick, 1985). Adverse manifestations of low birth weight include problems in cognition, attention, neuromotor functioning, temperament, subnormal growth, illnesses, neurodevelopmental problems, learning difficulties, hyperactivity, behavioral problems, visual defects, low intelligence, poor academic achievement, central nervous system damage, neurological abnormalities, psychiatric disorders, cerebral palsy, and so forth (Brand and Bignami, 1969; Brennan et al., 1997; Brennan and Mednick, 1997; Broman et al., 1975; Chess and Thomas, 1987; Coren, 1993; Denno, 1990; Fitzhardinge and Steven, 1972; Hack et al., 1994, 1995; Hardy et al., 1979; Hertzig, 1983; Kandel et al., 1990; Marlow et al., 1989; McCormick et al., 1990; McGauhey et al., 1991; Ross et al., 1990; Thomas and Chess, 1977; Werner and Smith, 1977; Whitaker et al., 1997). Many of the problems arising from a low birth weight condition have been implicated in the development of crime, in general, and violence, in particular (Moffitt, 1990, 1997; Raine et al., 1997b; Reiss and Roth, 1993:383; Szatmari et al., 1986).

In addition, low birth weight is commonly correlated with low socioeconomic status and level of parents’ education (Denno, 1990; Hughes and Simpson, 1995; Penchasazadeh et al., 1972; Taylor, 1976). These two problems are overrepresented among minority, particularly African-American, populations (Chomitz et al., 1995), such that African-American women in the United States experience an especially high prevalence of low birth weight babies relative to other races and ethnicities in the United States and other parts of the world (Paneth, 1995; Shiono et al., 1986).

Although low birth weight has been linked with various adverse developmental implications, including neuropsychological problems, the link between low birth weight and criminal/aggressive behavior has not been extensively studied. However, the existing research on this relationship has documented that low birth weight, often in concert with inadequate social environments, is related to criminal and aggressive behavior.

Even though direct measures of neuropsychological deficits are difficult to come by, particularly with secondary data, there appears to be ample evidence that the association between low birth weight and behavioral problems/criminal behavior may be linked to early central nervous system dysfunction or development, neurological abnormalities, and neurodevelopmental problems and deficits (Brennan and Mednick, 1997; Breslau et al., 1988; Denno, 1985:719; Drillien et al., 1980; Lewis et al., 1979; Szatmari et al., 1990). Although the current research has no direct measure of neuropsychological deficit, we follow a strategy similar to the one recently employed by Brennan and Mednick (1997 p. 273; see also Brennan et al., 1997), in which an assumption was made that neuropsychological deficit/central nervous system dysfunction is likely a mediating factor between pre/perinatal complications (i.e., low birth weight) and adverse outcomes (i.e., criminal behavior).

It is assumed that perinatal factors influence antisocial behavior through the mediating factor of neurological or central nervous system dysfunction. It is important to note that this assumption is never directly tested in the studies linking perinatal factors and antisocial outcome. This research provides support for the theory that perinatal factors influence antisocial outcomes through the mediating factor of central nervous system dysfunction.

This assumption is consistent with previously documented research, as well as Moffitt’s
Influence of Gender, Low Birth Weight, and Disadvantaged Environment (1993) hypothesis that medical and congenital risk factors, such as low birth weight, produce central nervous system damage (i.e., neuropsychological deficits), which, in turn, has been shown to increase the risk of criminal offending (see also Moffitt et al., 1994:282). Given that low birth weight is strongly associated with early and long-term neuropsychological development (Brennan and Mednick, 1997; Denno, 1990:156; Hack et al., 1995; McCormick, 1985), low birth weight appears to be a reasonable proxy for increased risk of neuropsychological disorders, brain injury, and early central nervous system dysfunction (Moffitt, 1995; see also Brennan et al., 1997:164; Brennan and Mednick, 1997:273; Denno, 1985:719; Pasamanick et al., 1956:613).

What Should the Early Onset Group Look Like?
According to Moffitt (1993), less than 10% of the population are early onset offenders, but this group is large enough to be distinguished from other offenders. Although they represent a relatively small amount of the overall population, early onset offenders commit a relatively large portion of the more serious offenses in society (Moffitt, 1993). This finding is consistent with longitudinal studies reporting that persistent, serious offenders comprise less than 10% of birth cohorts (Farrington et al., 1990; Shannon, 1980; Wolfgang, 1983; Wolfgang et al., 1987).

Given that prior research has shown that life-course-persistent offenders are very rarely female (Denno, 1990; Moffitt, 1993, 1994; Moffitt et al., 1994; Wolfgang, 1983), it is no surprise that Moffitt (1993:674) concentrates on boys for the early onset group (i.e., life-course persisters); “chronic offending is...found among a relatively small number of males whose behavior problems are quite extreme.” Toward this end, little effort has been made to examine the impact of the neuropsychological-environmental interaction hypothesis for girls. In one of their most recent investigations, Moffitt et al. (1994:283) failed to find evidence for the presence of girls in the life-course-persistent group. To account for this, they (1994:283) offered three reasons: (1) neuropsychological disorders are rarer among females than among males, (2) childhood-onset conduct problems are very rare in girls, and (3) female delinquency lacks stability in relation to male delinquency (e.g., Denno, 1990:17; Reinish et al., 1979; Singer et al., 1968).

In sum, Moffitt is quite clear about the determinants of early onset. Aside from the interaction between neuropsychological and environmental characteristics, Moffitt (1994:39) states that much of the gender difference in the life-course-persistent group is attributable to sex differences in the exposure to risk factors for life-course-persistent antisocial behavior. For Moffitt, the causal process does not necessarily differ between males and females; rather, the difference in the prevalence or degree of exposure to predictors differs.

Hypotheses
From the preceding discussions, we develop the following hypotheses:

H1: The risk of neuropsychological deficit-disadvantaged environment interaction will predict early onset.

H2: Although boys and girls follow the same path toward the development of early onset of offending, or membership in the life-course-persistent group of offenders, this neurological deficit-disadvantaged environment interaction will be magnified for boys.

The first hypothesis is grounded in Moffitt’s (1993) work concerning the etiological correlates of the life-course-persistent offender. The second hypothesis is grounded in Moffitt’s (1994:39) claim that girls are less likely than boys to encounter all of the putative links in the causal chain for the development of life-course-persistent behavior, and Moffitt et al.’s
finding that neuropsychological effects were limited to males.

As a result, although the process of cumulative continuity can apply to girls, it does so at a lower rate than it does for boys. Also, if the analysis uncovers that fewer girls than boys are at risk, but they develop the same early onset outcome, this finding would not be inconsistent with Moffitt’s theory. Such a finding would replicate research completed by other scholars who found that high levels of perinatal risk were related to serious delinquency among females (Shanok and Lewis, 1981; Werner and Smith, 1992). On the other hand, if the analysis finds that there are girls at risk, but they do not develop the early onset outcome, this would be something not necessarily expected by Moffitt’s theory, but interesting and important nevertheless (e.g., Stanton et al., 1991:958). Regardless of the outcome, little is known about the development of female risk, in general, and the correlates of an early onset of offending for females, in particular. While problems associated with a low base rate of offending and/or early onset are common with female samples (Brennan et al., 1997:164), information on this front is sorely needed for a better understanding of female crime.

Data and Methods

The data used in this study were collected for the Longitudinal Study of Biosocial Factors Related to Crime and Delinquency in Pennsylvania (Denno, 1990). Data were collected from three sources. The first data source was the Collaborative Perinatal Project (CPP). Initiated in Philadelphia in 1959, the CPP was, at the time, one of the most ambitious and costly medical projects undertaken. Designed to obtain baseline data on birth defects, it includes a vast array of measures, including risk of neurological conditions, birth complications associated with cognitive abilities, familial conditions and socioeconomic status, all of which are key constructs in Moffitt’s (1993) theory. Furthermore, the CPP measures follow the subjects from birth to age 7, allowing researchers to trace the development of the individuals over time. The second and third sources of the data collected by Denno were from the Philadelphia public schools and the Philadelphia Police Department. School and police measures applied to the children from ages 7 to 14 and 7 to 18, respectively.

Detailed data have been organized and analyzed on the subsample of 987 youths who constitute the subjects selected by Denno (1990:29) from a larger sample of 2,958 black mothers who participated in the first four cohorts (1959–1962) of the CPP. Denno (1982; 1990:30) reports on comparisons made between the final sample and the excluded sample of subjects, the results of which showed no significant difference on a number of key variables.

These data are appealing for the current study because the CPP was designed to measure the effects of family background and developmental variables on the offending of a cohort of black, inner-city youths followed from birth to late adolescence (Denno, 1990).

The 987 subjects used for Denno’s study were infants of mothers who participated in the CPP and, therefore, reflect the characteristics of families who would be interested in receiving inexpensive maternity care provided by a public clinic at Pennsylvania Hospital between 1959 and 1962 (Denno, 1990). The 987 cases of the original sample were made up of children who: (1) had a black mother, (2) were located in a Philadelphia public school, (3) stayed in Philadelphia from ages 10 to 17, (4) were not among sibling members excluded from the sample to prevent possible biases in multiple family membership, and (5) received selected intelligence tests at age 7 and 14.

Given that inner-city, black youth are a high-risk population for violent and persistent offending (National Research Council, 1993; Reiss and Roth 1993; Wolfgang et al., 1987), Moffitt (1994: 38–39) has observed:
life-course-persistent antisocials may be anticipated at elevated rates among Black Americans because the putative root causes of this type are elevated by institutionalized prejudice and by poverty. . . Moreover, among poor blacks, prenatal care is less available, infant nutrition is poorer, and the incidence of fetal exposure to toxic and infectious agents is greater, placing infants at high risk for the nervous system problems that research has shown to interfere with prosocial child development.

Relatedly, research has shown that African-American women are more likely to give birth to low birth weight babies relative to other races and minorities (Paneth, 1995:19). These two points, taken with the recent assertion by Moffitt (1997:126) that these problems are magnified in inner-cities, suggest that the Denno data appear valuable, and perhaps unique to testing Moffitt’s interactional hypothesis.

From the 987 subjects in the publicly available data, a subsample was extracted that included the 220 subjects who had at least one recorded offense by age 18. In the present study, it is reasonable to study only offenders because Moffitt’s hypothesis specifies an etiological distinction within the population of offenders. Because of missing data, 13 of these cases were removed. The resulting sample consisted of 207 offenders (144 boys and 63 girls) for which sufficient data were available.

### Measurement of Variables

#### Dependent Variable

**Early Onset.** The dependent variable for this study—early onset—was measured by the age at first offense as recorded by the Philadelphia Police Department. Age at first offense was the age an offender first experienced a police contact that resulted in an official arrest or a remedial disposition. In the current sample, age at first offense ranged from 8 to 18. Although there is no clear consensus for determining age of onset (Dean et al., 1996; Mazerolle, 1997; Nagin and Farrington, 1992a, 1992b; Paternoster et al., 1997; Simons et al., 1994), we use age 14 in determining early/late onset for several reasons, First, findings from research report the highest hazard rates for onset of offending before age 14 (Blumstein et al., 1986; Patterson et al., 1992). Second, this cutoff age was used in one of the most recent tests of Moffitt’s theory (Moffitt et al., 1994) as well as Patterson’s developmental theory (Simons et al., 1994). In the present analysis, onset was recoded as 0 (age at first offense was 14 or older) or 1 (age at first offense was 13 or younger). The latter group of cases (N = 70) represents the early onset group, while the former group of cases (N = 137) represents the late onset groups. It is also important to note that the number of offenders (70) who fit the criterion for early onset make up about 7.1% of the original sample of 987. This is consistent with Moffitt’s (1993) claim that early offenders make up about 5% to 10% of the population.

#### Independent Variables

**Low Birth Weight.** Low birth weight was measured immediately upon delivery by the hospital staff in Philadelphia. Responses originally ranged from 3 to 12 pounds, but the variable was recoded as 1 (less than 6 pounds) or 0 (6 pounds or more). In the present analysis, 67 (32%) of the 207 offenders were classified as having low birth weight.

**Disadvantaged Environment.** In this paper, we utilize two different measures of disadvantaged environment. The first is concerned with a weak familial structure; the second deals with a poor socioeconomic status. We examined these two measures of disadvantaged environment for two reasons. First, we are interested in performing sensitivity analysis to determine if
the conclusions we draw from our operationalization of disadvantaged environment are sensitive to varying measurement strategies. Second, Moffitt’s theory of the life-course-persistent offender does not prefer one of the disadvantaged environment measures over the other. In fact, in various places, Moffitt (1993:684, 1997:153) has argued or shown that both weak familial structure and poor socioeconomic status are likely to exacerbate neuropsychological or neurological abnormalities.

For example, in the initial presentation of her theory, Moffitt (1993:682) notes: “Vulnerable children are often subject to adverse homes and neighborhoods because their parents are vulnerable to problems too.” Notice that in this particular passage, both adverse homes (weak family structure) and adverse neighborhoods (weak socioeconomic status) are discussed. In one of her most recent statements, Moffitt (1997:126; see also Moffitt, 1994:38) states:

Neuropsychological vulnerable children might be found at elevated rates in inner-city neighborhoods because the sources of poor brain health are linked with institutionalized prejudice and poverty. . . . Among the inner-city poor, prenatal care is less available, low birth weight is more common, infant nutrition is poorer, and the incidence of fetal exposure to toxic and infectious agents is greater, placing infants at high risk for the nervous system problems that research has shown to interfere with optimal child development.11

Socioeconomic Status. SES is believed to be a powerful influence on the development of early offenders (Moffitt, 1993; Patterson et al., 1992; Patterson and Yoerger, 1993). Moffitt (1993:682) claims that one of the best measures of a disadvantaged environment is SES. In their review of familial predictors of juvenile offending, Henry et al. (1993) found that low SES is widely associated with stable and pervasive antisocial behavior in late childhood. In the current research, SES was measured by a single-item, general SES score that is a composite measure comprising three indicators collected at age 7 for each child: education of head of household, income of head of household, and the occupation of the head of household. Higher scores are indicative of a higher SES.12

We should bear in mind, however, that this measure of SES should be viewed cautiously. As indicated by Denno (1990:30–31), the present sample exerts very little variation in SES because they were predominantly of lower SES when the CPP began. As such, “high” scores on the SES composite may still reflect high SES, but since the sample is relatively homogenous with regard to SES a “high” SES may give a somewhat false impression of a true high SES. We address this issue in further detail later in the text.

Family Structure. Research shows that the family structure of a child is an important factor in the development of early onset and serious offending (Denno. 1990; Henry et al., 1996; Kandel et al., 1990; Kolvin et al., 1988; Moffitt, 1993; Patterson et al., 1992; Smith and Jarjoura, 1988). Moffitt (1993) claims that a weak family structure is one of the primary features of a disadvantaged environment. Weak family structure was measured by summing the standardized scores of three indicators collected at age 7: the number of changes in mother’s marital status, with whom the child lives, and whether the husband/father of the child was present in the household.13 Higher scores on the scale indicated a weak, family structure. The reliability coefficient (Cronbach’s $\alpha = .83$) estimated for these indicators revealed that the family structure index was internally consistent.

Low Birth Weight × Disadvantaged Environment. In this study, we place particular emphasis on
the biosocial interaction between low birth weight and the two measures of disadvantaged environment. Two interaction terms were created: low birth weight × family structure and low birth weight × SES. The raw scores of the component factors were mean-centered in order to rid the measures of nonessential ill-conditioning (the multicollinearity between the component variables produced by noncentered-ness, which would inevitably cause multicollinearity between the component variables and their product terms (Aiken and West, 1991; Jaccard et al., 1990). When we examined the zero-order correlations, multicollinearity did not appear to be a problem.

Table 1 contains descriptive statistics for two sets of groups: the original cohort and the offender-only group. Within the original cohort, we report descriptive information for the nonoffenders (N = 734) and offenders (N = 207). Within the offender-only group, we report descriptive statistics for females, coded 2 (N = 63), and males, coded 1 (N = 144). By presenting the descriptive data in such a format, one can compare not only the distribution of male offenders versus female offenders, but also the study sample vs. the original cohort. Compared to the original cohort, offenders are significantly more likely to be male, to come from lower SES, and to have a weaker family structure. In the offender-only group, the only significant difference to emerge across gender concerns SES: males were more likely to come from higher SES. Interestingly, a similar percentage of early onset offenders were identified among boys (34%) and girls (33%). Of the 70 offenders who fit the study’s criteria for early onset, 49 were boys and 21 were girls. Low birth weight did not vary significantly across the four groups.14 We now turn to the results of our analysis.

Results

As stated earlier, Moffitt’s hypothesis specifies an etiological distinction within the population of offenders; thus, it is appropriate to study only offenders. Table 2 presents the results of three models; a full model that contains all 207 offenders and two gender-specific models, one for females and one for males. In all three models, the dependent variable is early onset (0 = late onset, 1 = early onset).15

<table>
<thead>
<tr>
<th>Variable</th>
<th>Original Cohort</th>
<th>Offenders Only</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-Offenders</td>
<td>Offenders</td>
</tr>
<tr>
<td></td>
<td>(N = 734)</td>
<td>(N = 207)</td>
</tr>
<tr>
<td>Low birth weight</td>
<td>.34 .47</td>
<td>.32 .47</td>
</tr>
<tr>
<td>SES</td>
<td>39.65 16.87</td>
<td>36.38* 17.10</td>
</tr>
<tr>
<td>Weak family structure</td>
<td>−.13 2.57</td>
<td>.35* 2.61</td>
</tr>
<tr>
<td>Gender</td>
<td>1.56 .50</td>
<td>1.30* .46</td>
</tr>
<tr>
<td>Early onset</td>
<td>— —</td>
<td>— —</td>
</tr>
<tr>
<td></td>
<td>Females</td>
<td>Males</td>
</tr>
<tr>
<td></td>
<td>(N = 63)</td>
<td>(N = 144)</td>
</tr>
<tr>
<td>Low birth weight</td>
<td>.33 .48</td>
<td>.32 .47</td>
</tr>
<tr>
<td>SES</td>
<td>32.49 15.29</td>
<td>38.08* 17.61</td>
</tr>
<tr>
<td>Weak family structure</td>
<td>.71 2.47</td>
<td>.19 2.66</td>
</tr>
<tr>
<td>Gender</td>
<td>— —</td>
<td>— —</td>
</tr>
<tr>
<td>Early onset</td>
<td>.33 .48</td>
<td>.34 .48</td>
</tr>
</tbody>
</table>

a. Because of removal of cases with missing data, 33 cases were discarded from the original group of 767 nonoffenders.
b. Because of removal of cases with missing data, 13 cases were discarded from the original group of 220 offenders.

*p < .05, one-tailed.
We also present the log odds of the coefficients, found in the column exp(B), in which a value greater than 1 indicates an increase in early onset, a value less than 1 indicates a decrease in early onset, and a value of 1 suggests no effect on early onset.

In examining the additive effects in the full sample model, it can be seen that individuals born at low birth weight were more likely to have an early onset of offending, and individuals from a higher SES were less likely to incur an early onset. Though in the correct direction, neither weak family structure nor gender had a significant effect on early onset.

Although an inspection of the additive effects is informative, the central focus of this study concerns the hypothesis outlined by Moffitt that risk of neuropsychological deficit (indicated in the present study by low birth weight) interacts with disadvantaged home environment. Both interactions have a significant effect on early onset. Both low birth weight × SES and low birth weight × weak family structure have a significant and positive effect on early onset. Thus when low birth weight is met with a weak family structure and a higher SES, individuals are more likely to incur an early onset of offending.16

So far, some evidence has emerged in support of Moffitt's interactional hypothesis. However, the question remains whether this interaction operates equally across gender. Turning to the gender-specific estimations in Table 2, some curious results emerge. In the female model, only one of the five variables exerts a significant effect (\(p = .06\)) on early onset.
Females who come from a higher SES are less likely to incur an early onset of offending. In terms of the other additive effects, neither low birth weight nor weak family structure significantly predicted early onset. Notably, in terms of the interaction effects, neither interaction term significantly predicted early onset for females. This result is consistent with Hypothesis 2, which specified Moffitt’s prediction that the neuropsychological-environmental interaction should not be important for females.

Turning to the male sample, two of the three additive effects are significant ($p < .07$). Low birth weight had a positive effect on early onset, and higher SES exerted a negative effect on early onset. Weak family structure failed to significantly predict early onset. In contrast to the results for females, however, both interaction terms were significant for males. The first interaction, low birth weight × SES, had a positive effect on early onset. Consistent with Moffitt, the second interaction term, low birth weight × weak family structure, had a positive effect on early onset, suggesting that individuals residing in a weak family structure and born at low birth weight are more likely to incur an early onset.

The counterintuitive result we observed for the low birth weight × SES interaction may have much to do with the nature of the sample under investigation. Recall that mothers interested in inexpensive maternal care for the first seven years of life selected themselves (and subsequently their children) in the study project. As Denno (1990:30–31) reports, the sample was predominantly low SES. Thus, individuals scoring “high” on the SES indicator may still be of low SES relative to the general population, but give the somewhat clouded impression that they are of higher SES.

One reviewer suggested that the neuropsychological deficit-poor SES environment interaction could be interpreted to suggest that among those with lower SES, in our case very low SES, it is only those with neuropsychological deficits, such as low birth weight, that have risk for an early onset (e.g., Ross et al., 1990). In other words, the reviewer was asserting that low birth weight is a risk factor conditional on low SES.

To further explore the moderating effect of SES on the relationship between low birth weight and early onset, we partialed the SES measure into two groups: low SES (those scoring at the 25th percentile or below, $N = 50$) and high SES (those scoring above the 25th percentile, $N = 157$). In Table 3, we present the results of two separate logistic

### Table 3: Logistic Regression Coefficients Predicting Early Onset by Level of SES

<table>
<thead>
<tr>
<th>Variable</th>
<th>Low SES (N = 50)</th>
<th></th>
<th></th>
<th></th>
<th>High SES (N = 157)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE(B)</td>
<td>Wald</td>
<td>Exp(B)</td>
<td>B</td>
<td>SE(B)</td>
<td>Wald</td>
<td>Exp(B)</td>
</tr>
<tr>
<td>Low birth weight</td>
<td>1.64</td>
<td>.69</td>
<td>5.53*</td>
<td>5.13</td>
<td>.58</td>
<td>.38</td>
<td>2.32</td>
<td>1.78</td>
</tr>
<tr>
<td>SES</td>
<td>−.11</td>
<td>.07</td>
<td>2.43</td>
<td>.90</td>
<td>−.03</td>
<td>.01</td>
<td>5.51*</td>
<td>.97</td>
</tr>
<tr>
<td>Weak family structure</td>
<td>.23</td>
<td>.15</td>
<td>2.13</td>
<td>1.25</td>
<td>.02</td>
<td>.07</td>
<td>.06</td>
<td>1.02</td>
</tr>
<tr>
<td>Gender</td>
<td>.64</td>
<td>.65</td>
<td>.97</td>
<td>1.90</td>
<td>−.56</td>
<td>.41</td>
<td>1.79</td>
<td>.57</td>
</tr>
<tr>
<td>Constant</td>
<td>−.392</td>
<td>1.74</td>
<td>5.06*</td>
<td>1.14</td>
<td>.11</td>
<td>.55</td>
<td>.04</td>
<td>.57</td>
</tr>
</tbody>
</table>

X^2 = 11.26, df = 4, p = .02
Model prediction rate = 72% for Low SES, 69% for High SES.

* $p < .05$, one-tailed.
regressions, one for the low SES group, and one for the high SES group which includes gender, SES, weak family structure, and low birth weight.

In the first column, we present the results for those individuals in the low SES group. The important coefficient for present purposes is the effect of low birth weight on early onset. The effect of this variable is positive and significant, suggesting that those individuals born at low birth weight are more likely to incur an early onset. Turning to the second column, among those high in SES, the effect of low birth weight on early onset was positive, but not statistically significant. Figures 1 and 2 graphically present these results. Figure 1 shows the relationship between low birth weight and early onset for the low SES group, and Figure 2 shows the same relationship for the high SES group. When selecting on those low on SES (Figure 1), individuals born at low birth weight have a mean onset of .611 and those individuals not born at low birth weight have a mean onset of .281 ($F = 5.599, p = .02$). When selecting on high SES (Figure 2), those born at low birth weight had a mean onset of .388 while those not born at low birth weight had a mean onset of .287 ($F = 1.571, p = .21$).

Taken together, these results appear to suggest that the effect of low birth weight on early onset is conditional on (low) SES. When we consider these results in the context of Moffitt’s theory, the initially apparent contradictory result obtained earlier for the low birth weight $\times$ SES interaction, with the original continuous coding for SES, appears to be a function of the fact that the sample is relatively homogenous with regard to SES. Thus, we view the supplementary results as being consistent with Moffitt’s interactional hypothesis.
Discussion and Conclusion

To the best of our knowledge, this study provides the first attempt to examine a prospective link between the interaction of neuropsychological risk and disadvantaged environment in explaining early onset in a longitudinal context, when the measurement of neuropsychological deficit is not composed of test scores, psychological assessments, or both (cf. Moffitt et al., 1994, 1996). This attempt is important because one of the neglected areas of biosocial research has been the examination of interactions between biological and environmental factors within a major, urban U.S. city (Brennan et al., 1997; Piquero and Tibbetts, 1999; Raine et al., 1997b).

The results of this study appear supportive of Moffitt’s (1993, 1994) interactional hypothesis concerning the development of early onset of offending and further demonstrate that influences of biosocial interaction are under way in early childhood (e.g., Brennan et al., 1995). Consistent with our first hypothesis, findings showed that (1) low birth weight interacts with a disadvantaged familial environment to predict early onset, and (2) low birth weight combined with low SES significantly increases the risk of an early onset. When gender-specific models were estimated, the results appeared to be in line with our second hypothesis that the neuropsychological risk-disadvantaged environment interactions were important for males, but not for females. In terms of the additive effects, the results showed that across a variety of models, low SES poses a risk for early onset of offending, and the aggravating effect of low birth weight on early onset was more important for males than for females.

We should note that the data utilized in this study suffer from a few limitations. First,
only one indicator of increased risk for neuropsychological deficit—low birth weight—was used. Future studies should examine other potential predictors of risk for neuropsychological deficits, such as birth complications, head injuries, mother’s drug use/abuse, mother’s health, and so on. This is important because we assumed: that low birth weight served as an adequate proxy for neuropsychological deficit. Although we are in the mainstream in this regard (Brennan and Mednick, 1997), we should point out that more direct measures of neuropsychological deficit are needed for a more direct test of the etiology of Moffitt’s life-course-persistent offender.

Second, age at first officially recorded offense was used to measure early onset. Although many researchers have employed official measures for identifying early onset (Moffitt et al., 1994; Patterson et al., 1992; Simons et al., 1994), such indices would probably best be used in conjunction with other measures such as self-reported offending in future studies (e.g., Bartusch et al., 1997). Confidence in the results of the present study would be increased if the results of this study are confirmed, with different operationalizations of early onset.

Third, the sample comprised inner-city, black youths, and as a result, some generalizability problems may emerge. Inclusion in the sample was, in part, based on characteristics of the families who would be interested in receiving inexpensive maternity care provided by a public clinic (Denno, 1990:30). Moreover, given that low birth weight rates differ between African-Americans and whites, and that African-American babies usually weigh about 9 ounces less than white babies (Paneth, 1995:24), this subtle difference could have a demonstrable impact when infants are categorized into low and regular birth weight groups. However, our analysis focused on a single race, African-Americans. This potential limitation can also be viewed as a beneficial characteristic of the study because black youth are a high-risk population for violent and persistent offending (National Research Council, 1993; Reiss and Roth, 1993; Wolfgang et al., 1987), as well as membership in the life-course-persistent group of offenders (Moffitt, 1994). Nevertheless, because our analyses were based on a single ethnicity predominantly of lower SES, without other ethnic groups and/or African-Americans of a variety of different types of SES levels, the present analysis cannot articulate the role that (poor) ethnic background plays in the development of early onset. As a result, future studies should examine the validity of Moffitt’s interactional hypothesis for other populations of youth (i.e., rural, white, etc.) and of varying levels of SES in order to further disentangle the interplay between individual and structural forces.

In addition to the future research directions just addressed, we also see potential for a few promising lines of inquiry with regard to birth weight. First, future studies may want to partial out the low birth weight categories into finer distinctions, such as very low birth weight and extremely low birth weight, because it is conceivable that infants in the lowest categories could suffer more damaging consequences compared with higher birth weight infants (e.g., Hack et al., 1994; McCormick et al., 1990, 1996; The Scottish Low Birthweight Study Group, 1992), and thus incur an early onset of offending.

Toward this end, we performed some preliminary, albeit crude, analyses that attempted to examine if the proportions of early onset were greater for those lowest in birth weight. Specifically, we created three groups of individuals: (1) those born over 6 pounds, (2) those born at low birth weight (between 5 and 6 pounds), and (3) those born at very low birth weight (between 3 and 4 pounds). We then calculated the mean of early onset across the three groups. Interestingly, the mean of early onset ($X^2 = .857$) was highest for the seven individuals who weighed 3 or 4 pounds at
Influence of Gender, Low Birth Weight, and Disadvantaged Environment

birth when compared to the 69 individuals who weighed between 5 and 6 pounds at birth ($X^2 = .449$) and the 144 individuals who weighed above 6 pounds at birth ($X^2 = .292$). The differences between the groups was statistically significant ($F = 6.718, p = .001$).

Measures of low birth weight could also be refined by incorporating information on gestational age. Although not directly expressed in her theory, it is possible that Moffitt’s biosocial interaction may be magnified for those infants in the lowest of all possible birth weight groups. Also, additional measures of disadvantaged environment, such as parent-child interactions, could be incorporated into indices measuring this component of Moffitt’s theory to create a more comprehensive estimate of disadvantaged environment (for a similar approach, see Raine et al., 1997b).

Our results also have some import for public policy. Although many avenues exist in terms of preventing low birth weight from occurring in the first place by targeting prenatal care (Alexander et al., 1995) and mother’s lifestyle (Chomitz et al., 1995), the presence of a low birth weight infant should not be viewed as a dooming consequence. Recent evidence suggests that a substantial portion of the adverse outcomes of low birth weight reflects modifiable environmental factors (McCormick et al., 1996). Therefore, even with recent gains in medical technology that have allowed for the positive development of low birth weight infants, there is still room for work in the social, familial, and economic environment of the infant that could help alleviate the impact of low birth weight. Reviews of the literature surrounding the amelioration of perinatal and other related birth consequences suggest that supportive environments and early interventions stand a fighting chance at diminishing the consequences of birth-related difficulties (Brennan and Mednick, 1997), and such approaches may have an even more demonstrable impact on inner-city youths (Guerra et al., 1997).

Notes

1. To be sure, the emphasis placed on early onset has not been wholeheartedly accepted by the criminological community. For some, early onset of offending is simply a behavioral manifestation of criminal propensity, such that individuals experiencing an early onset have higher criminal propensity than individuals experiencing onset later (i.e., persons having a lower criminal propensity) (Gottfredson and Hirschi, 1990; Hirschi and Gottfredson, 1983:574–77).

2. Some commonality exists with Moffitt’s (1993) life-course-persistent offender and Gottfredson and Hirschi’s (1990) low self-control offender. For both theories, early evidence of antisocial behavior, including an early age of onset, usually sets the stage for persistent offending throughout life. Where the theorists diverge, however, is in the attribution of the cause of this time-stable behavior. For Moffitt, it lies in the interaction of individual differences in neuropsychological development and poor environment. For Gottfredson and Hirschi, it is in low self-control and opportunity.

3. Some research appears to find support for the position that at least two (if not more) types of offenders exist (e.g., Bartusch et al., 1997; Caspi et al., 1994; D’Unger et al., 1998; Land et al., 1996; Land and Nagin, 1996; Moffitt et al., 1994; Nagin et al., 1995; Nagin and Land, 1993; Patterson et al., 1992; Simons et al., 1994).

4. Another recently proposed taxonomy (Patterson et al., 1992; Patterson and Yoerger, 1993; Simons et al., 1994) also claims that children with defiant orientations often overwhelm the efforts of authority figures to nurture or discipline them in their development.

6. Denno selected the 987 subjects from the larger sample of 2,958. Although she reports that there were no significant differences between the 987 subjects and the larger sample of 2,958, we do not have access to the larger sample. Our data on the 987 subjects were taken from the Inter-University Consortium for Political and Social Research (ICPSR) secondary data analysis archive. Nowhere in the publicly available data, nor in any of Denno’s works (1984, 1985, 1990), is there information on the 2,958 subjects to which we can compare the 987 subjects. Thus, we have to assume that the publicly available data, on which the current analyses are based, are representative of the large sample of 2,958 subjects, as Denno indicates.
8. In preliminary analysis not shown here, we estimated the onset dependent variable in a continuous fashion. Both the continuous and dichotomies indicators were highly correlated (r = .75). When onset was specified in a contiguous fashion, the results were substantively similar to the dichotomous indicator of onset. As such, we only report the results for the dichotomous indicator of onset. Moreover, we point out that, for theoretical reasons, previous examinations of the determinants of early and late onset of offending have utilized age 14 as the marker of distinction (cf. Moffitt et al., 1994; Simons et al., 1994). Such an approach is consistent with using this age as a marker for the transition between childhood and adolescence (Bartusch et al., 1997; Tanner, 1978).

9. Although age at first recorded police contact may not be as accurate a measure of onset as self-reported offending, it has several advantages over other commonly used measures of onset of offending (e.g., age at first arrest, age at first conviction, etc.). While recent empirical examinations of early and late onset have used arrest and conviction data (e.g., Moffitt et al., 1994; Simons et al., 1994), age at first police contact provides a more sufficient measure of onset because many first contacts with police do not result in an arrest or conviction. The likelihood of a police contact to result in an arrest may be influenced by several factors including: police discretion, demeanor, demographic characteristics of offender/victim, characteristics of the community, etc (e.g., Smith, 1984).

10. This cutoff for low birth weight was chosen because most medical researchers use a cutoff of just below 6 pounds (i.e., low birth weight is actually identified in the literature as 5 pounds, 8 ounces) (Coren, 1993; Denno, 1990; Paneth, 1995:19; Shiono and Behrman. 1995:17). This cutoff was adopted by the World Health Organization (1950), who was interested in adopting a universal definition for low birth weight. Since the WHO’s adoption of this cutoff, most studies have used the 6-pound marker for low birth weight. Although modern obstetric/pediatric research has improved the precision for the measurement of low birth weight (e.g., accounting for gestational age), our measure is limited to the medical technology of the 1950s, the time period within which the data were collected. There exists no separate cutoff for low birth weight between the sexes; thus, the 6 pound marker for low birth weight is used for both males and females.

One reviewer noted that this cutoff for low birth weight is rather liberal, and that it is at severe low birth weight that risk is really carried. Although this is certainly plausible, we offer two reasons as to why we do not explore this possibility in the present study. First, Moffitt’s theoretical argument does not make any distinctions between the various types of low birth weight (i.e., low, very low, extremely low). For her theory, it is the presence of low birth weight per se that matters. Second, and more practically, our sample was made of only 207 cases. To partial birth weight into smaller categories would create problems associated with reduced sample sizes in birth weight categories that could have a detrimental impact on the power of the analysis, a problem that has plagued other researchers (McGauhey et al., 1991).

11. In her own work, Moffitt (1997:155–57) has begun to examine the joint influence of neuropsychological problems and poor neighborhood structure (i.e., in an inner-city context) in predicting delinquency and poor cognitive test outcomes. Using data from the Pittsburgh Youth Study, Moffitt identified two neighborhoods. “Bad” or disadvantaged neighborhoods were those in the worst 25% in measures of median household income, unemployment, families below the poverty level, density of males aged 10–14, female-headed households, or rate of separation/divorce, and “good” neighborhoods were those that were not extreme on any of these factors. Her preliminary results suggested that “good” neighborhoods seemed to protect boys from delinquency, but only if the boys were neuropsychologically healthy. Moreover, cognitive impulsivity scores were significantly worse, and delinquency scores significantly higher, among boys from disadvantaged or “bad” neighborhoods.

12. Although we view our usage of the age 7 measure of socioeconomic status as adequate, some may suggest that early (i.e., birth) SES indicators are more relevant to Moffitt’s theory than those obtained later in childhood. We chose to retain the age 7 measure of socioeconomic status as the principle SES measure for several reasons. First, in her own work, Moffitt has utilized birth (Henry et al., 1996) and/or childhood/early adolescence (Moffitt et al., 1994; Moffitt, 1997) measures of SES and, thus, does not appear to prefer SES at one age over another. Second, because the family structure variables were obtained at age 7, we thought that keeping the environmental indicators measured concurrently would be more valid than measuring one of them early in life and the other later in life. Third, we also thought that the composite index of SES was a more internally valid indicator of SES.
because it takes into consideration income, education, and employment rather than just income. Nevertheless, we also performed the interactional analyses with an indicator of SES measured solely as the mother’s income in dollars while she was three months pregnant. The results (reported later) for the birth SES variable were substantively the same as those for the age 7 SES measure.

13. The number of changes in mother’s marital status was coded 0 to 6 (number of changes in marital status) or 7 (seven or more changes in marital status). The living situation of the child was coded 0 (child lives with mother and father/stepmother and father/ mother and stepfather) or 1 (child lives with mother only/ father only/adoptive home/foster home/miscellaneous). Husband or father present in household was coded 0 (yes) or 1 (no). All responses were standardized before summation for the family structure scale.

14. Preliminary bivariate analysis showed that birth weight and early onset were significantly related. Of the 67 individuals born with low birth weight, 30 of them incurred an early onset ($\chi^2 = 5.316$, df = 1, $p = 0.2$). Of the 144 males, 46 were born with low birth weight. Of the 46 cases, 20 had an early onset, but this result was not statistically significant ($\chi^2 = 2.689$, df = 1, $p = .10$). Of the 63 females, 21 were born with low birth weight. Of these 21 cases, 10 had an early onset. Similar to males, this result was not statistically significant ($\chi^2 = 2.892$, df = 1, $p = .09$).

15. We also estimated the models with a continuous age of onset, as well as several other age cutoffs (e.g., age 13 and age 15). In all cases, the coefficient estimates were substantively the same.

16. The coding of the SES variable (i.e., higher values connote higher SES) makes the interpretation of this interaction term counterintuitive. We will return to this issue shortly.

17. A test (e.g., Clogg et al., 1995) of the difference of the interactions across gender failed to detect any significant difference. Results are available on request.

18. Similar to the full sample results, the interaction between low birth weight and SES is statistically significant, but the sign is in the opposite direction to that predicted.

19. We recognize that our usage of 25% as a cutoff for low SES is somewhat arbitrary. However, in some of her most recent work, Moffitt (1997) used a similar cutoff to signify poor environment. In related work, Escalona (1982) also utilized a 25th percentile cutoff for low SES. To examine the robustness of our findings, we performed sensitivity analysis by defining the low SES group as those individuals at or below the 20th percentile, and the high SES group as those individuals above the 20th percentile. The results were substantively the same for both percentile cutoffs.

20. A coefficient comparison test failed to evidence a statistically significant difference between the low birth weight coefficients across SES groups ($z = 1.34$ at conventional levels of significance ($p < .05$). However, this result must be viewed in the context of a relatively small sample size, in general, and across SES groups, in particular.

21. Though not presented here, we also completed a similar analysis, but with a slightly different strategy. We created a dummy variable that was coded 1 when individuals were born at low birth weight and low in SES. When this variable was entered into a logistic regression equation predicting early onset, it evidenced a positive and statistically significant effect in predicting onset.

22. The null interaction effect observed for females may be caused by the small number of female offenders included in the analysis. As such, the difference in significance of the interaction terms across gender may be a spurious artifact of statistical power. It is entirely possible that the interaction proposed by Moffitt is salient for females; however, it may not have been different enough among boys and girls in the present sample to be detected at the relatively small sample size. We encourage future research endeavors to obtain a sample size larger than the one in the present study to give this hypothesis a better assessment.

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**REVIEW QUESTIONS**

1. Which factor in this study represents Moffitt’s high-risk factor for neuropsychological problems? Do you agree with the use of this measure as an indicator of this risk?

2. For which groups does this study seem to indicate Moffitt’s theory is most applicable?

3. Knowing the results of this study, what would you recommend in terms of reducing chronic offenders in our society?

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**READING**

In this selection, Alex Piquero, David Farrington, and Alfred Blumstein provide a comprehensive review of the concepts, issues, and propositions presented by the criminal career framework, on which developmental theories are based. The developmental paradigm is, by definition, based on following the criminal activity of individuals over time and exploring the reasons why they offend when they do, as well as why these individuals don’t offend at certain times. The authors explore the history of the criminal career perspective, as well as the key concepts of participation, offending frequency, duration, and co-offending patterns. Piquero et al. also explore the policy implications that can be gathered, given the current state of research on these various dimensions.

Then the authors explore the issues related to chronic offenders, who are the small percentage of society (approximately 5% to 8% of the population) who commit the vast majority of violent and serious offenses. Piquero et al. also provide policy recommendations, especially regarding implications for incarceration policies. Finally, the authors review the extant research on career length and desistence (or the ceasing of offending in an individual’s life), as well as prescribing issues that future research should examine.

While reading this selection, readers should consider the various concepts, such as frequency and duration, regarding their own offending careers, or the offending careers of people they know well. Furthermore, readers should examine the incarceration policies suggested by Piquero et al., and to consider whether they agree or disagree with their suggestions.

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**Criminal Career Paradigm**

**Background, Recent Developments, and the Way Forward**

*Alex R. Piquero, David P. Farrington, and Alfred Blumstein*

Researchers have long been interested in the patterning of criminal activity throughout the course of criminal careers. Early on, Quetelet (1831) recognized that the age was closely related to the propensity for crime. Using data on crimes committed against persons and property in France from 1826 to 1829, Quetelet found, that crimes peaked in the late teens through the mid twenties. Since Quetelet’s findings, a number of researchers have pursued the relationship between age and crime, across cultures and historical periods, and for a number of different crime types (Hirschi and Gottfredson 1983). Research on the relationship between age and crime has been one of the most studied issues within criminology (Farrington, 1986; Steffensmeier et al. 1989; Tittle and Grasmick 1993).

The relationship between age and crime raises the question of the degree to which the aggregate pattern displayed in the age/crime curve is similar to—or different from—the pattern of individual careers and whether conclusions about individuals can be validly drawn from aggregate data. For example, how far does the observed peak of the aggregate age/crime curve reflect changes within individuals as opposed to changes in the composition of offenders? In other words, is the peak in the age/crime curve a function of active offenders committing more crime, or is it a function of more individuals actively offending during those peak years?

Within individuals, to what extent is the slowing past the peak age a function of deceleration in continued criminal activity or stopping by some of the individuals? Across individuals, how much of the age/crime curve can be attributed to the arrival/initiation and departure/termination of different individuals? How about the role of co-offending? How much of the continuation of offending by lone/solo offenders is attributable to identifying theirs as the key criminal careers of long duration, with their co-offenders serving merely as transients with shorter careers? How much of the age/crime curve for any particular crime type is a consequence of individuals persisting in offending, but switching from less serious crime types early in the career to more
serious crime types as they get older? What about the relationship between past and future offending? Is it due to some causal factors or changes in causal factors (state dependence), unobserved individual differences (persistent heterogeneity), or some combination?

These questions are central to theory, as well as policy, especially those policies that are geared toward incapacitative effects of criminal sanctions, as well as to changes in the criminal career (e.g., rehabilitation or criminalization patterns as a result of actions by the criminal justice system). For example, if crime commission and arrest rates differ significantly among offenders and over the career, the effect of sentence length on overall crime will depend on who is incarcerated, and for how long (Petersilia 1980:325). Addressing these and related issues requires knowledge about individual criminal careers, their initiation, their termination and the dynamic changes between these end points (Blumstein et al. 1986).

In 1983, a Panel on Research on Criminal Careers was convened by the National Academy of Science at the request of the U. S. National Institute of Justice and was charged with evaluating the feasibility of predicting the future course of criminal careers, assessing the effects of prediction instruments in reducing crime through incapacitation, and reviewing the contribution of research on criminal careers to the development of fundamental knowledge about crime and criminals. This report outlined a novel approach of asking questions regarding the longitudinal patterning of criminal activity over the life course, i.e., the criminal career paradigm (Blumstein et al. 1986).

Since publication of the report, numerous theoretical, empirical, and policy issues have surfaced regarding the longitudinal patterning of criminal careers. One concerned the relevance (or lack thereof) of criminal career research for criminology generally, and public policy in particular. Gottfredson and Hirschi (1990) levied a series of critiques against the criminal career approach in which they claimed that attempts to identify career criminals and other types of offenders were doomed to failure. Perhaps the most important issue they raised concerns causality. Although the criminal career paradigm necessitates a longitudinal focus in order to study both the between- and within-individual patterning of criminal activity, Gottfredson and Hirschi questioned whether longitudinal research designs could actually resolve questions of causal order. They also argued that, since correlations with offending were relatively stable over the life-course, cross-sectional designs were suitable for studying the causes of crime.

This paper summarizes background and recent developments regarding the criminal career paradigm. Section I provides a brief review of the criminal career paradigm, as well as an overview of the empirical findings generated by criminal careers research, with a concentration on the dimensions of criminal careers. Section II presents a discussion of selected policy implications including the identification of career criminals and policies associated with sentence duration. Section III offers an agenda for future theoretical, empirical, and methodological research. The full conclusion of our report may be found in the essay “The Criminal Career Paradigm,” published in Crime and Justice: A Review of Research, Volume 30 (Piquero; Farrington, and Blumstein 2003).

I. The Criminal Career Paradigm

At its most basic level, a criminal career is the “characterization of the longitudinal sequence of crimes committed by an individual offender” (Blumstein et al. 1986:12). This definition helps to focus researchers’ attention on entry into a career when or before the first crime is committed and dropout from the career when or after the last crime is committed. The criminal career paradigm recognizes that individuals start their criminal activity at
some age, engage in crime at some individual crime rate, commit a mixture of crimes, and eventually stop. Hence, the criminal career approach emphasizes the need to investigate issues related to why and when people start offending (onset), why and how they continue offending (persistence), why and if offending becomes more frequent or serious (escalation) or specialized, and why and when people stop offending (desistance). The study of criminal careers does not imply that offenders necessarily derive their livelihood exclusively or even predominantly from crime; instead, the concept is intended only as a means of structuring the longitudinal sequence of criminal events associated with an individual in a systematic way (Blumstein et al. 1982:5). In sum, the criminal career approach focuses on both between—and within—individual changes in criminal activity over time.

A. Dimensions of a Criminal Career

1. Participation

The criminal career approach partitions the aggregate crime rate into two primary components: “participation,” the distinction between those who commit crime and those who do not; and “frequency,” the rate of offending among active offenders, commonly denoted by the Greek letter λ (Blumstein et al. 1986:12). Participation is measured by the fraction of a population ever committing at least one crime before some age or currently active during some particular observation period. In any period, active offenders include both new offenders whose first offense occurs during the observation period, and persisting offenders who began criminal activity in an earlier period and continue to be active during the observation period. Importantly, the longer the average duration of offending, the greater the contribution of persisters to measured participation in successive observation periods.

Estimates of ever-participation in criminal activity vary across reporting method (they tend to be much higher with self-report than with official records which are a filtered subset of self-reports), the crimes in which participation is being measured (there is more participation in less serious criminal activity), the level of threshold of involvement (police contact, arrest, conviction), and the characteristics and representativeness of the sample (high school students, college students, general population, offender-based, etc.). In general, ever-participation estimates are fairly common across data sets and consistent with most criminological findings.

There is a relatively high rate of participation among males in criminal activity (Elliott et al. 1987:502). Blumstein et al. (1986) reported that about 15 percent of urban males are arrested for an index offense by age eighteen, and about 25 to 45 percent of urban males are arrested for a non-traffic offense by age eighteen. Visher and Roth’s (1986) overview of several longitudinal studies employing police and court records indicates a lifetime prevalence estimate of 40 to 50 percent, with slightly higher rates for blacks and much lower rates among females. Stattin et al.’s (1989) longitudinal study of Swedish males and females revealed that by age 30, 37.7% of Swedish males and 9% of Swedish females were registered for a criminal offense. The cumulative prevalence of self-reported offenses is even more striking. For example, in the Cambridge study, Farrington (2003) found that 96 percent of the males had reported committing at least one of ten specified offenses (including burglary, theft, assault, vandalism, and drug abuse) up to age thirty-two. Kelley et al. (1997) used self-reported data on serious violence from three longitudinal studies funded by the Office of Juvenile Justice and Delinquency Prevention, the Causes and Correlates studies, and found that 39 percent of Denver males, 41 percent of Pittsburgh males, 40 percent of Rochester males, 16 percent of Denver females, and 32 percent of Rochester females reported committing at least one serious violent act by age sixteen.
Regardless of whether official or self-report
records are used to study prevalence, three main
conclusions emerge. First, male participation
rates are typically higher than those for females,
and especially so for the more serious offenses.
Second, black participation rates are typically
higher than those for whites, especially when
participation is examined via official records as
opposed to self-reports (Hindelang et al. 1981).
In self-reports, blacks have also been found to
report continuing their violent offending at
higher rates than whites (Elliott 1994). Third,
there is a strong relationship between age and
participation. In particular, the probability of
initiating a criminal career at a given age is high-
est between thirteen and eighteen, on the lower
end for self-report estimates and on the higher
end for arrest and conviction records, with little
to no gender difference (Moffitt et al. 2001).
Also, evidence on the probability of committing an
offense at a given age is mixed, with some
research indicating a consistent increase through
the mid-teens to a peak at age nineteen and then
subsequent decline, while other research indicates
a decline in self-reported participation
through the teens (Elliott et al. 1983; Thornberry
differences in prevalence remains controversial.
For example, Hindelang et al. (1981) argued that
there is a race difference in the validity of self-
reported delinquency measures, which leads to a
serious underestimation of black males’ preva-
lence rates.

2. Key Dimensions of Active Criminal Careers

The criminal career paradigm encom-
passes several dimensions of active criminal
careers including offending frequency, dura-
tion, crime type mix and seriousness, and co-
offending patterns.

a. Offending Frequency. The offending rate for
individual offenders, \( \lambda \), reflects the frequency
of offending by individuals who are actively
engaged in crime (Blumstein et al. 1986:55).

Much criminal career research has been
concerned with estimating the individual
offending frequency of active offenders during
their criminal careers (Blumstein and Cohen
1979; Cohen 1986; Loeber and Snyder 1990).

Blumstein et al. (1986) summarized vari-
ation in \( \lambda \) for active offenders by gender, age,
and race. Regarding gender, they found little
variation in frequency across males and
females (i.e., the ratios are generally 2:1 or less)
for most crimes (Blumstein et al. 1986:67–68).
Thus, if active in a crime type, females commit
crimes at rates similar to those of males (for an
exception see Wikström 1985). Regarding age,
Blumstein et al. reported little change with age
in offense-specific frequency rates for active
offenders, but when all offense types are com-
bined, there tended to be an increase during
the juvenile years and a decrease during the
adult years. In the Rand Inmate surveys, there
appeared to be some evidence of general sta-
bility of \( \lambda \) over age (Chaiken and Chaiken
1982). The number of active crime types
dieded with age in the Rand survey, but
crime-specific frequencies tended to be stable
(Peterson and Braiker 1980). Finally, although
research based on official records tends to
indicate that there is not a strong relationship
between offending frequency and demo-
graphic characteristics, some recent self-report
data on serious violence tends to indicate oth-
erwise (Elliott 1994).

Spelman (1994) summarized current
knowledge on offending frequencies. First,
there are different values for the average
offense frequencies across studies because
researchers provide different definitions and
operationalizations of the offense rate. Second,
most of the variation in offense rates can be
attributed to differences in the populations
sampled and especially where in the criminal
justice system they are sampled. Third, the
average offender commits around eight crimes
per year, while offenders who are incarcerated
at some point in their lives commit thirty to
fifty crimes per year, and the average member
of an incoming prison cohort commits between sixty and 100 crimes per year. Fourth, criminals do not commit crimes all the time; in other words, there is evidence that many offenders spend long periods of time in which they commit no crimes. Fifth, the distribution of offending frequencies is highly skewed, with a few offenders committing crimes at much higher than average rates.

b. Duration, the Interval between Initiation and Termination. One aspect of the criminal career paradigm that has received a great deal of research attention is initiation, or the onset of antisocial and criminal activity (Farrington et al. 1990). Several studies have reported higher recidivism rates among offenders with records of early criminal activity as juveniles (Blumstein et al. 1986). Although many researchers argue that individuals who begin offending early will desist later, and thus have lengthy careers (Hamparian et al. 1978; Krohn et al. 2001), there has been much less research on the duration of criminal careers, or an individual’s criminal career (Piquero, Brame, and Lynam 2003). It is more tenable, however, to measure a rate of desistance for an identified group of offenders (Bushway et al. 2001). Research on desistance, or the termination of a criminal career, has received even less attention because of difficulties in measurement and operationalization (Laub and Sampson 2001).

The two most common approaches for studying career termination have been through providing estimates of termination probabilities after each arrest, and estimating the time between the first and last crimes committed. Regarding termination probabilities, Blumstein et al. (1986) calculated persistence probabilities for six different data sets and found that after each subsequent event (i.e., police contact, arrest, conviction, etc.), the persistence probability increases, reaching a plateau of .7 to .9 by the fourth event across all data sets. Farrington, Lambert, and West (1998) used conviction data to calculate recidivism probabilities for Cambridge study males through age thirty-two and found that after the third offense, the recidivism probability ranged from .79 to .91 through the tenth offense.

A number of studies have attempted to derive estimates of career duration, typically measured as career length in years. Three major studies conducted in the 1970s estimated career lengths to be between five and fifteen years (Greenberg 1975; Shinnar and Shinnar 1975; Greene 1977). In 1982, Blumstein, Cohen, and Hsieh conducted the most detailed study of criminal career duration and used data on arrests rather than on arrestees to estimate career lengths, and concluded that criminal careers are relatively short, averaging about five years for offenders who are active in index offenses as young adults. Residual careers, or the length of time still remaining in careers, increase to an expected ten years for index offenders still active in their thirties. Persistent offenders who begin their adult careers at age eighteen or earlier and who are still active in their thirties are most likely to be persistent offenders and are likely to continue to commit crimes for about another ten years (Visher 2000).

Spelman (1994) studied career lengths with data from the three-state Rand Inmate Survey, and developed estimates of total career lengths of about six or seven years (Spelman 1994). Spelman showed that young and inexperienced offenders, those in the first five years of their career, were more likely than older offenders to drop out each year, but after five years the rate of dropout leveled off, rising only after the twentieth year as an active offender. Farrington (2003) examined the duration of criminal careers in the Cambridge study using conviction data to age forty and found that the average duration of criminal careers was 7.1 years. Excluding one-time offenders whose duration was zero, the average duration of criminal careers was 10.4 years. Piquero, Brame, and Lynam (2003) studied the length of criminal careers using data from a
sample of serious offenders paroled from California Youth Authority institutions in the 1970s and found that the average career length was 17.27 years, with little difference between white (16.7 years) and non-white parolees (17.7 years).

c. Crime Type Mix and Seriousness. The mix of different offense types among active offenders is another important criminal career dimension. The study of crime-type mix involves studying seriousness (the tendency to commit serious crimes throughout one’s criminal career), escalations (the tendency to move toward more serious crimes as one’s career progresses), specialization (the tendency to repeat the same offense type on successive crimes), and crime-type switching (the tendency to switch types of crimes and/or crime categories on successive crimes).

Diverse methodological techniques have been employed to investigate specialization, or the tendency to repeat the same offense type on successive crimes. Using official records, some research provides evidence in favor of some small degree of specialization (Bursik 1980; Rojek and Erickson 1982; Smith and Smith 1984), but most find that generality is the norm throughout offending careers (Farrington et al. 1988; Wolfgang et al. 1972; Nevares et al. 1990; Tracy et al. 1990). At the same time, important differences in specialization are observed between adults and juveniles such that specialization appears to be stronger in magnitude for adult rather than for juvenile offenders (Le Blanc and Fréchette 1989; Piquero et al. 1999). On the other hand, self-report data from the Rand studies suggest that, although there is some evidence of property specialization (Spelman 1994), incarcerated offenders tend to report much more generality than speciality (Petersilia et al. 1978; Peterson and Braiker 1980; Chaiken and Chaiken 1982).

Some scholars have investigated specialization in violence. Using official records, Farrington (1989) and Piquero (2000) reported little evidence of specialization in violence in the Cambridge study or the Philadelphia perinatal cohort, and that the commission of a violent offense in a criminal career is a function of offending frequency: frequent offenders are more likely to accumulate a violent offense in their career. Similar results have been obtained by Capaldi and Patterson (1996) with self-report data from the Oregon Youth Study.

Directly related to the specialization issue is the switching that occurs across clusters of crime types. Clusters represent natural groupings of offense types (violence, property, other), and research indicates that adult offenders display a stronger tendency to switch among offense types within a cluster and a weaker tendency to switch to offense types outside a cluster, but the strong partitioning is not as sharp among juveniles (Blumstein et al. 1986; Cohen 1986). Adult offenders and incarcerated juveniles are more likely to commit offenses within a cluster than to switch to offenses outside a cluster (Rojek and Erickson 1982; Blumstein et al. 1988). Drug offenders, however, do not tend to switch to either violent or property offenses.

d. Co-offending Patterns. Another important criminal career feature is whether a person commits on offense alone or with others (Reiss 1986). Little empirical work has been completed on co-offending, and even less information exists regarding the group criminal behavior of youths in transition to adult status or of adult offenders at different ages. In the Cambridge Study, Reiss and Farrington (1991) report that the incidence of co-offending is greatest for burglary and robbery, and that juvenile offenders primarily commit their crimes with others, whereas adult offenders primarily commit their crimes alone. Although the decline in co-offending may, at first glance, be attributed to co-offenders dropping out, it seems to occur because males change from co-offending in their teenage years to lone offending in their twenties. In the Swedish
Borlänge study, Sarnecki (1990) found that 45 percent of all youths suspected of offense at some stage during the six-year study period could be linked together in a single large network that accounted for most offenses. Recently, Sarnecki (2001) used data from all individuals aged twenty or less who were suspected of one or more offenses in Stockholm during 1991–1995 to study the extent and role of co-offending and uncovered that 60 percent of the individuals had a co-offender at some point. Interestingly, he also found that males tended to co-offend primarily with other males, but among females, the proportion of girls choosing other females was lower than the proportion of boys choosing other males as co-offenders. Conway and McCord (2002) conducted the first co-offending study designed to track patterns of violent criminal behavior over an eighteen-year period (1976–1994) among a random sample of 400 urban offenders and their accomplices in Philadelphia. Using crime data collected from court records and “rap sheets,” they found that nonviolent offenders who committed their first co-offense with a violent accomplice were at increased risk for subsequent serious violent crime, independent of the effects of age and gender.

B. Policy Issues

The criminal career paradigm suggests three general orientations for crime control strategies: prevention, career modification, and incapacitation. Knowledge concerning the patterning of criminal careers is intimately related to these policy issues. Prevention strategies, including general deterrence, are intended to reduce the number of nonoffenders who become offenders. Career modification strategies, including individual deterrence and rehabilitation, are focused on persons already known to be criminals and seek to reduce the frequency or seriousness of their crimes. In addition, these strategies encourage the termination of ongoing criminal careers through mechanisms such as job training and drug treatment. Incapacitative strategies focus on the crimes reduced as a result of removing offenders from society during their criminal careers. Two types of incapacitation are general, or collective and selective which focuses on the highest frequency offenders. These three crime control strategies are intimately related to specific laws, including habitual offender statutes, truth-in-sentencing laws, three-strikes laws, and mandatory minimum sentences laws.

1. Crime Control Strategies

Of all crime control strategies, the criminal career paradigm has focused extensive attention on incapacitation. General or collective incapacitation strategies aim to reduce criminal activity as a consequence of increasing the total level of incarceration while selective incapacitation policies focus primarily on offenders who represent the greatest risk of future offending. The former approach is consistent with the equal treatment concerns of a just-deserts sentencing policy while the latter focuses as much on the offenders as the offense. Importantly, the degree to which selective incapacitation policies are effective depends on the ability to distinguish high- and low-risk offenders, and to identify them early enough before they are about to terminate criminal activity. Three related issues arise: the ability to classify individual offenders in terms of their projected criminal activity; the quality of the classification rules; and the legitimacy of basing punishment of an individual on the possibility of future crimes rather than only on the crimes already committed (and the consequent level of disparity that is considered acceptable).

Regarding collective incapacitation, Blumstein et al. (1986) suggest that achieving a 10 percent reduction in crime may require more than doubling the existing inmate population. However, under selective incapacitation policies, long prison terms would be reserved.
primarily for offenders identified as most likely to continue committing serious crimes at high rates. Blumstein et al. conclude that selective incapacitation policies could achieve 5 to 10 percent reductions in robbery with 10 to 20 percent increases in the population of robbers in prison, while much larger increases in prison populations are required for collective incapacitation policies.

2. Relationship to Laws

Both collective and selective incapacitation policies are directly influenced by laws and policies that govern criminal justice decisions regarding the punishment of offenders. For example, habitual offender statutes give special options to prosecutors for dealing with repeat offenders. Truth-in-sentencing laws are intended to increase incapacitation by requiring offenders, particularly violent offenders, to serve a substantial portion of their prison sentence, and parole eligibility and good-time credits are restricted or eliminated. Three-strikes laws provide that any person convicted of three, typically violent, felony offenses, must serve a lengthy prison term, usually a minimum term of twenty-five-years-to-life. Mandatory-minimum sentence laws require a specified sentence and prohibit offenders convicted of certain crimes from being placed on probation, while other statutes prohibit certain offenders from being considered for parole. Mandatory-minimum sentence laws can also serve as sentencing enhancement measures, requiring that offenders spend additional time in prison if they commit particular crimes in a particular manner (e.g., committing a felony with a gun). The net effect of these laws is to increase prison populations by incarcerating certain kinds of offenders or increasing the sentence length of those offenders convicted for certain types of crimes.

C. “Chronic” Offenders

Criminologists have long recognized that a small group of individuals is responsible for a majority of criminal activity. Wolfgang et al. (1972) focused attention on the chronic offender by applying that label to the small group of 627 delinquents in the 1945 Philadelphia birth cohort who committed five or more offenses by age seventeen (hereafter five-plus). This group constituted just 6 percent of the full cohort of 9,945 males and 18 percent of the delinquent subset of 3,475, but was responsible for 5,305 offenses, or 52 percent of all delinquency in the cohort through age seventeen. The chronic offenders were responsible for an even larger percentage of the more serious, violent offenses. The finding that a small subset of sample members are responsible for a majority of criminal activity is supported by data from other longitudinal data sets, including the second 1958 Philadelphia birth cohort (Tracy et al., 1990), the Puerto Rico Birth Cohort Study (Nevares et al., 1990), the Dunedin New Zealand Multidisciplinary Health Study (Moffitt et al. 2001), the Philadelphia (Piquero 2000) and Providence (Piquero and Buka 2002) perinatal projects, the Racine, WI birth cohorts (Shannon 1982), the Cambridge study (Farrington 2003), and also by cohort studies in Sweden (Wikström 1985), Finland (Pulkkinen 1988), and Denmark (Guttridge et al. 1983). The finding is also replicated across gender and race (Moffitt et al. 2001; Piquero and Buka 2002), and emerges from both official and self-report data. Research also indicates that chronic offenders exhibit an early onset, a longer career duration, and involvement in serious offenses—including person/violent-oriented offenses—than other offenders (Loeber and Farrington 1998).

The five-plus cutoff advanced by Wolfgang et al. has been employed in several studies; however, since theoretical and empirical definitions of chronicity have yet to be established, questions have been raised about the extent to which similar definitions of chronicity should be used across gender (Farrington and Loeber 1998; Piquero 2000), as well as the relatively
arbitrary designation of five-plus offenses as characteristic of chronicity (Blumstein et al. 1985). Blumstein et al. (1985) raised other concerns with the use of five-plus as the chronicity cut point. They argued that the chronic offender calculation, which was based on the full cohort, overestimates the chronic offender effect because many cohort members will never be arrested. Instead, they urge that the ever-arrested subjects should be the base used to calculate the chronic offender effect. With the base, the 627 chronics with five-plus arrests represented 18 percent of those arrested, as opposed to 6 percent of the cohort. Blumstein and colleagues also argued that the proportion of chronic offenders observed by Wolfgang et al. could have resulted from a homogenous population of persisters. Blumstein et al. (1985) tested the hypothesis that all persisters (those with more than three arrests) could be viewed as having the same rearrest probability. Such an assumption could not be rejected. Although those with five-plus arrests accounted for the majority of arrests among the persisters, such a result could have occurred even if all subjects with three or more arrests had identical recidivism probabilities. Thus, the chronic offenders who were identified retrospectively as those with five or more arrests could not have been distinguished prospectively from nonchronics with three or four arrests.

II. Policy Implications

Research on criminal careers has direct import for decision-making in the criminal justice system. In this section, we address four implications of criminal career research: the role of criminal career research in policy and individual decision-making, individual prediction of offending frequencies ($\lambda$), sentence duration, and research on career length and desistance and its relation to intelligent sentencing policy.

A. Role of Criminal Career Research in Policy and Individual Decision-Making

A principal example of the importance of criminal career research for criminal justice policy is criminal career length. Three-strikes and selective incapacitation philosophies assume that high-rate offenders will continue to offend at high rates and for long periods of time if they are not incarcerated. From an incapacitative perspective, incarceration is only effective in averting crimes when it is applied during an active criminal career. Thus, incarceration after the career ends or when a career is abating, is wasted for incapacitation purposes (Blumstein et al. 1982:70). By identifying career lengths, especially residual career lengths, policymakers can better target incarceration on offenders whose expected remaining careers are longest. Incarceration policies should be based on career duration distribution information. The more hardcore committed offenders with the longest remaining careers are identifiable only after an offender has remained active for several years (Blumstein et al. 1982). Earlier and later in criminal careers, sanctions will be applied to many offenders who are likely to drop out shortly anyway (Blumstein et al. 1982:71). The benefits derived from incapacitation will vary depending on an individual’s crime rate and the length of his or her remaining criminal career. Continuing to incarcerate an offender after his/her career ends limits the usefulness of incarceration.

B. Individual Prediction of $\lambda$

Rand’s second inmate survey highlighted the extreme skewness of the distribution of $\lambda$ for a sample of serious criminals (Chaiken and Chaiken 1982; Visher 1986). Naturally, the identification of a small number of inmates who reported committing several hundred crimes per year led to the search for a method to identify these offenders in advance. If high-rate
offenders cannot be identified prospectively, then crime control efforts will be hampered (Visher 1987). In this section, we highlight two related issues: the difficulty in identifying high-\(\lambda\) individuals, and the alleviation of the concern over prediction by “stochastic selectivity.”

1. Difficulty in Identifying High-\(\lambda\) Individuals

Although high-\(\lambda\) individuals emerge in the aggregate, it has been difficult to identify specific individuals. Greenwood and Turner (1987) used data consisting of follow-up criminal history information on the California inmates who were included in the original Rand survey and who had been out of prison for two years to examine the extent to which Greenwood’s seven-item prediction scale succeeded in predicting recidivism. The scale was not very effective in predicting post-release criminal activity when the recidivism measure was arrest. The majority of released inmates, regardless of whether they were predicted to be low- or high-rate offenders, were rearrested within two years. Greenwood and Turner also created a measure of the offender’s annual arrest rate (i.e., the number of arrests per year of street time) for the follow-up sample and defined high-rate offenders as those inmates who had an actual arrest rate greater than 0.78. They found that the seven-item scale was less accurate in predicting annual arrest rates than it was in predicting re-incarceration.

There are also concerns related to the false positive prediction problem in identifying high-\(\lambda\) individuals. For example, Visher (1986:204-5) reanalyzed the Rand second inmate survey and found that not only were the estimates of \(\lambda\) for robbery and burglary sensitive to choices in computation (i.e., handling missing data, street time, etc.), but also that some inmates reported annual rates of 1,000 or more robberies or burglaries, thus strongly affecting the distribution of \(\lambda\), and especially its mean. Finally, Visher’s analysis of the Greenwood scale for identifying high-rate offenders indicated that 55 percent of the classified high-rate group (27 percent of the total sample) were false positives who did not commit crimes at high rates. In fact, the prediction scale worked better in identifying low-rate offenders. Recently, Auerhahn (1999) replicated Greenwood and Abrahams’s (1982) selective incapacitation study with a representative sample of California state prison inmates, and found that the scale’s overall predictive accuracy was 60 percent, indicating a great deal of error in identifying serious, high-rate offenders.

2. Concern and Need for Prediction Alleviated by “Stochastic Selectivity”

Many analyses of the crime control potential of increasing incarceration rely on a single estimate of mean \(\lambda\) derived from prison inmates and applying it indiscriminately to all related populations of offenders (Canela-Cacho et al. 1997). This assumes that all offenders engage in the same amount (\(\lambda\)) of criminal behavior—regardless of whether they are in prison or jail, or free in the community—and that the probability of their detection and incarceration is equal. However, measures of \(\lambda\) derived from arrestee/convictee populations display a strong selection bias because individuals who have gone through the criminal justice process are unlikely to be representative of the total offender population. This selection bias could be because samples of arrestees have a higher propensity for arrest or different offending frequencies. A highly heterogeneous distribution of offending frequency in the total population of offenders combines with relatively low imprisonment levels to lead to substantial selectivity of high-\(\lambda\) offenders among resident inmates and a correspondingly low mean value of \(\lambda\) among those offenders who remain free (Canela-Cacho et al. 1997). “Stochastic selectivity,” then, draws into prison new inmates disproportionately from the high end of the \(\lambda\) distribution of free offenders. Further, the higher the incarceration
probability following a crime, the deeper into the offender pool incarceration will reach, and the lower will be the incapacitation effect associated with the incoming cohorts (Canela-Cacho et al. 1997).

Using data from the second Rand inmate survey, Canela-Cacho et al. studied the issue of stochastic selectivity and found that the proportion of low-\(\lambda\) burglars and robbers among free offenders was much larger than among resident inmates, while at the high end of the offending frequency distribution there was a larger proportion of high-\(\lambda\) burglars and robbers among resident inmates than among free offenders. Thus, selectivity occurred naturally as high-\(\lambda\) offenders experienced greater opportunities for incarceration through the greater number of crimes they committed (Canela-Cacho et al. 1997:142), thereby obviating the need for efforts to explicitly identify individual high-\(\lambda\) offenders.

C. Sentence Duration

Information about crime rates and career lengths is particularly useful for incapacitation and incarceration decisions and policies, and such knowledge can also provide useful information regarding the intelligent use of incapacitation and may even provide powerful arguments against lengthy incapacitation policies. Principal among these is the decision regarding sentence length. Many current sentencing policies are based on the assumption that high-rate offenders will continue committing crimes at high rates and for lengthy periods, and thus prescribe lengthy incarceration stints. The extent to which this policy is effective however, is contingent on the duration of a criminal career.

Much debate regarding sentence length has centered on three-strikes policies. These policies severely limit judges’ discretion because they prescribe a mandatory prison sentence of (typically) twenty-five-years-to-life. The incapacitation effectiveness of three-strikes laws, however, depends on the duration of criminal careers. To the extent that sentencing decisions incapacitate individuals with short residual career lengths, a three-strikes law will waste incarceration resources (Stolzenberg and D’Alessio 1997:466).

Stolzenberg and D’Alessio (1997) used aggregate data drawn from the ten largest cities in California to examine the impact of California’s three-strikes law on serious crime rates and found that the three-strikes law did not decrease serious crime or petty theft rates below the level expected on the basis of preexisting trends. Zimring et al. (1999) obtained a sample of felony arrests (and relevant criminal records) in Los Angeles, San Francisco, and San Diego, both before and after the California law went into effect to study the three-strikes issue. Two key findings emerged from their study. First, the mean age at arrest for two strikes and above was 34.6 years. This is particularly important because: “[O]n average the two or more strikes defendant has an almost 40 percent longer criminal adult career behind him (estimated at 16.6 years) than does the no-strikes felony defendant. All other things being equal, this means that the twenty-five-years-to-life mandatory prison sentence will prevent fewer crimes among the third-strike group than it would in the general population of felons because the group eligible for it is somewhat older” (Zimring et al. 1999:34). Second, when comparing crime trends in the three cities before and after the law, Zimring et al. found that there was no decline in the crimes committed by those targeted by the new law. In particular, the lower crime rates in 1994 and 1995 (just immediately after the three-strikes law went into effect) were evenly spread among targeted and non-targeted populations, suggesting that the decline in crime observed after the law went into effect was not due to the law.

D. Research on Career Length and Desistance

Sentencing practices involving lengthy sentence durations assume that affected
offenders will continue to commit crime at a high rate and for a long period. To the extent that this is the case, incapacitation policies will avert crimes and thwart continued careers. However, to the extent that offenders retire before the expiration of a lengthy sentence, shorter career durations will reduce the effects of lengthy sentences. Using data from Florida, Schmertmann et al. (1998) concluded that the aging of prison populations under three-strikes policies in that state will undermine their long-run effectiveness. In particular, they noted that the policies will cause increases in prison populations due to the addition of large numbers of older inmates who are unlikely to commit future offenses.

The key to the sentence duration issue, and why estimates of criminal career duration are so important, rests on the characteristics of the person years—not the people—that are removed from free society as a result of such policies (Schmertmann et al. 1998:458). Such policies will be effective only to the extent that they incarcerate offenders during the early stages of their criminal careers when they are committing crimes at a high-rate.

Unfortunately, research on career duration and desistance is in its infancy. Knowledge on this subject will be important for furthering criminal justice policy and the cost-effective use of criminal justice resources.

III. Directions for Future Criminal Career Research

Evidence on criminal career issues cuts to the heart of theory and policy. On the theoretical side, knowledge on the correlates of criminal career dimensions is relevant to the necessity for general versus typological models. If research indicates that the correlates of one offending dimension are similar to another offending dimension, then more general and non-dimension-specific theories are warranted. If the correlates of one offending dimension are different from another offending dimension, then the causal process(es) underlying these two particular dimensions are probably different and different explanations and theories are required.

Better knowledge on various criminal career dimensions would aid policy initiatives designed to prevent initial involvement, curtail current offending, and accelerate the desistance process. If research suggests that poor parental socialization is related to early initiation, then prevention efforts should include parent-training efforts. Similarly, if drug use is associated with continued involvement in delinquent and criminal behavior, then intervention efforts should include drug treatment. Finally, if some set of correlates is associated with desistance, then policy efforts may wish to provide for specific prevention and intervention efforts.

Knowledge on career length and residual career length could best inform criminal justice policies because it deals directly with sentencing and incapacitation policies that are now driven more by ideology than by empirical knowledge. For example, if residual criminal career lengths average around five years, criminal justice policies advocating multi-decade sentences waste scarce resources. Similarly, if offenders are incarcerated in late adulthood when their residual career lengths have diminished, incarceration space will be wasted, and health care costs will increase, thereby further straining scarce resources.

Empirical study of criminal careers requires data collection for large samples of individuals beginning early in life and continuing for a lengthy period into adulthood. Such data are needed if questions surrounding initiation, continuation, and desistance are to be adequately addressed, and this is especially the case among serious offenders for which little longitudinal data exists (Laub and Sampson 2001; Piquero et al. 2002). The use of such longitudinal data, of course, brings with it several potential problems that need to be considered
including methodological issues such as street time (Piquero et al. 2001), mortality (Eggleston, Laub, and Sampson 2003) and sample attrition (Brame and Piquero 2003), as well as statistical issues that deal with various modeling strategies and assumptions (Bushway et al. 1999; Nagin 1999; Raudenbush 2001). Nevertheless, continued data collection and research are important to identify and study unaddressed and unresolved criminal career issues, and to update thirty-year-old estimates.

Information derived from criminal career research is important to advance fundamental knowledge about offending and to assist criminal justice decision-makers in dealing with offenders. Much more important criminal career research lies on the horizon nationally and internationally, and we look forward to seeing this research emerge.

References


**REVIEW QUESTIONS**

1. Explain in your own words some of the concepts that Piquero et al. point out as key concepts of the career criminal paradigm, such as offending frequency, duration, and so on. Which of the concepts do you feel are most important in determining which individuals pose the greatest danger to society?

2. Which policy implications suggested by Piquero et al. do you feel make the most sense? Which make the least sense to you, and why?

3. Do you know any individuals in your life whom you would classify as chronic offenders (if not, consider stories in the media/press)? What do you think caused them to become such habitual offenders? What do you think are the primary causes for their chronic offending, and what types of policies would you implement to prevent others from becoming such persistent offenders?
The introduction of this section will introduce integrated theories, those in which two or more traditional theories are merged into one cohesive model. We will then discuss the pros and cons of integrating theories and explain the various ways theories can be integrated. A review of various integrated theories will demonstrate the many ways different theories have been merged to form a more empirically valid explanation for criminal behavior.

Introduction

This introduction examines relatively recent developments in criminological development, with virtually all of these advances taking place in the last couple of decades. Specifically, we discuss the types of models that modern explanatory formulations seem to have taken, namely integrated and theories. Of course, other unique theoretical frameworks have been presented in the last 20 years, but most of the dominant models presented during this time fall into the category of integrated theories.
Integrated theories attempt to integrate two or more traditionally separate models of offending to form one unified explanatory theory. Given the empirical validity of most of the theories discussed in previous sections, as well as the failure of all of these previously examined theories to explain all variation in offending behavior, it makes sense that theorists would try to combine the best of several theories, while disregarding or de-emphasizing the concepts and propositions that don’t seem to be as scientifically valid in each of the frameworks. Furthermore, some forms of theoretical integration deal with only concepts or propositions, while others vary by level of analysis (micro vs. macro, or both). Although such integrated formulations sound attractive and appear to be sure-fire ways to develop sounder explanatory models of behavior, they have a number of weaknesses and criticisms. In this introduction, we explore these issues, as well as the best known and most accepted integrated theories that are currently being examined and tested in the extant criminological literature.

Integrated Theories

About 30 years ago at a conference at the State University of New York at Albany, leading scholars in criminological theory development and research came together to discuss the most important issues in the growing area of theoretical integration.¹ Some integrated theories go well beyond formulating relationships between two or more traditionally separate explanatory models; they actually fuse the theories into one, all-encompassing framework. The following sections will examine why integrated theories became popular over the last several decades while discussing different types of integrated theories, the strengths and weaknesses of theoretical integration, and several of the better known and respected integrated theories.

The Need for Integrated Theories in Criminology

The emphasis on theoretical integration is a relatively recent development, which has evolved due to the need to improve the empirical validity of our traditional theories, which suffer from lack of input from various disciplines.² This was the result of the history of criminological theory, which we discussed in prior sections of this book. Specifically, most 19th-century theories of criminal behavior are best described as based on a single-factor (e.g., IQ) or limited-factor (e.g., stigmata) reductionism. Later, in the early 1900s, a second stage of theoretical development involved the examination of various social, biological, and psychological factors, which became known as the multiple-factor approach and is most commonly linked with the work of Sheldon and Eleanor Glueck.

Finally, in the latter half of the 20th century, a third stage of theoretical development and research in criminology became dominant, which represented a backlash against the multiple-factor approach. This stage has been called systemic reductionism, which refers to


²This discussion is largely drawn from Charles F. Wellford, “Towards an Integrated Theory of Criminal Behavior,” in Messner et al., Theoretical Integration, 119–27.
the pervasive attempts to explain criminal behavior in terms of a particular system of knowledge. For example, a biologist who examines only individuals’ genotype will likely not be able to explain much criminal behavior because he is missing a lot of information about the environment in which the person lives, such as level of poverty or unemployment. For the last 50 years, the criminological discipline in the United States has been dominated by sociologists, which is largely due to the efforts and influence of Edwin Sutherland (see Section VII). Thus, as one expert has observed:

It is not surprising to find that most current explanations of criminal behavior are sociologically based and are attempts to explain variations in the rates of criminal behavior as opposed to individual instances of that behavior . . . [e]ven when the effort is to explain individual behavior, the attempt is to use exposure to or belief in cultural or social factors to explain individual instances or patterns of criminal behavior. . . . We find ourselves at the stage of development in criminology where a variety of sociological systemic reductionistic explanations dominate, all of which have proven to be relatively inadequate (to the standard of total explanation, prediction, or control) in explaining the individual occurrence or the distribution of crime through time or space.4

Other criminologists have also noted this sociological dominance, with some going as far to claim that:

Sutherland and the sociologists were intent on turning the study of crime into an exclusively sociological enterprise and that they overreacted to the efforts of potential intruders to capture some of what they regarded as their intellectual turf.5

This dominance of sociology over the discipline is manifested in many obvious ways. For example, virtually all professors of criminology have a Doctorate of Philosophy (Ph.D.) in sociology or criminal justice, and virtually no professors have a degree in biology, neuropsychology or other fields that obviously have important influence on human behavior. Furthermore, virtually no undergraduate (or even graduate) programs in criminal justice and criminology currently require students to take a course that covers principles in biology, psychology, anthropology, or economics; rather, virtually all the training is sociology based. In fact, most criminal justice programs in the United States do not even offer a course in biopsychological approaches toward understanding criminal behavior, despite the obvious need for and relevance of such perspectives.

Many modern criminologists now acknowledge the limitations of this state of systemic reductionism, which limits theories to only one system of knowledge, in this case...
sociology. What resulted is a period of relative stagnation in theoretical development, with experts regarding the 1970s as “one of the least creative periods in criminological history.” In addition, the mainstream theories that were introduced for most of the 1900s (such as differential association, strain, social bonding, and labeling, which we reviewed in previous sections) received limited empirical support, which should not be too much of a surprise given that they were based on principles of only one discipline, namely sociology. Thus, it has been proposed that integrated theories evolved as a response to such limitations and the need to revitalize progress in the area of criminological theory building. After reviewing some of the many integrated theories that have been proposed in the last two decades, we think readers will agree that the approach of combining explanatory models has indeed helped stimulate much growth in the area of criminological theory development. But before examining these theories, it is important to discuss the varying forms they take.

**Different Forms of Integrated Theories**

There are several different types of integrated theories, which are typically categorized by the way that the creator of the integrated model proposes the theories fuse together in a useful way. The three most common forms of propositional theoretical integration, meaning that they synthesize theories based on their postulates, are known as end-to-end, side-by-side, and up-and-down integration. First, we will explore each of these types before discussing a few more variations of combining theoretical concepts and propositions.

**End-to-End Integration.** The first type, *end-to-end theoretical integration*, typically is used when theorists expect that one theory will come before or after another in terms of temporal ordering of causal factors. This type of integration is more developmental in the sense that it tends to propose a certain ordering of the component theories that are being merged. For example, an integrated theory may claim that most paths toward delinquency and crime have their early roots in the breakdown of social attachments and controls (i.e., social bonding theory), but later, the influence of negative peers (i.e., differential association) becomes more emphasized. Thus, such a model would look like this:

Weak Social Bond $\rightarrow$ Negative Peer Associations $\rightarrow$ Crime

Such an integrated model is referred to as *end-to end* (or “sequential”) integration, which is appropriately named because it conveys the linkage of the theories based on the temporal ordering of two or more theories in their causal timing. Specifically, the

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6Wellford, “Toward an Integrated Theory”; Sampson and Laub, “Crime and Deviance.”
8Wellford, “Toward an Integrated Theory.”
breakdown of social bonds comes first, followed by the negative peer relations. Another way of saying this is that the breakdown of social bonds is expected to have a more “remote” or indirect influence on crime, which is mediated by differential peer influences; on the other hand, according to this model, peer influences are expected to have a more “immediate,” or direct effect on crime, with no mediating influences of other variables. This model is hypothetical and presented to illustrate the end-to-end form of integration, but we will see that some established frameworks have incorporated similar propositions regarding social bonding and differential association/reinforcement theories.

Many of the traditionally separate theories that we have examined in previous introductions tend to differ in their focus on either remote or immediate causal factors. 11 For instance, one of the assumptions of differential association theory is that psychological learning of crime is based on day-to-day (or even moment-to-moment) learning, so the emphasis is on more immediate causes of crime, namely interactions with peers and other significant others. On the other hand, other theories tend to focus more on remote causes of crime, such as social disorganization and strain theory, which place the emphasis on social structure factors, such as relative deprivation or industrialization, that most experts would agree are typically not directly implicated in situational decisions to engage in an actual criminal act but are extremely important nonetheless.

This seems to be conducive to using end-to-end integration, and often, the theories seem to complement each other quite well, as in our hypothetical example in which social control theory proposes the remote cause (i.e., weakened bonds) and differential association theory contributes the more direct, proximate cause (i.e., negative peer influence). On the other hand, two or more theories that focus only on more immediate causes of crime would be harder to combine because they both claim they are working at the same time, in a sense competing against the other for being the primary direct cause of criminal activity; thus, they would be unlikely to fuse together as nicely and would not complement one another. Also, some theorists have argued that end-to-end integration is simply a form of theoretical elaboration, which we will discuss later. Another major limitation of end-to-end integration is the issue of whether the basic assumptions of the included theories are consistent with one another. We will discuss this in the following section, which discusses criticism of integration. But first we must examine the other forms of theoretical integration.

**Side-by-Side Integration.** Another type of integrated theory is called **side-by-side (or “horizontal”) integration.** In the most common form of side-by-side integration, cases are classified by a certain criterion (e.g., impulsive versus planned), and two or more theories are considered parallel explanations depending on what type of case is being considered. So when the assumptions or target offenses of two or more theories are different, a side-by-side integration is often the most natural way to integrate them. For example, low self-control theory may be used to explain impulsive criminal activity, whereas rational choice theory may be used to explain criminal behavior that involves planning, such as white-collar crime. Traditionally, many theorists would likely argue that low self-control and rational choice theory are quite different, almost inherently opposing

11Much of our discussion of these forms of integration is taken from Liska et al., “Strategies and Requisites.”
perspectives of crime. However, contemporary studies and theorizing have shown that the two models complement and fill gaps in the other. Specifically, the rational choice/deterrence framework has always had a rather hard time explaining and predicting why individuals often do very stupid things for which there is little payoff and a high likelihood of getting in serious trouble, so the low self-control perspective helps fill in this gap by explaining that some individuals are far more impulsive and are more concerned with the immediate payoff (albeit often small) rather than any long-term consequences.

An illustration of this sort of side-by-side integration of these two theories might look something like this:

For most typical individuals:

High Self-Control ➔ Consideration of Potential Negative Consequences ➔ Deterred From Committing Crime

For more impulsive individuals/activities:

Low Self-Control ➔ Desire for Immediate Payoff ➔ Failure to Consider Consequences ➔ Decision to Commit Criminal Act

This side-by-side integration shows how two different theories can each be accurate, depending on what type of individual or criminal activity is being considered. As some scholars have concluded, rational choice theory is likely not a good explanation for homicides between intimates (which tend to be spontaneous acts), but it may be very applicable to corporate crime.

**Up-and-Down Integration.** Another way of combining two or more theories is referred to as up-and-down (or “deductive”) integration, and is generally considered the classic form of theoretical integration because it has been done relatively often in the history of criminological theory development, even before it was considered integration. This often involves increasing the level of abstraction of a single theory so that postulates seem to follow from a conceptually broader theory. Up-and-down integration can take two prevalent forms: theoretical reduction and theoretical synthesis.

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Theoretical reduction is typically done when it becomes evident “that theory A contains more abstract or general assumptions than theory B and, therefore, that key parts of theory B can be accommodated within the structure of theory A.”14 Regarding theoretical reduction, we have discussed this form of integration previously in this book, without actually calling it by this name. For example, in the introduction to Section VII, we discussed how differential reinforcement theory subsumed Sutherland’s differential association theory. By equating concepts contained in both theories, the authors of differential reinforcement argued somewhat effectively that the learning that takes place through interactions with primary groups is one type of conditioning.15 As you will recall, the main point is that the concepts and propositions of differential reinforcement theory are more general than, but entirely consistent with, those of differential association theory, such that the latter is typically a specific form of the former model. In other words, differential reinforcement is a much more broad, general theory, which accounts for not only differential association (i.e., classical conditioning), but also many other theoretical concepts and propositions (operant conditioning, modeling/imitation).

This same type of theoretical reduction was also discussed in the introduction to Section V when we noted that general strain theory subsumed Merton’s traditional strain theory. Specifically, traditional strain theory focused on only one type of strain: failure to achieve positively valued goals. In comparison, while general strain theory also places an emphasis on failure to achieve positively valued goals, it is more general and broad because it also focuses on two other forms of strain: loss of positively valued stimuli and exposure to noxious stimuli. Therefore, it seems to make sense that general strain theory would subsume traditional strain theory because the concepts and principles of traditional strain appear to simply represent a specific type of general strain and can be fully accounted for by the more general version of the theory.16

Despite the obvious efficiency in theoretical reduction, many theorists have criticized such subsuming of theories by another. Specifically, many experts in the social sciences view such deduction as a form of theoretical imperialism because the theory being deduced essentially loses its unique identity.17 Therefore, the very phrase theoretical reduction generally has a negative connotation among scholars. In fact, one of the most accepted reductions in the 20th century criminological literature, the differential association-differential reinforcement synthesis we referred to above, has been condemned as a “revisionist takeover...a travesty of Sutherland’s position.”18 So even the most widely known and cited forms of theoretical reduction have been harshly criticized, which gives readers some idea of how frowned upon such subsuming of theories by another is considered by social scientists.

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17Liska et al., “Strategies and Requisites.”
The other form of up-and-down integration is referred to as theoretical synthesis, which is “done by abstracting more general assumptions from theories A and B, allowing parts of both theories to be incorporated in a new theory C.”\(^{19}\) This form of up-and-down integration is more uncommon in social science than theoretical reduction, perhaps because it is more difficult to achieve successfully because it, by definition, requires a new theory that essentially necessitates new concepts and/or hypotheses that are not already found in the original component models. Furthermore, if the constituent theories are competing explanations, then it is quite likely that new terminology will have to be created or incorporated to resolve these differences.\(^{20}\) However, if theoretical synthesis can be done correctly, it is perhaps the type of integration that provides the most advancement of theory development because, in addition to bringing together previously independent models, it also results in a new theory with predictions and propositions that go beyond the original frameworks.

One of the best known and most accepted (despite its critics) examples of theoretical synthesis is Elliott’s integrated model, which we review in detail later in this introduction.\(^ {21}\) For our purposes here, it is important only to understand why Elliott’s model is considered theoretical synthesis. This is because Elliott’s model integrates the concepts and propositions of various theories (e.g., social control and differential association) and contributes additional propositions that did not exist in the component theories.

Levels of Analysis of Integrated Theories

Beyond the variation of types of propositional theoretical integration discussed above, such synthesis of explanatory models also differs in terms of the level of analysis that is being considered. Specifically, the integrated models can include component theories of micro-micro, macro-macro, or even micro-macro (called “cross-level”) combinations. For example, Elliott’s integrated theory is a micro-micro level theory, which means that all of the component theories that make up the synthesized model refer to the individual as the unit of analysis. Although these models can provide sound understanding for why certain individuals behave a certain way, they typically do not account for differences in criminality across groups (e.g., gender, socioeconomic groups, etc.).

On the other hand, some integrated models include theories from only macro levels. A good example of this type of integration is seen in Bursik’s synthesis of conflict theory and the social disorganization framework.\(^ {22}\) Both of these component theories focus only on the macro (group) level of analysis, thus neglecting the individual level, such as explaining why some individuals do or do not commit crime even in the same structural environment.

\(^{19}\)Liska et al., “Strategies and Requisites,” 10.


The most complicated integrated theories, at least in terms of levels of analysis, are those that include both micro and macro models. Such models are likely the most difficult to synthesize successfully because it involves bringing together rather unnatural relationships between individual-based propositions and group-level postulates. However, when done effectively, such a model can be rather profound in terms of explanation of crime. After all, one of the primary objectives of a good theory is to explain behavior across as many circumstances as possible. Thus, a theory that can effectively explain why crime occurs in certain individuals as well as certain groups would be better than a theory that explains crime across only individuals or groups.

An example of this is Braithwaite’s theory of reintegrative shaming, which begins with an individual (or micro) level theory of social control/bonding—which he refers to as interdependency—and then relates levels of this concept to a group or community (or macro) level theory of bonding—which he refers to as communitarianism. This theory will be discussed in far more detail later, but it is important here to acknowledge the advantages of explaining both the micro (individual) and macro (group) level of analysis in explanations of criminal behavior, such as in the theory of reintegrative shaming.

Ultimately, the levels of analysis of any component theories are an important consideration in the creation of integrated models of crime. It is particularly important to ensure that the merging of certain theories from within or across particular levels makes rational sense and, most important, advances our knowledge and understanding of causes of crime.

Additional Considerations Regarding Types of Integration

Beyond the basic forms of propositional integration models and levels of analysis, there are two additional types of integration—conceptual integration and theoretical elaboration—that are quite common, perhaps even more common than the traditional forms discussed above. Conceptual integration involves the synthesis of models in which “the theorist equates concepts in different theories, arguing that while the words and terms are different, the theoretical meanings and operations of measurement are similar.” Essentially, the goal in such a formulation is to take the primary constructs of two or more theories and to merge them into a more general framework that aids understanding in explaining behavior by unifying terms that fundamentally represent similar phenomena or issues. Such formulations are considered less intrusive on the component theories than the propositional integrations we discussed previously.

One of the first and most cited examples of conceptual integration was provided by Pearson and Weiner in 1985. As shown in Table 10.1, Pearson and Weiner attempted to map the various concepts of numerous criminological theories. This is done by creating a category that numerous concepts from various theories appear to fit into through their inclusion in

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20John Braithwaite, Crime, Shame and Reintegration (Cambridge, UK: Cambridge University, 1989).


### Table 10.1: Mapping of the Selected Criminological Theories Into the Integrative Structure

#### INTEGRATIVE CONSTRUCTS

<table>
<thead>
<tr>
<th>Selected Criminological Theories</th>
<th>Utility Demand (Deprivation)</th>
<th>Behavioral Skill</th>
<th>Rules of Expedience</th>
<th>Rules of Morality</th>
<th>Signs of Favorable Opportunities (Discriminative Stimuli)</th>
<th>Behavioral Resources</th>
<th>Utility of Reception</th>
<th>Information Acquisition</th>
<th>Social Structural Production and Distribution of:</th>
<th>Rules of Expedience and Morality</th>
<th>Belief About Sanctioning Practices</th>
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<tr>
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<td>✓</td>
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<td>Social Control:</td>
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<td>3. involvement</td>
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<td>Normative (Culture) Conflict</td>
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<tr>
<td>Marxist-Critical/Group Conflict</td>
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explanatory models of criminal behavior and across level of explanation. Although based on a social learning/differential reinforcement perspective, Pearson and Weiner’s model attempts to include concepts of virtually all existing theories of crime and delinquency models of behavior. A particular strength is that this model includes feedback or behavioral consequence elements, as well as classifying each model by unit of measurement and analysis.

For example, as illustrated in Table 10.1, the conceptual model shows that differential association theory has concepts that apply to all internal aspects and one of the two concepts at the consequences at the micro level, but none of the aspects at the external-micro level or any of the four macro-level concepts. On the other hand, Marxist critical theory is shown to apply to three of the internal-micro and one of the consequences-level concepts and to most of the macro-level concepts as well. Although some of the theories that we discuss in this book are included, largely because Pearson and Weiner’s conceptual integration was done in the mid-1980s, this model includes most of the dominant theoretical frameworks that were prevalent in the criminological literature at the time of their formulation. Thus, this conceptual model remains as a sort of prototype for future attempts to conceptually integrate established theories explaining criminal conduct.

One notable strength of their conceptual integration is the inclusion of mainstream theories—differential association, labeling, social control, deterrence/economic, routine activities, neutralization, strain, cultural, conflict—at the time in which they created their integrated framework. Another strength of their integrated framework is the fact that they account for concepts at different levels of analysis, namely micro (individual) and macro (group) levels, as shown in Table 10.1. So the framework clearly does a good job at creating links between the most prominent theories in terms of the concepts that they propose as the primary causes of crime.

However, Pearson and Weiner’s conceptually integrated framework does have several notable weaknesses. One of the most prominent criticisms of the conceptual model is that it is based on a single theory, specifically social learning theory (tied to Akers’s differential reinforcement/social learning theory discussed in Section VII), and the authors never really provide a strong argument for why they chose this particular base framework for their model. Another major weakness of this conceptual framework is that it completely neglects many biological and biosocial factors—hormones, neurotransmitters, toxins—that have been consistently shown to have profound effects on human behavior. Still, despite the criticisms of this integrated framework, respected theorists have noted that Pearson and Weiner’s “integration of these concepts into a consistent, coherent framework is impressive,” but the model has never received much attention in the criminological literature.26

However, despite the obvious tendency to simplify formulations through conceptual integration, many critics have claimed that such attempts are simply a means toward propositional integration. Thus, despite its categorization as conceptual, this type of integration is not necessarily seen as such, and it may be seen by many as a form of deductive integration. However, many experts have noted that conceptual integration is actually not a form of side-by-side integration nor is it end-to-end integration; rather, it is what it says it is: conceptual integration. It is nothing more and nothing less.27 Therefore, it appears that conceptual integration is a distinct derivative form of integration and that it can and should occur

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independently if it helps to advance understanding of why people commit crime, particularly for integrated models of offending. As the most knowledgeable experts recently concluded, “establishing some conceptual equivalence is necessary for deductive integration.”

An additional variation of integration is theoretical elaboration, which is a strategy that takes an existing theory that is arguably underdeveloped and then further develops it by adding concepts and/or propositions to include other components from other theories. Many critics of traditional theoretical integration have argued that theoretical elaboration is a more attractive strategy because existing theories of offending are not developed enough to fully integrate them. An example of theoretical integration can be seen in the expansion of rational choice theory, which had traditionally focused on ratios of perceived costs and benefits, to include deontological constructs such as moral beliefs. Specifically, studies have consistently shown that ethical constraints condition the influence of expected consequences on criminal behavior, ranging from violence to academic dishonesty to white-collar crime. Although they are not without critics, most rational choice scholars appear to be in agreement that such elaboration advanced the theoretical framework and made it a more accurate explanation of human behavior. In sum, theoretical integration, like conceptual integration, is an option for merging and improving theoretical models without completely synthesizing two or more entire paradigms.

**Criticisms and Weaknesses of Integrated Theories**

A number of criticisms have been leveled at theoretical integration. Perhaps one of the most obvious and prevalent, not to mention extremely valid, criticisms is the argument that caution should be taken in attempting to integrate theories that have apparent contradictions or inconsistencies in their postulates. As we have seen, different theories are based on varying, often opposite, perspectives of human nature. While most versions of strain theory (e.g., Merton’s theory) assume that human beings are born with a natural tendency toward being good, most variations of control theory (e.g., Hirschi’s social bonding and self-control theories) assume that humans are innately selfish and hedonistic. At the same time, most versions of learning theory (e.g., Sutherland’s theory of differential association and Akers’s differential reinforcement theory) assume that humans are born with a blank slate, in other words, people are born with neither good nor bad tendencies but rather learn their morality moment-to-moment from social interaction.

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28Ibid., 16.


31Much of this discussion is taken from Brown et al., *Explaining Crime*, and Messner et al., *Theoretical Integration*.
Obviously, attempts to integrate such theories face the problematic hurdles of dealing with such obvious contradictions, and many formulations that do merge some of these perspectives simply do not deal with this issue. The failure to acknowledge, let alone explain, such inconsistencies is likely to result in regression of theoretical development instead of leading to progress in understanding, which is the primary goal of integrating theories in the first place.

Other experts have argued that any attempts to integrate theories must unite three different levels of analysis, which include individual (micro), group (macro), and microsituational, which merges the micro level with spontaneous context. While we agree that this would be the ideal for theory formulation, we know of no theory that does so. Therefore, this proposition is more of an ideal that has not yet been attempted. So we are inclined to go with the best that has been offered by expert theorists. Still, in the future, it is hoped that such an integrated model will be offered that addresses all of these aspects in an explanatory model.

Another argument against theoretical integration is the stance that explanatory perspectives of crime are meant to stand alone. This is the position taken by Travis Hirschi, who is one of the most cited and respected scholars in criminology over the last 40 years. As others have noted, Hirschi informed his position on this debate unequivocally when he stated that “separate and unequal is better” than integrating traditionally independent theoretical models. This type of perspective is also called oppositional tradition or theoretical competition, because the separate theories are essentially pitted against one another, in a form of battle or opposition. Although scientists are trained always to be skeptical of their own beliefs and open to other possibilities, especially the desire to refine theoretical models that are shown to be invalid, it is surprising that such a position exists. Despite the rather unscientific nature of this stance, such a position of oppositional tradition has many supporters. Specifically, one of the most respected and cited criminologists, Travis Hirschi claimed:

The first purpose of oppositional theory construction is to make the world safe for a theory contrary to currently accepted views. Unless this task is accomplished, there will be little hope for the survival of the theory and less hope for its development. Therefore, oppositional theorists should not make life easy for those interested in preserving the status quo. They should instead remain at all times blind to the weaknesses of their own position and stubborn in its defense. Finally, they should never smile.

Unfortunately, this position against theoretical integration is presented in a very unscientific tone. After all, scientists should always be critical of their own views and theory. By stating that theorists should be “blind” to opposing viewpoints and “stubborn” in their own perspective’s defense, Hirschi advocates a position that is absolutely against science. Still, this statement, albeit flawed, shows the extreme position against theoretical integration and is favorable toward having each independent theory standing opposed to

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34Hirschi, “Separate but Unequal.”
It is our position that this stand does not have much defense, which is shown by Hirschi’s lack of rational argument. Furthermore, it is generally acceptable to smile when presenting any theoretical or empirical conclusions, even when they involve opposition to or acceptance of integrated theoretical models of criminal behavior.

Perhaps one of the most important criticisms against Hirschi’s and others’ criticisms of integrated models is that most traditional models alone only explain a limited amount of variation in criminal activity. Elliott and colleagues have claimed:

Stated simply, the level of explained variance attributable to separate theories is embarrassingly low, and, if sociological explanations for crime and delinquency are to have any significant impact upon future planning and policy, they must be able to demonstrate greater predictive power.36

While some put this estimate at 10 to 20 percent of the variance in illegal activities, this is simply an average across different theories and various forms of deviant behavior.37 However, this range is an overestimate regarding many studies on the accuracy of separate theories, which tend to show weak support (well under 10 percent explained variation in offending), particularly for some tests of social bonding and strain models, as well as others.38

On the other hand, this estimated range of explained variance underestimates the empirical validity of some theoretical frameworks that consistently show a high level of explained variation in certain criminal behaviors. For example, a large number of studies examining Akers’s differential reinforcement/social learning theory (discussed in Section VII), which examined not only a wide range of samples (in terms of age, nationality, and other demographic characteristics) but also a large range of deviant activities (e.g., cigarette smoking to drug usage to violent sexual crimes) consistently account for more than 20 percent of variation in such behaviors.39 Specifically, most of these studies estimate that


37This estimate can be found in Bernard and Snipes, “Theoretical Integration,” 306, but is based on the estimates of others, as discussed in this work.

38See review in Akers and Sellers, Criminological Theories, particularly p. 97.

Akers’s social learning model explains up to 68 percent or more of the variation in certain deviant behaviors, with the lowest estimate around 30 percent.

Obviously, not all independent theories of crime lack empirical validity, so this does not support critics’ claims that traditionally separate theories of crime do not do a good job in explaining criminal behavior. However, it is also true that many of the theories that do the best job in empirical tests for validity are those that are somewhat integrated, in the sense that they often have been formed by merging traditional theories with other constructs and propositions, much like Akers’s differential reinforcement theory, which added more modern psychological concepts and principles (e.g., operant conditioning and modeling) to Sutherland’s traditional theory of differential association (see Section VII). So in a sense, an argument can be made that theoretical integration (or at least theoretical elaboration) had already occurred, which made this theory far more empirically valid than the earlier model.

Another example of the high level of empirical validity of existing models of offending can be found in some models of rational choice, which have been revised through theoretical elaboration and have explained more than 60 percent of the explained variation in deviant behavior. However, much of the explanatory power of such frameworks relies on incorporating the constructs and principles of other theoretical models, which is what science is based on; specifically, they revise and improve theory based on what is evident from empirical testing. After all, even some of the harshest critics of theoretical integration admit that traditional theories do not “own” variables or constructs. For example, Hirschi claimed that:

Integrationists somehow conclude that variables appear . . . with opposition theory labels attached to them. This allows them to list variables by the theory that owns them. Social disorganization theory . . . might own economic status, cultural heterogeneity, and mobility. . . . Each of the many variables is measured and . . . the theories are ranked in terms of the success of their variables in explaining variation in delinquency . . . such that integration is in effect required by the evidence and surprisingly easily accomplished.

This is the way that science and theoretical development and revision are supposed to work, so in our opinion, this is exactly as it should be. All scientists and theoreticians should constantly be seeking to improve their explanatory models and be open to ways to do so, as opposed to being staunch supporters of one position and blind to existing evidence.

Despite the criticisms against theoretical integration, a strong argument has been made that theoretical competition and oppositional tradition is “generally pointless.” A big reason for this belief of proponents of theoretical integration is that various theories tend to explain different types of crime and varying portions of the causal processes for

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40For example, see Tibbetts, “College Student Perceptions,” which showed that an elaborated rational choice model explained more than 60 percent of variation in test cheating among college students.


43Quote from Bernard and Snipes, “Theoretical Integration,” 306, based on the rationale provided by Elliott et al., Explaining Delinquency.
behavior. For example, some theories focus more on property crimes while others place emphasis on violent crimes, and some theories emphasize the antecedent or root causes (e.g., genetics, poverty) of crime while others focus on more immediate causes (e.g., current social context at the scene). Given that there are multiple factors that contribute to crime and that different factors are more important for various types of crime, it only makes sense that a synthesis of traditionally separate theories must come together to explain the wide range of criminal activity that occurs in the real world.

Ultimately, there are both pros and cons regarding whether or not to integrate theories. It is our belief that theoretical integration is generally a good thing, as long as there is caution and attention given to merging models that have opposing assumptions, such as the natural state of human beings (e.g., good vs. bad vs. blank slate). But only after considerable empirical research will the true validity of integrated models be tested, and many have already been put to the test. We will now examine a handful of integrated theories that have been proposed over the last couple of decades, as well as the studies that have examined their empirical validity. Not surprisingly, some integrated and elaborated theories appear to be more valid than others, with most adding considerably to our understanding of human behavior and contributing to explaining the reasons why certain individuals or groups commit criminal behavior more than others.

**Examples of Integrated Criminological Theory**

We have already discussed the advantages and disadvantages of theoretical integration, as well as the ways in which traditionally separate explanatory models are combined to form a new synthesized framework. We will now review a number of the most prominent examples of theoretical integration that have been proposed in the last 30 years, which is largely the time period when most attempts at integration have been presented. We hope that readers will critique each theory based on the criteria that we have already discussed, particularly noting the empirical validity of each model as based on scientific observation and logical consistency of its propositions.

**Elliott’s Integrated Model.** Perhaps the first and certainly the most prominent integrated model is that proposed by Delbert Elliott and his colleagues in 1979, which has become known as Elliott’s integrated model. In fact, this model “opened the current round of debate on integration,” because it was essentially the first major perspective proposed that clearly attempted to merge various traditionally separate theories of crime. Elliott’s integrated framework attempts to merge strain, social disorganization, control, and social learning/differential association-reinforcement perspectives for the purpose of explaining delinquency, particularly in terms of drug use, as well as other forms of deviant behavior (see Figure 10.1).

As can be seen in Figure 10.1, the concepts and propositions of strain and social disorganization, as well as inadequate socialization, are considered antecedent (or root)
causes of delinquency. In other words, failing to achieve one’s goals (i.e., strain theory) or coming from disadvantaged neighborhoods (i.e., social disorganization) are key causes for predisposing people to criminal behavior. Furthermore, the fact that many low-income households tend to lack adequate socialization, such as when a single parent has to work two or three jobs to make ends meet, is also a major root cause of delinquency.

Because this model clearly shows some models/constructs coming first (e.g., strain, social disorganization) and others coming later (e.g., weak bonding and then affiliations with delinquents), which lead to criminality, this is a good example of an “end-to-end” form of theoretical integration. This is an “end-to-end” form of integration because some models/concepts, such as strain, occur chronologically first, which then lead chronologically to other models/concepts, such as weak conventional bonding or strong delinquent bonding, which then leads to crime.

The notable ways in which this perspective becomes a true integrated model is seen in the mediating or intervening variables. Although some antecedent variables (such as strain) can lead directly toward delinquent activity, most of the criminal activity is theoretically predicted through a process that would include a breakdown of conventional bonding (i.e., social control/bonding theory), which occurs in many individuals who experience strain or social disorganization in their neighborhoods and inadequate socialization. Furthermore, individuals who have such a breakdown in conventional bonding tend to be more highly influenced by the associations that they make in the streets among their peers (i.e., differential association-reinforcement/social learning theory). According to Elliott’s integrated theory, this factor—strong delinquent bonding—most directly results in delinquent behavior among most juvenile offenders.

One of the notable features of this theoretical model is that it allows for various types of individuals to become criminal. In other words, unlike traditionally separate frameworks that assume offenders expect not to achieve their goals (e.g., strain theory) or come from bad neighborhoods (e.g., Chicago/social disorganization theory), Elliott’s integrated theory allows for a variety of possibilities when it comes to causal paths that explain how crime and delinquency develop in certain people and groups. This is what makes integrated models so much more powerful; namely, they bring several valid explanations together and allow for various possibilities to occur, all of which explain some criminality.
Whereas traditional theories largely only provide for one causal process, Elliott and his colleagues showed right from the first major integrated theory that different types of trajectories, or paths to crime, are possible.

One of the major criticisms of merging such theories, particularly strain (which assumes individuals are born relatively good) and control/social bonding (which clearly assumes that people are born relatively bad [i.e., selfish, greedy, aggressive, etc.]), is that they tend to have extremely different, even opposite, assumptions of human behavior. As a recent review of theoretical integration noted, Elliott and his colleagues attempted to circumvent this obvious contrast in basic assumptions by claiming that the model allows for variation in individual motivations for why people engage in delinquency and crime. For example, they claim that failure to achieve one’s goals (i.e., strain theory) is not always the motivation for crime; rather, crime can result from inadequate socialization or coming from a disadvantaged neighborhood.

Furthermore, Elliott’s integrated model also allows for different forms of control or social bonding, with not all of the delinquents being required to have weak social bonds with conventional society. For instance, as can be seen in Figure 10.1, a person who has experienced strain (or failure to achieve one’s goals) can move directly to the social learning/differential association–reinforcement variables of strong delinquent bonding, so that the weak conventional bonding construct is not a required causal process in this theoretical model. So while some critics claim that Elliott and his colleagues have combined theories that simply cannot be synthesized due to contrasting assumptions, we believe that the integrated theory did, in fact, find a logical and consistent way of showing how both models can be merged in a way that makes a lot of sense in the real world. On the other hand, the model does indeed claim that strain directly causes weak conventional bonding, and the theoretical framework implies that the probability of delinquency is highest when an individual experiences both strain and weak conventional bonding, so to some extent the critics make an important point regarding the logical consistency of the full model, which Elliott and his colleagues have not adequately addressed.

Despite the presence of elements of the four traditionally separate theories (strain, social disorganization, social control/bonding, and social learning/differential association–reinforcement), Elliott and his colleagues identify this integrated theory with social control as opposed to any of the other perspectives, which they argue is a more general theory and can explain crime and delinquency across different levels of explanation. They also note that the social control perspective is more sociological, in the sense that it places more importance on the role of institutional structures in controlling criminal behavior. Perhaps another reason why they identified their model with social control/bonding theory was because both intervening constructs represent types of bonds formed or not formed with others: weak conventional bonding and strong delinquent bonding. However, it is important to keep in mind that these constructs actually represent two traditionally separate theories, namely social bonding theory and differential association–reinforcement/social learning, respectively.

The authors of this textbook believe that when an integrated theory (which claims to be such an integrated model) chooses a primary or dominant theory as its basis, it does

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46Ibid.
47Ibid.
48Ibid., 311–12.
not help in selling it to the scientific community, let alone others. A similar problem was seen in Pearson and Weiner’s conceptual integration in their identifying a single traditionally separate theory—social learning/differential association-reinforcement—as the foundation or basis for their framework. Obviously, the first reaction by many theorists, even those that are not inherently against theoretical integration, would be somewhat cautious or even resistant. After all, why would a theory that claims to be integrated outright claim a single explanatory framework as its basis.

Rather, such models may be seen more so as examples of theoretical elaboration, which tends to start with the assumptions and concepts of one theory and draw from other models to improve the base model. Still, despite the criticisms toward identifying a single model as a basis for developing an integrated framework for explaining criminality, it is apparent that latitude has been shown for this flaw. It is important to note that Elliott’s model is considered the first “true” attempt at theoretical integration and is still widely respected as the prototype and example of what an integrated model could and should be.

Regarding the empirical evidence for and against Elliott’s integrated model, much of the evidence for it has been provided by Elliott and his colleagues through their testing of the theory. Specifically, much of the testing they have done has been via the National Youth Survey (NYS), a national survey collected and synthesized by criminologists at the University of Colorado, Boulder, which is where Elliott and most of the colleagues with whom he works are professors. This longitudinal measure of delinquency has been administered and analyzed for several decades, and it represents perhaps the most systematic collection of information from youth regarding key developmental variables and delinquency rates that has ever existed.

Most of the evidence from the National Youth Survey shows general strong support for Elliott’s model.49 However, some evidence showed few direct effects of strain and social control concepts, which is surprising given that the basis for the model was the social control/bonding elements of the theory.50 In fact, the original hypothesis in the model—that strain and social control/bonding theories would have a direct effect on delinquency—were not observed.51 Rather, only bonding to delinquent peers had a significant and strong effect on future criminality, which supports social learning/differential association-reinforcement theory. This strongly supports the social learning variables in the model and diminishes the claim by Elliott and his colleagues about the fundamental theoretical perspective of social control/bonding.

Furthermore, a critical review of Elliott’s framework, as presented in his 1985 book (with Huizinga and Ageton), notes that a major problem with the integrated framework is that:

The most puzzling feature of the theory is the inclusion of social disorganization in it as a causal factor, in the absence of any attempt to measure or test the importance of this factor. Presumably, the authors wished to claim that their theory was “more sociological than psychological.”52

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49See review in Akers and Sellers, *Criminological Theories*, 273–76.
50Elliott, Huizinga, and Ageton, *Explaining Delinquency*.
This point is particularly important, given that virtually none of the tests of Elliott’s integrated model have included social disorganization factors in their studies, even after this critical review was published more than 20 years ago. So Elliott and his colleagues should either drop this portion of his model from consideration in the model or provide an adequate test of it in relation to the rest of the framework. Although we would opt for the latter, one of these two alternatives must be chosen.

However, from the presentation that Elliott gave as his presidential address to the American Society of Criminology in 1993, it appears that the former alternative was chosen. Specifically, in his model of the onset of serious violent offending, all of the antecedent variables in his model could be explained by the other traditionally separate theoretical models in his framework. He included two bonding constructs (family and school), parental sanctions, stressful life events (i.e., strain), and early exposure to crime and victimization. Perhaps the last factor could be construed as related to social disorganization theory, but it is probably regarded more as a social learning/differential association-reinforcement variable, as is suggested from the original model.

In addition, this critique noted that the existing evidence shows that most delinquent activity is committed among groups of juveniles, and thus, youth who tend to commit illegal acts naturally associate with delinquents. Yet, the affiliation with delinquent peers is not considered the basic foundation of the theory—as tests of this model demonstrated—but rather an intervening variable in the model. The author of this critique claims that Elliott’s model does not emphasize this point strongly enough and thereby does not provide “convincing evidence in this book that delinquent peers cause or facilitate offending.”

In light of these findings, even Elliott and his colleagues acknowledged that their integrated model best fit the data as a social learning/differential association-reinforcement framework of delinquency. However, they chose to retain social control/bonding theory as the primary foundation of their integrated model, stating that “it is not clear that a social learning model would have predicted a conditional relationship between conventional bonding . . . and deviant bonding.” Elliott and colleagues went on to say that they did not attribute most of the explained variation in the model on social learning/differential reinforcement as being the most important model or construct because they claimed that such variables did not play a strong enough part in the indirect effects that were seen in the estimated models.

This is actually a logical position, given the fact that their integrated framework would, in fact, predict the social learning/differential association-reinforcement variables were the primary direct effects on delinquency, and the social control, strain, and social disorganization variables were considered primarily indirect all along, according to their model. However, some critics, especially the proponents of social learning/differential reinforcement theory, have claimed that:

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53 Farrington, book review, 433.
54 Ibid.
55 Ibid., based on quote from Elliott et al. *Explaining Delinquency*, 137.
In our opinion, even with the addition of the interactive effects of conventional bonding, the final model reported by Elliott et al. is more of a variation on social learning theory (with bonding modifications) than it is a variation on social bonding theory (with learning modifications).  

After all, the measures of delinquent peer bonds used by Elliott and his colleagues are essentially measures that have been used by theorists and researchers of social learning theorists over the last few decades, regarding differential associations, reinforcements, and modeling.

Additional analyses using the National Youth Survey have tended to agree with the critics regarding the importance of social learning/differential reinforcement variables in predicting crime and delinquency. Specifically, one relatively recent reanalysis of the NYS data showed that social learning variables appeared to predict more variation in deviance than did the other models or constructs in the model. Some have noted that the social bonding assumption—that strong attachments to others, regardless of who they are—is not supported by empirical research (see Section VII). This is true, and all future integrated models must address this issue if they include social control/bonding propositions or constructs in their models.

Despite these criticisms and empirical observations, it appears that Elliott’s integrated model has contributed to our understanding of the development of delinquent behavior. In the least, it inspired other theoretical frameworks, some of which we review here. However, it should also be obvious that there are some valid criticisms of this model, such as claiming that the model is based on social control/bonding theory while depending heavily on the strong delinquent bonding that takes place in most cases of criminality, clearly implicating social learning/differential reinforcement theory. Again, we want to stress that a true integrated model should not place any emphasis on a particular theory, otherwise the critics will have a sound argument when findings show that one theory is more influential than another.

Thornberry’s Interactional Theory. After Elliott’s integrated model, presented in 1979, the next major integrated framework was that of Terrence Thornberry in 1987. This model incorporated empirical evidence drawn since Elliott’s presentation to create a unique and insightful model of criminality, which addressed an extremely important aspect that had never been addressed previously in criminological theory. Specifically, Thornberry’s interactional theory was the first to emphasize reciprocal, or feedback effects, in the causal modeling of the theoretical framework.

56 Akers and Sellers, Criminological Theories, 275.
57 Ibid., 276.
As a basis for his model, Thornberry combined social control and social learning models. According to Thornberry, both of these theories try to explain criminality in a straightforward, causal process and are largely targeted toward a certain age population. Thornberry uniquely claims that the processes of both social control and social learning theory affect each other in a type of feedback process.

Thornberry’s integrated model incorporates five primary theoretical constructs, which are synthesized in a comprehensive framework to explain criminal behavior. These five concepts are: commitment to school; attachment to parents; belief in conventional values (these first three are taken from social control/bonding theory); adoption of delinquent values; and association with delinquent peers (these last two are drawn from social learning/differential association-reinforcement theory). These five constructs, which most criminologists would agree are important in the development of criminality, are obviously important in a rational model of crime, so at first it does not appear that Thornberry has added much to the understanding of criminal behavior. Furthermore, Thornberry’s model clearly points out that different variables will have greater effects at certain times; for example, he claims that association with delinquent peers will have more effect in mid-teenage years than at other ages.

What Thornberry adds beyond other theories is the idea of reciprocity or feedback loops, which no previous theory had mentioned, much less emphasized. In fact, much of the previous criminological literature had spent much time debating whether individuals become delinquent and then start hanging out with similar peers or whether individuals start hanging out with delinquent peers and then begin engaging in criminal activity. This has been the traditional “chicken or egg” question in criminology for most of the 20th century; namely, which came first, delinquency or bad friends. It has often been referred to as the “self-selection” versus “social learning” debate; in other words, do certain individuals select themselves to hang out with delinquents by their previous behavior, or do they learn criminality from delinquents with whom they start associating. One of the major contributions of Thornberry’s interactional model is that he directly answered this question.

Specifically, Thornberry noted that most, if not all, contributors to delinquency (and criminal behavior itself) are related reciprocally. Thus, Thornberry postulated that engaging in crime leads to hanging out with other delinquents and that hanging out with delinquents leads to committing crimes. It is quite common for individuals to commit crime and then start hanging out with other peers who are doing the same, and it is also quite common for people to start hanging out with delinquent peers and then start committing offenses. Furthermore, it is perhaps the most likely scenario for a person to be offending and to be dealing with both the influences of past experiences and with peer effects as well.

As mentioned previously, Thornberry considers the social control/bonding constructs, such as attachments to parents and commitment to school, the most essential predictors of delinquency. Like previous theoretical models of social bonding/control, Thornberry’s model puts the level of attachments and commitment to conventional society ahead of the degree of moral beliefs that individuals have toward criminal offending. However, lack of such moral beliefs leads to delinquent behavior, which in turn negatively

60Much of this discussion is taken from Bernard and Snipes, “Theoretical Integration,” 314–16; and also Akers and Sellers, Criminological Theories, 278.
affects the level of commitment or attachments an individual may have built in his/her development. As Thornberry claimed:

While the weakening of the bond to conventional society may be an initial cause of delinquency, delinquency eventually becomes its own indirect cause precisely because of its ability to weaken further the person’s bonds to family, school, and conventional beliefs.61

Thus, the implications of this model are that variables relating to social control/bonding and other sources cause delinquency, which then becomes, in itself, a predictor and cause for the breakdown of other important causes of delinquency and crime. For example, consider a person we shall call Johnny, who has an absent father and a mother who uses inconsistent discipline and sometimes harsh physical abuse of her son. He sees his mother’s state of constant neglect and abuse as proof that belief in conventional values is wrong, and he becomes indifferent toward governmental laws; after all, his main goal is to survive and be successful. Because of his mother’s psychological and physical neglect, Johnny pays no attention to school and rather turns to his older peers for guidance and support. These peers guide him toward behavior that gives him both financial reward (selling what they steal) and status in their group (respect from performing well in illegal acts). At some point, Johnny gets caught, and this makes the peers who taught him how to engage in crime very proud, while alienating him from the previous bonds he had with his school, where he may be suspended or expelled, and with his mother, who further distances herself from him. This creates a reciprocal effect or feedback loop to the previous factors, which was lack of attachment to his mother and commitment to school. The lowered level of social bonding/control with conventional institutions/factors (mother, school), and increased influence by the delinquent peers then leads Johnny to commit more frequent and more serious crimes.

Such a model, although complex and hard to measure, is logically consistent, and the postulates are sound. However, the value of any theory has to be determined by the empirical evidence that is found regarding its validity. Much of the scientific evidence regarding Thornberry’s empirical model has been contributed by Thornberry and his colleagues.

Although the full model has yet to be tested, the researchers “have found general support for the reciprocal relationships between both control concepts and learning concepts with delinquent behavior.”62 One test of Thornberry’s model used the longitudinal Rochester Youth Development Study to test its postulates.63 This study found that the estimates of previous unidirectional models (nonreciprocal models) did not adequately explain the variation in the data. Rather, the results supported the interactional model, with delinquent associations leading to increases in delinquency while delinquency led to reinforcing peer networks and both directional processes working through the social environment. In fact, this longitudinal study demonstrated that once the participants had acquired

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63Thornberry et al., “Delinquent Peers.”
delinquent beliefs from their peers, the effects of these beliefs had further effects on their future behavior and associations, which is exactly what Thornberry’s theory predicts.64

Perhaps the most recent test of Thornberry’s interactional model examined the age-varying effects of the theory.65 This study incorporated hierarchical linear modeling in investigating a sample of the National Youth Survey, a national sample of youth. The results showed that while the effects of delinquent peers were relatively close to predictions, peaking in the mid-teenage years, the predictions regarding the effects of family on delinquency were not found to be significant in the periods that were expected, although family was important during adolescence.

Unlike other authors of integrated theories, Thornberry specifically noted that he prefers to see his approach as “theoretical elaboration,” and not full theoretical integration. While we commend Thornberry for addressing this concern, virtually all criminologists still consider his framework a fully integrated model. And in many ways, Thornberry’s interactional model is far more integrated than others discussed here because it gives equal weight to the traditionally separate theoretical frameworks that are combined into his model, in the sense that both are considered antecedent and reciprocal in their effects on criminal behavior.

**Braithwaite’s Theory of Reintegrative Shaming.** A unique integrated model that proposed the synthesis of several traditionally separate theories was presented in 1989, in a book entitled *Crime, Shame, and Reintegration.*66 The theory of reintegrative shaming merges constructs and principles from several theories, primarily social control/bonding theory and labeling theory, with elements of strain theory, subculture/gang theory, and differential association theory. All of these theories are synthesized in a clear and coherent framework that is presented in both descriptive and graphic form. We will spend extra time discussing Braithwaite’s theory because it discusses not only U.S. culture but also cultural and justice tendencies in Japanese culture.

Braithwaite’s idea for the theory was obviously inspired by the cultural differences he observed in Eastern (particularly Japanese) culture, in terms of both socialization practices and the justice system, as compared to the Western world. (Note that Braithwaite is from Australia, which uses the same Western practices as England and the United States.) Specifically, he emphasizes the Japanese focus on the aggregate, such as family, school, or business, to which the individual belongs. In contrast, in many Western cultures, epitomized by U.S. culture, the emphasis is clearly placed on the individual.

This contrast has often been referred to as the “we” culture versus the “me” culture (Eastern versus Western emphases, respectively). Although this is seen in virtually all aspects of culture and policy practices, it is quite evident in people’s names. In most Eastern cultures, people are known by their family name, which is placed first in the ordering. This shows the importance that is placed on the group to which they belong. In contrast, Western societies listing individual names first, implying a focus on the individual him/herself. These naming practices are a manifestation of a virtually all-encompassing

64Ibid.


cultural difference regarding group dynamics and social expectations across societies, especially their justice systems. For example, it is quite common in Japan to receive a sentence of apologizing in public, even for the most serious violent crimes. In his book, Braithwaite points out that after World War II, Japan was the only highly industrializing society that showed a dramatic decrease in its crime rate.

Criminological theory would predict Japan to have an increasing crime rate, given the extremely high density of urban areas due to rapid industrialization, especially on such a small amount of land, Japan being a large island. As Braithwaite describes it, the Japanese suffered from anomie after the war in the sense of a general breakdown of cultural norms, but the nation was able to deal with this anomic state despite the odds. Japan definitively decided not to follow the Western model of justice after the war; rather, they rejected the Western system of stigmatizing convicted felons. Instead, the Japanese implemented a system in which they reintroduce (hence “reintegration”) the offenders to society via a formal ceremony in which citizens accept the offenders back into conventional society. In contrast, in the United States, we typically give our “ex-cons” about $75 on average and make them promise always to identify themselves as felons on legal documents.

In other cultural contrasts, Japan is extremely lenient in sentencing offenders to prison. In contrast, by rate of incarceration the United States is the most punitive developed nation. In Japan, Braithwaite notes that:

Prosecution only proceeds in major cases . . . where the normal process of apology, compensation, and forgiveness by the victim breaks down. Fewer than 10 percent of those offenders who are convicted receive prison sentences, and for two-thirds of these, prison sentences are suspended. Whereas 45 percent of those convicted of a crime serve a jail sentence in the U.S., in Japan the percentage is under two.

Public apology is the most common punishment among the Japanese, which strongly reflects the nature of honor in Japanese society, as well as pointing out the fundamental differences between how we deal with offenders. Braithwaite claims that this cultural and political difference has a huge impact on why crime rates in both nations have experienced such differential trends.

Most developing Western nations, including the United States, experienced a rising crime rate in the 1950s, 1960s, and 1970s. Braithwaite argues that this was likely due to culture and the differential treatment of its offenders, namely “it might be argued that this [the downward trend in crime rates after World War II in Japan] was a result of the re-establishment of cultural traditions of shaming wrongdoers, including the effective coupling of shame and punishment.” In contrast, Braithwaite claims that “one contention . . . is that the uncoupling of shame and punishment manifested in a wide variety of ways in many Western countries is an important factor in explaining the rising crime rates in those countries.”

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67Ibid., 62.


69Braithwaite, Crime Shame, 61, brackets are authors’ paraphrasing.

70Ibid, 61.
Furthermore, in contrast to American society, the Japanese are typically less confrontational with authority. For example, some scholars have noted that the Japanese accept the authority of law, and police officers are considered similar to “elder brothers” who rely “on positive rather than negative reinforcement,” when it comes to crime control.71 This difference in the way officers and other authority figures are considered is likely due to the way that the Japanese view society, in terms of neighborhood, community, school, and work—the informal institutions of control that we have mentioned earlier in this book as having more effect on the crime rate than the formal institutions (i.e., police, courts, prisons).

Beyond discussing the cultural differences, Braithwaite’s integrated theory addresses some of the most notable scientific observations regarding what types of individuals and groups are likely to commit crime. Specifically, Braithwaite states that most crime is committed by young, poor, single males who live in urban communities that have high levels of residential mobility; they are not likely attached to or do poorly in school, have low educational/occupational aspirations, are not strongly attached to their parents, associate with delinquent peers, and do not have moral beliefs against violating law.72

It is obvious from this list that Braithwaite incorporated some of the major theories and corresponding variables into his theoretical perspective. The emphasis on poor people who do not have high educational/occupational aspirations obviously supports strain theory, whereas the inclusion of urban individuals who live in communities with high residential mobility reflects the Chicago School/social disorganization theory. At the same time, Braithwaite clearly highlights the predisposition of people who have limited moral beliefs and weak attachments, which conjures images of social bonding/control theory; individuals having delinquent peers obviously supports differential association/reinforcement theory. Thus, a handful of theories are important in the construction of Braithwaite’s integrated theory.

Braithwaite notes that much of the effectiveness of the Japanese system of crime control depends on two constructs: interdependency and communitarianism. Interdependency is the level of bonds that an individual has to conventional society, such as the degree to which they are involved or attached to conventional groups in society, which would include employment, family, church, and organizations. According to Braithwaite, interdependency is the building block of the other major theoretical construct in his integrated model: communitarianism. Communitarianism is the macro (group) level of interdependency, meaning that it is the cumulative degree of the bonds that individuals have with the conventional groups and institutions (e.g., family, employment, organizations, church, etc.) in a given society. Obviously, these theoretical constructs are highly based on the theory of social bonding/control, in the sense that they are based on attachments, commitment, and involvement in conventional society.

Braithwaite’s model has a causal ordering that starts with largely demographic variables, such as age, gender, marital status, employment, and aspirations on the individual

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level and urbanization and residential mobility on the macro (group) level. All of these factors are predicted to influence the level of interdependency and communitarianism in the model, which as we previously discussed is largely based on social control/bonding theory. Depending on which type of culture is considered, or what forms of shaming are used in a given jurisdiction, the various types of shaming that are administered are key in this integrated model.

According to Braithwaite, societies that emphasize reintegrative shaming, such as Japan, will reduce the rates of crime in their society. When an offender in Japan completes his or her sentence or punishment for committing a crime, the government will often sponsor a formal ceremony in which the offender is reintroduced or “reintegrated” back into conventional society. According to Braithwaite, we do not reintegrate offenders into our society after shaming them but rather stigmatize them, which leads them to associate only with people from criminal subcultures (e.g., drug users, gang members). Braithwaite claims that this leads to the formation of criminal groups and the grasping of illegitimate opportunities offered in the local community. Ultimately, this means that people who are not reintegrated into conventional society will inevitably be stigmatized and labeled as offenders, preventing them from becoming productive members of the community, even if their intentions are to do such.

Most empirical studies of Braithwaite’s theory show mixed results, with most in favor of this theory, especially regarding its implementation for policy. Some tests have shown that reintegrative ideology regarding violations of law can have a positive impact on future compliance with the law; others have found that high levels of shaming in parental practices do not increase offending. Studies in other countries, such as China and Iceland, show partial support for Braithwaite’s theory. While some studies have found encouraging results, other recent studies have also found weak or no support for the theory.

The most recent reports regarding the effects of shame show that outcomes largely depend on how shame is measured, which Braithwaite’s theory largely ignores. There are, for example, episodic or situational shame states as well as long-term shame traits or propensities. Recent reviews of the literature and studies of how different types of shame are measured show that certain forms of shame are positively correlated with offending, whereas other forms of shame tend to inhibit criminal behavior. If an individual persistently feels shame, they are more likely to commit criminal activity, but if persons who are

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not predisposed to feel shame perceive that they would feel shame for doing a given illegal activity, then they would be strongly inhibited from engaging in such activity.\textsuperscript{78} This is consistent with findings from another recent study that demonstrated that the effect of reintegrative shaming had an interactive effect on delinquency.\textsuperscript{79}

Furthermore, Braithwaite’s theory does not take into account other important self-conscious emotions, such as guilt, pride, embarrassment, and empathy, that are important when individuals are deciding whether or not to commit criminal behavior. Although some theorists claim that shame is the key social emotion, studies show that they are clearly wrong. Rather, many emotions, such as guilt and embarrassment, are based on social interaction and self-consciousness; in many ways, they are just as inhibitory or rehabilitating as shame.\textsuperscript{80} The literature examining rational choice theory is also an indication of the effects of other emotions than shame in influencing decisions on offending.\textsuperscript{81}

Still, Braithwaite’s reintegrative theory provides an important step ahead in theoretical development, particularly in terms of combining explanatory models to address crime rates, as well as correctional policies/philosophies, across various cultures. Specifically, Braithwaite’s theory makes a strong argument that Eastern (particularly Japanese) policies of reintegration and apology for convicted offenders are beneficial for their culture. Would this system work in Western culture, especially the United States? The answer is definitely unknown, but it is unlikely that such a model would work well in the United States. After all, most of the chronic, serious offenders in the United States would not be highly deterred by having to apologize to the public, and many might consider such an apology or reintegration ceremony as an honor, or a way to show that they weren’t really punished. This may not be true, but we would not know this until such policies were implemented fully in our system. However, programs along these lines have been implemented in our country, and some of these programs will be reviewed later in this book.

\textit{Tittle’s Control-Balance Theory.} One of the more recently proposed models of theoretical integration is that of Charles Tittle’s control balance theory. Presented by Tittle in 1995, control-balance integrated theory proposes that (1) the amount of control to which one is \textit{subjected} and (2) the amount of control that one can \textit{exercise} determine the probability of deviance occurring. In other words, the balance between these two types of control, he argued, can predict the \textit{type} of behavior that is likely to be committed.\textsuperscript{82}

In this integrated theoretical framework, Tittle claimed that a person is least likely to offend when he or she has a balance of controlling and being controlled. On the other


\textsuperscript{80}Hay, “Exploratory Test.”

\textsuperscript{81}For an excellent review, see June Price Tangney and K. Fischer, \textit{Self-Conscious Emotions: The Psychology of Shame, Guilt, Embarrassment, and Pride} (New York: Guilford Press, 1995).


hand, the likelihood of offending will increase when these become unbalanced. If individuals are more controlled by external forces, which Tittle calls “control deficit,” then the theory predicts they will commit predatory or defiant criminal behavior. In contrast, if an individual possesses an excessive level of control by external forces, which Tittle refers to as “control surplus,” then that individual will be more likely to commit acts of exploitation or decadence. It is important to realize that this excessive control is not the same as excessive self-control, which would be covered by other theories examined in this introduction. Rather, Tittle argues that people who are controlling, that is, who have excessive control over others, will be predisposed toward inappropriate activities.

Early empirical tests of control-balance theory have reported mixed results, with both surpluses and deficits predicting the same types of deviance. Furthermore, researchers have uncovered differing effects of the control balance ratio on two types of deviance that are contingent on gender. This finding is consistent with the gender-specific support found for Reckless’s containment theory and with the gender differences found in other theoretical models. Despite the mixed findings for Tittle’s control balance theory of crime, this model of criminal offending still gets a lot of attention, and most of the empirical evidence has been in favor of this theory.

Hagan’s Power-Control Theory. The final integrated theory that we will cover in this introduction deals with the influence of familial control and how that relates to criminality across gender. Power-control theory is another integrated theory that was proposed by John Hagan and his colleagues. The primary focus of this theory is on the level of patriarchal attitudes and structure in the household, which are influenced by parental positions in the workforce.

Power-control theory assumes that in households where the mother and father have relatively similar levels of power at work (i.e., balanced households), mothers will be less likely to exert control on their daughters. These balanced households will be less likely to experience gender differences in the criminal offending of the children. However, households in which mothers and fathers have dissimilar levels of power in the workplace (i.e., unbalanced households) are more likely to suppress criminal activity in daughters. In such families, it is assumed that daughters will be taught to be less risk-taking than the males in the family. In addition, assertiveness and risky activity among the males in the house will be encouraged. This assertiveness and risky activity may be a precursor to crime, which is highly consistent with the empirical evidence regarding trends in crime related to gender. Thus, Hagan’s integrated theory seems to have a considerable amount of face validity.

References:
84Matthew Hickman and Alex Piquero, “Exploring the Relationships”; for contrast and comparison, see Grasmick et al., “Changes Over Time”; Grasmick et al., “Reduction in Drunk Driving”; Tibbetts, “College Student Perceptions.”
Most empirical tests of power-control theory have provided moderate support, while more recent studies have further specified the validity of the theory in different contexts.\textsuperscript{86} For example, one recent study reported that the influence of mothers, not fathers, on sons had the greatest impact on reducing the delinquency of young males.\textsuperscript{87} Another researcher has found that differences in perceived threats of embarrassment and formal sanctions varied between more patriarchal and less patriarchal households.\textsuperscript{88} Finally, studies have also started measuring the effect of patriarchal attitudes on crime and delinquency.\textsuperscript{89} However, most of the empirical studies that have shown support for the theory have been done by Hagan or his colleagues. Still, power-control theory is a good example of a social control theory in that it is consistent with the idea that individuals must be socialized, and that the gender differences in such socialization make a difference in how people will act throughout life.

\section*{Policy Implications}

Many policy implications can be drawn from the various integrated theoretical models that we have discussed in this section introduction. We will focus on the concepts that were most prominent in this section, which are parenting and peer influences. Regarding the former, numerous empirical studies have examined programs for improving the ability of parents and expecting parents to be effective.\textsuperscript{90} Such programs typically involve training high school students—or individuals/couples who are already parents—on how to be better parents. Additional programs include Head Start, and other preschool programs that attempt to prepare high-risk youth for starting school; these have been found to be effective in reducing disciplinary problems.\textsuperscript{91}

Regarding peer influences, numerous programs and evaluations have examined reducing negative peer influences regarding crime.\textsuperscript{92} Programs that emphasize prosocial peer groups are often successful, whereas others show little or no success.\textsuperscript{93} The conclusion from most of these studies is that the most successful programs of this type are those that


\textsuperscript{90}See review in Brown et al., \textit{Explaining Crime}, 425.

\textsuperscript{91}Ibid.

\textsuperscript{92}For a review, see Akers and Sellers, \textit{Criminological Theories}, 102–8.

\textsuperscript{93}Ibid.
focus on learning life skills and prosocial skills and use a curriculum based on cognitive-behavioral approaches.\textsuperscript{94} This approach includes reinforcing positive behavior, clarifying rules of behavior in social settings, teaching life and thinking skills, and perhaps most important, thinking about the consequences of a given behavior before acting (hence cognitive-behavioral approach). Studies consistently show that programs using a cognitive-behavioral approach (i.e., think before you act) are far more successful than programs that emphasize interactions among peers or use psychoanalysis or other forms of therapy.\textsuperscript{95}

Many other policy implications can be derived from integrated theories explaining criminal behavior, but parenting practices and peer influences are the primary constructs in most integrated models. Thus, these are the two areas that should be targeted for policy interventions, but they must be done correctly. For a start, policymakers could review the findings from empirical studies and evaluations and see that the earlier parenting programs start, particularly for high-risk children, the more effective they can be. Regarding the peer-influence programs, the emphasis on a cognitive-behavior therapy/training and life skills appears to be more effective than other approaches.

\section*{Conclusion}

In this section, we have reviewed what determines the types of integrated theories and what criteria make an integrated theory a good explanation of human behavior. We have also examined some examples of integrated theories that have been proposed in the criminological literature in the last 20 years. All of the examples represent the most researched and discussed integrated theories, and they demonstrate both the advantages and disadvantages of theoretical integration/elaboration. We hope that readers will be able to determine for themselves which of these integrated theories are the best in explaining criminal activity.

In this introduction, we have examined the various ways in which theoretical integration can be done, including forms of conceptual integration and theoretical elaboration. Furthermore, the criticisms of the different variations of integration and elaboration have been discussed. In addition, numerous examples of theoretical integration have been presented, along with the empirical studies that have been performed to examine their validity.

Finally, we discussed the policy implications that can be recommended from such integrated theories. Specifically, we concluded that the influence of early parenting and peer-influences are the two most important constructs across these theoretical models. Furthermore, we concluded that “the earlier, the better” regarding the parenting programs. We also concluded that a cognitive-behavioral approach, which includes life skills, is most effective for peer-influence programs.

\section*{Section Summary}

- Theoretical integration is one of the more contemporary developments in criminological theorizing. This approach brings with it many criticisms, yet arguably many advantages.

\textsuperscript{94}Ibid., 108.

\textsuperscript{95}Ibid.
Types of theoretical integration include end-to-end, side-by-side, and up-and-down types.

Conceptual integration appears to be a useful, albeit rarely explored, form of theoretical integration.

Theoretical elaboration is another form of integration, which involves using one theory as the base or primary model and then incorporating concepts and propositions from other theories to make the primary model stronger.

A number of seminal integrated theories have been examined using empirical evidence and appear to have enhanced our understanding of criminal behavior.

Some of the theoretical models that have been proposed (such as Elliott et al.’s model) have been supported by empirical research.

Theoretical integration models have many critics, who claim that the assumptions, concepts, and propositions of the mixed theories are counterintuitive.

**KEY TERMS**

Braithwaite’s reintegrative shaming theory

End-to-end theoretical integration

Theoretical elaboration

Communitarianism

Integrated theories

Thornberry’s interactional model

Conceptual integration

Interdependency

Up-and-down integration

Elliott’s integrated model

Side-by-side (or “horizontal”) integration

**DISCUSSION QUESTIONS**

1. What is the definition of theoretical integration, and why can such theories be beneficial?

2. Describe what end-to-end theoretical integration is and provide an example of such integration.

3. Describe what side-by-side theoretical integration is and provide an example of such integration.

4. Describe what up-and-down theoretical integration is and provide an example of such integration.

5. Discuss the difference between theoretical elaboration, theoretical integration, and conceptual integration.

6. What are the major strengths and weaknesses of theoretical integration?

7. In your opinion, what is the best of the integrated models? Why do you believe this is the best integrated model?

8. What do you believe is the weakest integrated model? Why?
Some argue that the assumptions of strain, control, and differential association theories of delinquency are fundamentally incompatible (Hirschi, 1969; Kornhauser, 1978), while others deny that they are necessarily incompatible and suggest the possibility of a compromise theory satisfactory to all concerned. For sheer reasonableness, the integrationist approach would seem to have much to commend it: Why should we continue to squabble over petty

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**WEB RESOURCES**

**Integrated Theories of Crime**

http://www.indiana.edu/~theory/Kip/IC.htm

**John Braithwaite/Reintegrative Theory**

http://www.realjustice.org/library/braithwaite06.html

**Various Integrated Theories of Crime**


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**READING**

In this selection, Travis Hirschi argues that theoretical integration is against the best interests of the development of criminological theory. Hirschi’s idea of integrated models is that they “divide the child in two,” “giving the larger half” to other competing theories, which is consistent with what was seen in the introduction to this section.

While reading this selection, readers should take Hirschi’s arguments into consideration in deciding whether or not integrated models are beneficial in understanding why individuals engage in criminal offending. However, readers should also feel free to question the rationale that Hirschi presents for dismissing such integrated frameworks.

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**Separate and Unequal Is Better**

Travis Hirschi

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differences when, with a little concession here
and a minor modification there, the larger truth
we all love so well would be better served? As a
matter of fact, however, integration turns out to
be more difficult than this question suggests.
When Elliott, Ageton, and Canter (1979)
actually face the Solomonic task of resolving the
conflicting claims of the three perspectives, they
find themselves compelled to agree that it
cannot be done. Their solution is to use the
terms and ignore the claims of control theory.
This allows them to divide the child in two,
giving the larger half to differential association
and the remainder to strain theory.

Since it seems late to be inquiring after the
child’s health, it may be more useful here to
look briefly at the mediating devices available
to those who would resolve the conflicts
among these traditional perspectives. For all
their popular appeal, the repeated failure of
integrationist approaches suggests that there
are inherent difficulties that preclude attain-
ment of their avowed goal.

End to End

One procedure open to the integrationist is to
put partial theories end to end so that they
describe a developmental sequence. The depend-
et variables of prior theories become the indepen-
dent variables of subsequent theories. An overall increase in the ability to account for
the final dependent variable is not expected
because the last theory in the sequence pre-
sumably absorbs the predictive power of those
preceding it. In fact, given the reasonable
notion that the power and complexity of a the-
ory should somehow be proportioned to what it
explains, sequential integrations will nor-
manly explain less than the sum of things
explained by their constituent theories. In
other words, sequential integrations presup-
pose important outcomes (e.g., sustained pat-
terns of delinquent behavior) and are

Side by Side

Another procedure is to put partial theories
side by side and segregate the cases to which
they are considered applicable (Warren and
Hindelang, 1979). This increases explained
variance, avoids questions of incompatibility,
and answers the question of relative impor-
tance. (Other things being equal, a theory that
applies to 40 percent of the cases is “better” than one applying to 30 percent.) Since the side-by-side approach avoids the theory overload problem, it is useful in explaining delinquent acts differing widely in significance.

Being all virtue and no apparent defect, the side-by-side “integration” would seem to be the way to go. The reluctance of Elliott et al. to exploit this strategy fully seems to result from the fact that in the side-by-side approach the definition of delinquency is unrestricted. This approach does not allow a single definition tailored to the needs of a particular theory. Instead, it leaves each sub-theory free to define delinquency in its own terms. Having constructed their definition with a causal sequence and differential association in mind, Elliott et al. cannot reopen the definitional question without reopening the question of the adequacy of their integrated theory. (A pure side-by-side approach would require consideration of control theory as a possible explanation of at least some forms of delinquent behavior.)

The major difficulty inherent in the side-by-side approach, as far as I can determine, is that no one has as yet come up with a way of segregating cases that produces the results suggested. (The notoriously unsuccessful social-class-specific approach to theory is a good example of the side-by-side procedure in operation.) Elliott et al. segregate cases on the basis of the strength of initial “bonds to the conventional order.” Those with formerly strong bonds are said to follow a path to delinquency different from the path followed by those who have never developed such bonds. Integrationists may also raise the level of abstraction to the point where these partial theories become specific applications of a general theory of deviance—or law (e.g., Black, 1976). Such efforts should lead to greater explained variance because what were once considered unrelated processes may now be seen to bear on the same outcome. This procedure too has the defects of its virtues: a marked tendency on the part of integrationists to accept without question the truth of any partial theory their general theory subsumes. (The greater the number of partial theories accounted for, the greater and more powerful the general theory.) What appears to be unusual reasonableness on the part of the integrationist may then turn out to be nothing more than failure to invoke required scientific bases of discrimination.

To some extent, all of these integrative procedures are employed by Elliott et al. As can be seen from their general properties, the life of the integrationist is not easy. He or she is forced to make theoretical decisions (and to abide by their consequences) unguided by a consistent theoretical perspective. If, in desperation, one or another theoretical perspective is adopted, claims to even-handed treatment of all perspectives are no longer tenable.

I think we should be pleased to find that attainment of the integrationist’s goal is so difficult. A “successful” integration would destroy the healthy competition among ideas that has made the field of delinquency one of the most interesting and exciting fields in sociology for some time. To their credit, Elliott et al. eventually abandon the integrationist perspective in favor of the theory of differential association. To my mind, differential association is at least of some
historical interest. I would not be able to speak so highly of an integrated theory of delinquency.

Notes

1. Students in schools of criminal justice, where the boundaries between disciplines are often obscure, are easily irritated by a focus on differences among theories within discipline. If all disciplines are “really saying the same thing,” within-discipline differences are obviously too petty to merit attention.

2. Elliott et al. occasionally mention that strain theory requires a repeated-measures design, while research from within the control perspective has been cross-sectional or “static.” I do not find their equation of superior research design and superior theory convincing. A repeated-measures design may indeed allow the researcher to examine the effects of prior states, but it does not guarantee that such effects exist. In fact, given the empirical record, I would expect the strain theorist to be extremely leery of the hypothesis that prior and subsequent states interact in their effects on delinquency.

3. “We fail to find any support for Cloward and Ohlin’s disjunction hypothesis” (Elliott and Voss, 1974:170). “There is little or no support for the hypothesis that a tendency to attribute blame externally . . . increases the likelihood of delinquency . . . ” (Elliott and Voss 1974:170). “Strain theories have a decided defect: they are not consistent with the evidence” (Hirschi, 1969:228). “On the basis of available evidence, Cloward and Ohlin are wrong” (Hirschi and Hindelang, 1977:578). “There are no delinquent gangs of the types described by Cloward and Ohlin” (Kornhauser, 1978:159).

4. In the empirical (“down”) equivalent of this procedure, the integrationist simply combines variables from various theories on the grounds that some may explain cases left unexplained by the others. This is the “multiple regression” approach, where predictability is increased by inclusion of variables unrelated to variables already considered. In most applications of this procedure, unfortunately, the presumption of orthogonality among independent variables owes much of its plausibility to the fact that it has not yet been tested.

5. In his 1939 statement of differential association, Edwin Sutherland limited his dependent-variables to systematic crimes in order “to postpone consideration of the very trivial criminal acts” (Cohen et al., 1956:21). In their 1979 statement of essentially the same theory, Elliott et al. restrict their dependent variable to “sustained patterns of illegal behavior” because they “are not concerned . . . with the isolated delinquent act.”

By 1947 Sutherland had abandoned “systematic” because a psychiatrist could find no more than 2 systematic criminals among the 2,000 inmates of Indiana State Prison and because his own students found it “most difficult . . . to determine objectively whether a prisoner was a criminal systematically or adventitiously” (Cohen et al., 1956:21). I suspect that in the next go around Elliott and his colleagues will reach similar conclusions about “sustained patterns of illegal behavior.” They will see that it eliminates too much of interest and is too difficult (impossible?) to operationalize to justify its retention in a theory of delinquency. (I suspect too that they will see that this definition of delinquency reopens the question of the theoretical relevance of self-report results, since it has not been the definition employed in self-report research.)

References

REVIEW QUESTIONS

1. What does Hirschi have to say about integrated models generally? Do you agree or disagree?

2. What does Hirschi have to say about “end-to-end” integrated models versus “side-by-side” integrated models? Do you agree or disagree? Can you provide an example for both types of theoretical integration?

3. Finally, what does Hirschi have to say about “up-and-down” integrated models? Do you agree or disagree with his stance on this form of integrated frameworks? What does Hirschi conclude, and do you agree?

READING

In this selection, Delbert Elliott, Suzanne Ageton, and Rachelle Canter provide one of the earliest, and still one of the best-known and respected examples of theoretical integration. We shall see that Elliott et al. merge various concepts and propositions from at least three traditional theoretical perspectives, namely strain theory, social control theory, and various social learning theories.

One of the beneficial aspects of Elliott et al.’s integrated theory is that it attempts to merge various versions of each of these perspectives into a cohesive, unitary explanation of delinquency/criminal behavior. For example, the authors go beyond the original strain theory proposed by Merton in 1938 and also take into consideration the subsequent versions of strain theory that appeared in later decades (such as Cloward and Ohlin’s theory of differential opportunities, as well as Cohen’s ideas regarding the formation of gang subcultures). Also, when explaining how control theories were integrated into Elliott et al.’s model, the authors do not simply rely on Hirschi’s version of social bonding but also consider some of the other versions of control theory (such as control theories by Reiss, Nye, Reckless as well as Matza’s theory of drift). Finally, the authors don’t simply merge Sutherland’s theory of differential association but also take into account the more modern versions of social learning theory, such as Akers’s model of differential reinforcement and Bandura’s model of imitation/modeling. Although even more modern versions of each of these theoretical perspectives have been introduced (e.g., general strain theory) since Elliott et al. proposed this model in 1979, it is obvious from this selection that the authors did their best to integrate these three major perspectives using the most recent scientific evidence they had in the late-1970s.

While reading this selection, readers are encouraged to consider the validity of the model by considering themselves or others they grew up with and examining whether the development of the various stages proposed by Elliott et al. seems to fit with the delinquents or criminals they have known. Furthermore, if you were to create such an integrated model, would you have emphasized any concepts or propositions from these three theoretical perspectives (or those from other theories) that the authors do not seem to focus on or merge into their “comprehensive” explanation of why individuals become delinquents? Finally, readers should consider whether it is rational to merge theoretical perspectives that have opposing basic assumptions, such as merging strain theory, which claims that individuals are born good, with perspectives such as control theory, which claims that people are born bad and must be taught or controlled to be good.

An Integrated Theoretical Perspective on Delinquent Behavior

Delbert S. Elliott, Suzanne S. Ageton, and Rachelle J. Canter

Previous Theories: Strain and Control

Anomie/Strain Perspective

...Strain theory has become the most influential and widely used contemporary formulation in the sociology of delinquent behavior. A specific application of strain theory to delinquency has been proposed by Cloward and Ohlin (1960) and, more recently, by Elliott and Voss (1974). Cloward and Ohlin’s work is of particular interest to us because their formulation, like that proposed here, represents an attempt to integrate and extend current theoretical positions. Although their theory has been viewed primarily as an extension of the earlier work of Durkheim and Merton, it is equally an extension of the differential association perspective and the prior work of Sutherland (1947). Indeed, much of its significance lies in the fact that it successfully integrated these two traditional perspectives on the etiology of delinquent behavior. Cloward and Ohlin maintain that limited opportunity for achieving conventional goals is the motivational stimulus for delinquent behavior. The specific form and pattern of delinquent behavior are acquired through normal learning processes within delinquent groups. Experiences of limited or blocked opportunities (a result of structural limitations on success) thus lead to alienation (perceived anomie) and an active seeking out of alternative groups and settings in which particular patterns of delinquent behavior are acquired and reinforced (social learning).

Merton, Cloward and Ohlin have conceptualized the condition leading to anomie in terms of differential opportunities for achieving socially valued goals. Differential access to opportunity creates strain; this is postulated to occur primarily among disadvantaged, low-SES [socioeconomic status] youths, resulting in the concentration of delinquent subcultures in low-SES neighborhoods. It is important to note, however, that Cloward and Ohlin have changed the level of explanation from the
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macrosociological level which characterized Durkheim’s work to an individual level. It is the perception of limited access to conventional goals that motivates the individual to explore deviant means. This change in level of explanation was essential for the integration of strain and learning perspectives.

Elliott and Voss’s more recent work (1974) has attempted to deal with the class-bound assumptions inherent in strain theory. Their formulation extends Cloward and Ohlin’s classic statement in the following three ways: (1) The focus on limited opportunities was extended to a wider range of conventional goals. (2) The goal-means disjunction was modified to be logically independent of social class. (3) The role of social learning in the development of delinquent behavior was further emphasized. Elliott and Voss have proposed a sequential, or developmental, model of delinquency: (1) Limited opportunities or failure to achieve conventional goals serves to (2) attenuate one’s initial commitment to the normative order and (3) results in a particular form of alienation (normlessness), which serves as a “permitter” for delinquency, and (4) exposure to delinquent groups, which provides learning and rewards for delinquent behavior for those whose bonds have undergone the attenuation process.

From this perspective, aspiration-opportunity disjunctions provide motivation for delinquent behavior. As compared with Merton and Cloward and Ohlin, Elliott and Voss view both goals and opportunities as variables. They postulate that middle-class youths are just as likely to aspire beyond their means as are low-SES youths. While the absolute levels of aspirations and opportunities may vary by class, the discrepancies between personal goals and opportunities for realizing these goals need not vary systematically by class. Given Durkheim’s (1897/1951, p. 254) view that poverty restrains aspirations, Elliott and Voss have postulated that aspiration-opportunity disjunctions would be at least as great, if not greater, among middle-class youths. In any case, the motivational stimulus for delinquent behavior in the form of aspiration-opportunity discrepancies or goal failure is viewed as logically independent of social class.

Normlessness, the expectation that one must employ illegitimate means to achieve socially valued goals (Seeman, 1959), is postulated to result from perceived aspiration-opportunity disjunctions. When a person cannot reach his or her goals by conventional means, deviant or illegitimate means become rational and functional alternatives. When the source of failure or blockage is perceived as external—resulting from institutional practices and policies—the individual has some justification for withdrawing his or her moral commitment to these conventional norms. In this manner, a sense of injustice mitigates ties to conventional norms and generates normlessness.

Once at this point in the developmental sequence, the relative presence or absence of specific delinquent learning and performance structures accounts for the likelihood of one’s behavior. The time-ordering of the exposure to delinquency variable is not explicit. It may predate failure or it may be the result of seeking a social context in which one can achieve some success. While the exposure may result in the acquisition of delinquent behavior patterns, actual delinquent behavior (performance) will not result until one’s attachment to the social order is neutralized through real or anticipated failure, and the delinquent behavior has been reinforced. The results of research relative to this set of propositions have been generally encouraging. . . .

While considerable empirical support for an integrated strain-learning approach to delinquency has been amassed, most of the variance in delinquency remains unexplained. If the power of this theoretical formulation is to be improved, some basic modification is required. One avenue is suggested by the weak predictive power of the aspiration-opportunity discrepancy variables. . . . [In some studies],
limited academic success at school and failure in one’s relationship with parents were predictive, but only weakly. To some extent, the low strength of these predictors might be anticipated, since they are the initial variables in the causal sequence and are tied to delinquency only through a set of other conditional variables. On the other hand, the strong emphasis placed on these specific variables in strain theories seems questionable, given the available data. It might be argued that the difficulty lies in the operationalization or measurement of the relevant goal-opportunity disjunctions. However, we are inclined to reject this position because previous findings as to this postulated relationship have been generally weak and inconclusive (Spergel, 1967; Short, 1964; Elliott, 1962; Short, Rivera, and Tennyson, 1965; Jessor et al., 1968; Hirschi, 1969; Liska, 1971; and Brennan, 1974). Furthermore, there is substantial evidence in the above-mentioned studies that many adolescents engaging in significant amounts of delinquent behavior experience no discrepancies between aspirations and perceived opportunities. The lack of consistent support for this relationship suggests that failure or anticipated failure constitutes only one possible path to an involvement in delinquency.

The Control Perspective

The different assumptions of strain and control theories are significant. Strain formulations assume a positively socialized individual who violates conventional norms only when his or her attachment and commitment are attenuated. Norm violation occurs only after the individual perceives that opportunities for socially valued goals are blocked. Strain theory focuses on this attenuation process. Control theories, on the other hand, treat the socialization process and commitment to conventional norms and values as problematic. Persons differ with respect to their commitment to and integration into the conventional social order . . .

From a control perspective, delinquency is viewed as a consequence of (1) lack of internalized normative controls, (2) breakdown in previously established controls, and/or (3) conflict or inconsistency in rules or social controls. Strain formulations of delinquency appear to be focusing on those variables and processes which account for the second condition identified by Reiss (1951): attenuation or breakdown in previously established controls. On the other hand, most control theorists direct their attention to the first and third conditions, exploring such variables as inadequate socialization (failure to internalize conventional norms) and integration into conventional groups or institutions which provide strong external or social controls on behavior. From our perspective, these need not be viewed as contradictory explanations. On the contrary, they may be viewed as alternative processes, depending on the outcome of one’s early socialization experience.

For example, Hirschi (1969) has argued that high aspirations involve a commitment to conventional lines of action that functions as a positive control or bond to the social order. Strain theories, on the other hand, view high aspirations (in the face of limited opportunities) as a source of attenuation of attachment to the conventional order. Recognizing this difference, Hirschi suggested that the examination of this relationship would constitute a crucial test of the two theories. Empirically, the evidence is inconsistent and far from conclusive. One possible interpretation is that both hypotheses are correct and are part of different etiological sequences leading to delinquent behavior.

Empirical studies using the control perspective have focused almost exclusively on the static relation of weak internal and external controls to delinquency without considering the longer developmental processes. These
processes may involve an initially strong commitment to and integration into society which becomes attenuated over time, with the attenuation eventually resulting in delinquency. The source of this difficulty may lie in the infrequent use of longitudinal designs. Without a repeated-measure design, youths with strong bonds which subsequently become attenuated may be indistinguishable from those who never developed strong bonds.

**An Integrated Strain-Control Perspective**

Our proposed integrated theoretical paradigm begins with the assumption that different youths have different early socialization experiences, which result in variable degrees of commitment to and integration into conventional social groups. The effect of failure to achieve conventional goals on subsequent delinquency is related to the strength of one’s initial bonds. Limited opportunities to achieve conventional goals constitute a source of strain and thus a motivational stimulus for delinquency only if one is committed to these goals. In contrast, limited opportunities to achieve such goals should have little or no impact on those with weak ties and commitments to the conventional social order.

Limited opportunities to achieve conventional goals are not the only experiences which weaken or break initially strong ties to the social order. Labeling theorists have argued that the experience of being apprehended and publicly labeled delinquent initiates social processes which limit one’s access to conventional social roles and statuses, isolating one from participation in these activities and relationships and forcing one to assume a delinquent role (Becker, 1963; Schur, 1971; Kitsuse, 1962; Rubington & Weinberg, 1968; Ageton & Elliott, 1974; and Goldman, 1963). It has also been argued that the effects of social disorganization or crisis in the home (divorce, parental strife and discord, death of a parent) and/or community (high rates of mobility, economic depression, unemployment) attenuate or break one’s ties to society (Thomas & Znaniecki, 1927; Shaw, 1931; Savitz, 1970; Monahan, 1957; Toby, 1957; Glueck & Glueck, 1970; Andry, 1962; and Rosen, 1970).

In sum, we postulate that limited opportunities, failure to achieve valued goals, negative labeling experiences, and social disorganization at home and in the community are all experiences which may attenuate one’s ties to the conventional social order and may thus be causal factors in the developmental sequence leading to delinquent behavior for those whose early socialization experiences produced strong bonds to society. For those whose attachments to the conventional social order are already weak, such factors may further weaken ties to society but are not necessary factors in the etiological sequence leading to delinquency.

Our basic conceptual framework comes from control theory, with a slightly different emphasis placed on participation in and commitment to delinquent groups. Further, it identifies a set of attenuating/bonding experiences which weaken or strengthen ties to the conventional social order over time. Our focus is on experiences and social contexts which are relevant to adolescents. A diagram of our proposed theoretical scheme is shown in Figure 1. The rows in Figure 1 indicate the direction and sequence of the hypothesized relationships. While the time order designated in Figure 1 is unidirectional, the actual relationships between initial socialization, bonding/attenuation processes, normative orientations of groups, and behavior are often reciprocal and reinforcing. We have also presented the variables in dichotomized form to simplify the model and the discussion of its major elements.
Bonds

Control theorists disagree about sources of control, but they all accept the central proposition that delinquent behavior is a direct result of weak ties to the conventional normative order. In operationalizing control theory, major emphasis has been placed on the bond(s) which tie a person to society. Hirschi (1969) conceptualized four elements of this bond. First, attachment implies a moral link to other people and encompasses such concepts as conscience, superego, and internalization of norms. Commitment, the second factor, is the rational element in the bond. Hirschi views commitment to conformity as an investment in conventional lines of action, such as an educational or occupational career. Other theorists have tied the concept of commitment to such notions as “stake in conformity” (Goode, 1960) and “side bets” (Becker, 1960). Involvement is the time and energy dimension of the bond for Hirschi. Given the limits of time and energy, involvement in conventional activities acts as a social constraint on delinquent behavior. The final bond, belief, refers to one’s acceptance of the moral validity of social rules and norms. According to Hirschi, this psychological element of the bond is effective as long as a person accepts the validity of the rules. If one denies or depreciates the validity of the rules, one source of control is neutralized.
Other control theorists, such as Reiss (1951), Nye (1958), and Reckless (1967) use a more general classification of bonds as internal (personal) and external (social) controls. Hirschi’s dimensions are not easily placed into these two general categories, although Hirschi identifies attachment as an internal and involvement as an external element of the bond (1969, p. 19). We believe that distinguishing internal controls, whose locus is within the person (beliefs, commitment, attitudes, perceptions), from external controls, whose locus is in the surrounding social and physical milieu, poses fewer difficulties and produces greater conceptual clarity than is found in Hirschi’s four concepts.

The external, or social, bond we have defined as integration. By this, we refer to involvement in and attachment to conventional groups and institutions, such as the family, school, peer networks, and so on. Those persons who occupy and are actively involved in conventional social roles are, by this definition, highly integrated. Group controls exist in the form of sanctioning networks (the formal and informal rules and regulations by which the behavior of social role occupants or group members is regulated). This conceptualization of integration is akin to Hirschi’s concepts of involvement and commitment.

The internal, or personal, bond is defined as commitment. Commitment involves personal attachment to conventional roles, groups, and institutions. At another level, it reflects the extent to which one feels morally bound by the social norms and rules and the degree to which one internalizes or adopts those norms as directives for action. Our notion of commitment is akin to Hirschi’s concepts of attachment and belief. Integration and commitment together constitute the bonds which tie an individual to the prevailing social order. High levels of integration and commitment imply strong bonds and general insulation from delinquent behavior. Conversely, low social integration and commitment presuppose weak bonds and a susceptibility to delinquent behavior. All gradations of integration and commitment are possible.

### Building Social Control: The Bonding/Attenuation Processes

The inclusion of the bonding/attenuation process in the model suggests that, throughout adolescence, youths are involved in experiences and processes which attenuate or reinforce their childhood bonds to the conventional social order. Adolescence is a critical life period, both psychologically and socially. As youths make the transition from childhood to adulthood, the level of involvement in the immediate family declines and they move into new and more complex social settings at school and in the community. For one who developed strong childhood bonds, such factors as (1) success experiences at school and in the larger community, (2) positive labeling in these new settings, and (3) a continuous, stable, harmonious home life constitute positive reinforcements of initially strong bonds and continuing insulation from delinquency. For some, the transition is not as smooth, and failure, negative labeling, isolation, and rejection occur in these new social settings; these, in turn, may create difficulties in the youth’s relationship with his family. The net effect of these new experiences may be a weakening of one’s integration into...these social groups and institutions and an increasing likelihood of involvement in delinquent behavior. Finally, for those who never developed strong bonds during childhood, bonding/attenuation experiences will either strengthen the weak bonds, thus reducing the likelihood of delinquency, or further attenuate them, thus maintaining or increasing the probability of delinquent behavior.

We do not propose that this specific set of variables exhausts the possible experiences or conditions which might attenuate or reinforce one’s bonds to society during adolescence. Rather, we have purposely selected those conditions and experiences which prior
theory and research have suggested as critical variables to illustrate the major dimensions of the paradigm.

**Delinquent Learning and Performance Structures**

A major criticism of control theory has been that weak bonds and the implied absence of restraints cannot alone account for the specific form or content of the behavior which results. They may account for a state of “drift,” as described by Matza (1964), but they do not explain why some youths in this state turn to delinquency, drug use, and various unconventional subcultures, while others maintain an essentially conforming pattern of behavior; nor can they account for emerging patterns of delinquency which may be unique to particular ages or birth cohorts. We therefore postulate that access to and involvement in delinquent learning and performance structures is a necessary (but not sufficient) variable in the etiology of delinquent behavior. Following Sutherland (1947), we maintain that delinquent behavior, like conforming behavior, presupposes a pattern of social relationships through which motives, rationalizations, techniques, and rewards can be learned and maintained (Burgess & Akers, 1966a and 1966b; Akers, 1977; Bandura, 1969, 1973; and Mischel, 1968). Delinquent behavior is thus viewed as behavior which has social meaning and must be supported and rewarded by social groups if it is to persist.

By the time children enter adolescence, virtually all have been sufficiently exposed to criminal forms of behavior to have “learned” or acquired some potential for such acts. The more critical issue for any theory of delinquency is why and how this universal potential is transformed into delinquent acts for some youths and not others. For most learning theorists, a distinction is made between learning and performance and the latter is directly tied to reinforcements (Rotter, 1954; Bandura & Walters, 1963; Hebb, 1966). Direct and vicarious reinforcements are, however, important determinants of response selection in performance.

The delinquent peer group thus provides a positive social setting that is essential for the performance and maintenance of delinquent patterns of behavior over time. Those committed to conventional goals, although they may have been exposed to and learned some delinquent behaviors, should not establish patterns of such behavior unless (1) their ties to the conventional social order are neutralized through some attenuating experiences and (2) they are participating in a social context in which delinquent behavior is rewarded. In social learning terms, they may have acquired or learned delinquent behavior patterns, but the actual performance and maintenance of such behavior are contingent on attenuation of their commitment to conventional norms and their participation in a social context supportive of delinquent acts. Alternatively, for those with weak ties and commitments to the conventional social order, there is no reason for a delay between acquisition and performance of delinquent acts.

In the causal sequence described by strain theory, the individual holds conventional goals but is unable to attain them by conventional means. If attachment to the goals is strong enough, it may support delinquent behavior without participation in delinquent groups, for attaining these goals may provide sufficient reinforcement to maintain the behavior. Therefore, our model shows one direct route to delinquent behavior from attenuating experiences, without mediating group support for delinquency. We view this as the atypical case, however, and postulate that it is difficult to sustain this causal sequence for extended periods of time.
Involvement in a delinquent group is a necessary condition for sustained patterns of delinquency among persons who do not subscribe to conventional goals (the weakly socialized person described by control theory). Individual patterns of delinquency (without group support) are more viable for those committed to conventional goals because there are generally shared expectations and social supports for achievement of those goals. For youths with weak bonds, involvement in a delinquent peer group serves this support function. Cohen (1966) has observed that delinquency often involves a desire for recognition and social acceptance, and, therefore, requires group visibility and support. Maintenance of delinquent behavior patterns should require some exposure to and participation in groups supporting delinquent activities. Though not a necessary condition for delinquent behavior among those with initially strong bonds, contact with delinquent groups should, nevertheless, increase the likelihood of sustained delinquent behavior.

Delineation of the delinquent peer group as a necessary condition for maintenance of delinquent behavior patterns represents an extension of previous statements of control theory. . . . It is one thing to be a social isolate with weak bonds to conventional peer groups and another to be highly committed to and integrated into a delinquent peer group. Both persons may be characterized as having weak bonds to the social order, with few conventional restraints on their behavior; but those committed to and participating in delinquent peer groups have some incentive and social support for specifically delinquent forms of behavior. We agree with Hirschi’s (1969) and Hepburn’s (1976) argument that those with a large stake in conformity (strong bonds) are relatively immune to delinquent peer group influence. However, we postulate that, in addition to weak bonding and an absence of restraints, some positive motivation is necessary for sustained involvement in delinquent behavior. In the absence of positive motivation, we would not predict significant involvement in delinquency across time even for those with weak bonds, for there is no apparent mechanism for maintaining such behavior (Brennan, Huizinga, & Elliott, 1978). It may be that some exploratory, “primary” forms of delinquency (Lemert, 1951) may occur without group support, or that this constitutes a pathological path to delinquency, but the maintenance of delinquent behavior patterns usually requires some exposure to and participation in groups supporting delinquent activity.

In sum, we postulate that bonding to conventional groups and institutions insulates one from involvement in delinquent patterns of behavior and that bonding to deviant groups or subcultures facilitates and sustains delinquent behavior. When examining the influence of social bonds, it is critical that the normative orientation of particular groups be taken into account. This focus on the normative orientations of groups is the central theme in subcultural theories of delinquency (Cohen, 1955; Cloward and Ohlin, 1960; and Miller, 1958) and constitutes an important qualification to a simple interpretation of the relationship between social bonds and delinquency. This position has an empirical as well as a theoretical base. . . .

**Delinquent Behavior**

Delinquent behavior is viewed as a special subclass of deviant behavior. While deviance includes all violations of all prevailing norms, delinquent behavior includes only violations of statutory proscriptive norms, or, as they are usually called, laws. Thus, delinquent behavior takes on special meaning because (1) there is generally broad community consensus for these norms, (2) virtually all persons are aware that these specific proscriptions are enforced by official sanctions, and (3) the risk of detection and punishment influences the performance of delinquent acts.
We are not concerned here with the isolated delinquent act. Our focus is on sustained patterns of delinquent behavior, whether the person involved is socially or self-defined as a delinquent or nondelinquent person. Although our definition of delinquency subsumes one characteristic of a delinquent role (sustained patterns of delinquent behavior), it is our view that continuing involvement in delinquency may not necessarily involve the enactment of a delinquent role (Becker, 1963). There is empirical evidence that many embezzlers, auto thieves, check forgers, shoplifters, and persons involved in violent assaults against persons (including rape) do not view themselves as criminal or delinquent (Gibbons, 1977; Lemert, 1951, 1953; Cameron, 1964; Robin, 1974; Gauthier, 1959; and Gebhard et al., 1965). Furthermore, many adolescents involved in sustained patterns of delinquent behavior are never apprehended and publicly labeled as delinquent persons, and have neither a public nor a self-definition as a delinquent or criminal person (Sykes and Matza, 1957; Reiss, 1962; Cameron, 1964; Hirschi, 1969; Kelly, 1977; and Jensen, 1972). Thus, our conceptualization of delinquency focuses on sustained patterns of illegal behavior and is logically independent of the concept of delinquent role.

Etiological Paths to Delinquency

There are two dominant etiological paths to delinquency in the paradigm shown in Figure 1. The first involves an integration of traditional control theory and social-learning theory. Weak integration into and commitment to the social order, absence of conventional restraints on behavior, and high vulnerability to the influence of delinquent peer groups during adolescence characterize the socialization experiences related to the first path. Depending on the presence and accessibility of conventional and delinquent peer groups, some weakly bonded youths turn to delinquency while others maintain an essentially conforming pattern of behavior or a legal, but unconventional, lifestyle. The crucial element in this path is the delinquent peer group. Weakly bonded youths may not hold conventional aspirations (as for academic peer group), but they do share in more general aspirations for friendship and acceptance, as well as status and material rewards, which may be offered through participation in a group. Given an absence of conventional restraints and access to delinquent groups, the reasons for involvement are not unlike those for involvement in more conventional peer groups during adolescence.

The second path represents an integration of traditional strain and social-learning perspectives. Youths who follow this path develop strong bonds to the conventional social order through their socialization experiences. The crucial element in this sequence is the attenuation, or weakening, of these bonds. Attenuating experiences during adolescence involve personal failure to achieve conventional goals and/or threats to the stability and cohesion of one’s conventional social groups. Once one’s bonds are effectively weakened, like those who never developed strong bonds, one is free to explore alternative means for goal achievement and to participate in delinquent or unconventional groups.

In most instances, this path also involves participation in peer groups which tolerate or encourage delinquent forms of behavior. It is our view that truly individual adaptations to this situation are unlikely to survive long enough to generate detectable patterns of delinquent behavior. However, two possible subtypes deserve mention. The diagram of this integrated paradigm shows a direct causal path from initially strong bonds and subsequent attenuation experiences to delinquent behavior patterns. Under some circumstances, participation in groups providing reinforcements for delinquent acts is unnecessary. Attenuating experiences are sufficient to motivate repeated
acts of delinquency, which are attempts to regain conventional rewards through unconventional means. This pattern involves the classic strain model, in which the person retains a strong commitment to conventional goals and values and uses illegal means as a temporary expedient. The attenuation process is only partial, and these youths retain some commitment to and integration into conventional groups. We anticipate such patterns to be of relatively short duration and to involve highly instrumental forms of delinquent behavior. Patterns of theft may characterize this etiological path.

A second subtype corresponds to that described generally by Simon and Gagnon (1976) in their article on the anomie of affluence. This path involves those whose commitments to conventional goals are attenuated by a decreasing gratification derived from goal achievement. Unlike the previously described subtype, which involved failure to achieve conventional success goals because of limited means or abilities, this type has ability and a ready access to legitimate means and is successful by conventional standards. The failure to derive personal gratification from “success” results in an attenuation of the commitment to these success goals and sets in motion a search for alternative goals whose attainment will provide a greater measure of personal gratification. This path to delinquency clearly requires participation in social groups in which delinquent behavior patterns can be learned and reinforced. This pattern of delinquency is characterized by a search for new experiences, which frequently involves illegal forms of behavior, such as illicit drug use and sex-related offenses.

At a more tentative level, we postulate that the two major paths (1) typically involve different forms of personal alienation and (2) result in different self-images and social labels. Conceptually, alienation plays a slightly different role within strain and control perspectives. From a control perspective, alienation, in the form of powerlessness, societal estrangement, and social isolation, directly reflects a weak personal commitment to conventional groups and norms. For strain theory, however, alienation represents a crucial intervening variable linking failure to delinquency. It is evidence of the attenuation of one’s commitment bond or, in Hirschi’s (1969) terms, the neutralization of “moral obstacles” to delinquency. In the form of alienation described by Cloward and Ohlin (1960), the neutralization is achieved through a blaming process in which failure is attributed to others or to general societal injustice. These same elements are present in Sykes and Matza’s (1957) techniques of neutralization. Cartwright et al. (1966) and Cartwright (1971) identify four types of alienation which provide this direct encouragement, justification, or permission for delinquency: normlessness, futility, lack of trust, and perceived indifference. If we assume some relationship between the two causal paths and social class, there is some indirect empirical support for the hypothesis that the form of alienation is tied to the strength of one’s initial commitment bond. . . .

We also hypothesize that those with initially strong bonds are less likely to view themselves as delinquent, even when they are involved in sustained patterns of delinquent behavior. Such persons are more likely to come from advantaged backgrounds and to have prosocial self-images. Consequently, they are likely to view their delinquent acts as temporary expedients, retaining at least a partial commitment to conventional goals. The probability of apprehension and public labeling by the police and courts is also much lower for such youths. In contrast, those who never developed strong bonds to the social order are more vulnerable to labeling processes and thus more likely to be viewed as delinquents by themselves and by others (Jensen, 1972). This
may account, in part, for the persistent view among law enforcement officials and the general public that most delinquents are poor and/or nonwhite, in spite of the compelling evidence that the incidence of delinquent behavior is unrelated to these variables.

**Summary and Discussion**

... We believe the synthesis of traditional strain, social control, and social-learning perspectives into a single paradigm has several advantages over a conceptualization which treats each theory as separate and independent. First, the provision for multiple etiological paths to delinquency in a single paradigm presents a more comprehensive view. The integration of strain and control perspectives assumes that these two paths are independent and additive and that their integration will account for more variance in sustained patterns of delinquent behavior than either can explain independently. Independent tests of these traditional perspectives in the past have often failed to include the variables necessary to test alternative explanations, and even when such variables were available, the alternative explanations were assumed to be competitive and were thus evaluated with respect to the relative strengths of the two competing hypotheses (Hirschi, 1969; and Eve, 1977). Such an approach misses the possibility that both hypotheses are correct and are accounting for different portions of the variance in delinquency. We have also suggested that different patterns of delinquency may be tied to alternative etiological paths; for example, we postulated that one of the strain paths (limited means/goal failure) should produce forms of delinquency which are considered very instrumental by conventional values. The alternative strain path (attenuated commitment to conventional goals) should result in less instrumental forms of delinquency, since it characteristically involves a search for new experiences (e.g., drug use) rather than attempts to achieve conventional goals.

Second, we believe that our integrated paradigm is consistent with previous empirical findings and offers some insight into contradictory findings. Previous research using the social control perspective has established a relationship between the strength of one’s bonds and social class, with low-SES and minority youths characterized by weaker bonds (Nye, 1958; Gold, 1963; McKinley, 1964; and Hirschi, 1969). In contrast, the attenuated commitment strain path has been associated with affluence, and the limited means-strain path seems most relevant to working-class youths. The combined effect seems consistent with the observed class distribution of self-reported delinquent behavior. Our assumption that weakly bonded youths run the greatest risk of official processing (because of greater surveillance in their neighborhoods, more traditional forms of delinquent behavior, and limited resources with which to avoid processing in the justice system) would account for the observed class distribution of official measures of delinquency. . . .

**References**


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**REVIEW QUESTIONS**

1. In the integrated model proposed by Elliott et al., which theoretical perspective is considered to be antecedent, or most important in the early stages, for developing delinquent or criminal tendencies? Do you agree with this portion of the model?

2. Do you think it is rational to merge theoretical perspectives that have opposing basic assumptions, such as merging strain theory, which claims that individuals are born good, with perspectives such as control theory, which claims that people are born bad and must be taught or controlled to be good? Or with learning theories, such as differential association/reinforcement, that assume individuals are born neither good nor bad, but rather as a “blank slate”? If you agree with such integration, explain the rationale for your reasoning. If not, why?

3. Ultimately, what do you think of Elliott et al.’s model? Do you think it was a good early attempt for an integrated theory, or do you think it is rather weak given the information they had at that time (1979)?
In this selection, Carter Hay examines the empirical validity of a more modern and well-respected integrated theoretical model, namely John Braithwaite’s theory of reintegrative shaming. We examined Braithwaite’s integrated model in the introduction to this section, and Hay provides one of the first empirical tests of the theory’s propositions regarding individuals. The author does this with an American sample, which consists of 197 adolescents from one region in the United States.

While reading this selection, readers should consider the extent to which the primary concepts or variables in the model are represented, such as the way youths are shamed negatively or in a more positive, reintegrative form. Also, readers should consider whether the effects of reintegrative shaming reduce delinquency among youth.
theories therefore present the potential for improved explanation of crime.

It is also true, however, that the recent growth in theory comes at some risk. If new theories are not (1) empirically tested and (2) discarded when support is lacking, the wave of new theory may prove overwhelming. Theoretical criminology could become fragmented as a result of an immense and confusing number of theories that have either limited or unknown levels of explanatory power. Moreover, the sheer number of theories would require considerable specialization among criminologists, thereby hindering communication across theoretical lines. To the extent that such fragmentation does in fact emerge, the question “What causes crime?” might become answerable in even less lucid terms than is presently the case.

Bernard and Snipes (1996) already see the field as fragmented, and Liska, Krohn, and Messner (1989:1) would seem to agree when they refer to the “seemingly chaotic state of affairs” in theoretical criminology. Bernard and Snipes’s central argument is that criminology has too many theories, and the resulting fragmentation impedes scientific progress. They warn that cynicism about criminological theorizing may already be rampant and may increase in the future. Bernard and Snipes cite theoretical integration as one solution to this problem, arguing that integration can reduce the number of crime theories and at the same time improve their overall quality.

Although the importance of integration should not be dismissed, an equally important solution is simply to ensure that recent theories receive sufficient empirical scrutiny. If new theories are to illuminate rather than obscure our understanding of the causes of crime, explicit tests of them are needed. With few exceptions (e.g., Gottfredson and Hirschi’s 1990 self-control theory and Agnew’s 1992 general strain theory), such research has not been done. This article addresses that void by reporting an exploratory test of one prominent new theory of crime: John Braithwaite’s (1989) reintegrative shaming theory.

### Reintegrative Shaming Theory

John Braithwaite first put forth reintegrative shaming theory (RST) in the book *Crime, Shame and Reintegration* (Braithwaite 1989). The theory’s essential argument is that the precise ways in which societies, communities, and families sanction deviance affect the extent to which their members engage in predatory criminal behavior. The key explanatory variable in the theory is shaming, which Braithwaite defines as any social process that expresses disapproval of a sanctioned act such that there is the intent or effect of invoking moral regret in the person being shamed (p. 100). Braithwaite is explicit about how shaming contrasts with a more classical view of sanctioning: “Shaming, unlike purely deterrent punishment, sets out to moralize [emphasis added] with the offender to communicate reasons for the evil of her actions” (p. 100).

Shaming is not, however, a uniform type of sanctioning—it can be done in different ways and in different contexts. Braithwaite (1989) distinguishes between two types of shaming. First, shaming is reintegrative when it reinforces an offender’s membership in the community of law-abiding citizens. This prevents the shamed individual from adopting a deviant master status and is accomplished when shaming (1) maintains bonds of love or respect between the person being shamed and the person doing the shaming, (2) is directed at the evil of the act rather than the evil of the person, (3) is delivered in a context of general social approval, and (4) is terminated with gestures or ceremonies of forgiveness (pp. 100–1).

Reintegrative shaming is contrasted with stigmatization, which is disintegrative shaming.
in which little or no effort is made to forgive offenders or affirm the basic goodness of their character and thus reinforce their membership in the community of law-abiding citizens. Stigmatization can be seen essentially as shaming in the absence of reintegration—it is the converse of each of the four aspects of reintegration mentioned earlier. The primary importance of stigmatization is that it treats offenders as outcasts and provokes a rebellious and criminal reaction from them: “Shaming that is stigmatizing . . . makes criminal subcultures more attractive because these are in some sense subcultures which reject the rejectors” (Braithwaite 1989:102).

RST’s basic prediction therefore is quite simple: There should be a negative relationship between the use of reintegrative shaming and the extent of criminal behavior. This prediction is applicable to both micro- and macro-level units of analysis. That is, just as individuals who are exposed to reintegrative shaming should commit fewer crimes, communities or societies with high levels of reintegrative shaming should have low aggregate rates of crime.

The focus of this study is the micro-level portion of the theory, and three further points about the theory should be emphasized. First, Braithwaite (1989) specifies the antecedent of reintegrative shaming: Whether individuals are exposed to reintegrative shaming to begin with should be a function of their involvement in interdependent relationships. Braithwaite describes interdependency in the following way:

Interdependency is a condition of individuals. It means the extent to which individuals participate in networks wherein they are dependent on others to achieve valued ends and others are dependent on them. . . . Interdependency is approximately equivalent to the social bonding, attachment and commitment of control theory. (pp. 99–100)

Braithwaite (1989) argues that several individual characteristics generally found to reduce crime—age (being younger than 15 and older than 25), being married, being female, and having a job—do so because they increase involvement in interdependent relationships and therefore increase the chances that rule-violating behavior will be met with reintegrative shaming rather than stigmatization.

Second, key to the theory is the interaction between reintegration and shaming: The combination of reintegration and shaming should have an effect on offending that exceeds the sum of each variable’s independent effects. In fact, strictly speaking, neither variable should have an independent effect on offending (Braithwaite 1989:99; Makkai and Braithwaite 1994:371–72). Instead, the effects of shaming should be conditional on the level of reintegration. When reintegration is high, shaming should be negatively related to offending. When reintegration is low, shaming has a stigmatizing effect and should be positively related to offending.

A third point to emphasize about RST is that it limits its scope to the explanation of predatory offenses against persons and property. The reason for this restricted focus is that reintegrative shaming is thought to be relevant only for offenses in which there is consensus regarding their moral wrongfulness. When such consensus is lacking, shaming should not be influential.

The Current Study

This study reports an exploratory test of the micro-level predictions of RST. As has been noted elsewhere (Braithwaite 1989:120-21; Hay 1998:424), there are substantial barriers to testing the macro-level portions of RST. Using survey research to measure reintegrative shaming across a sample of communities or societies
would be prohibitively expensive. Moreover, researchers have yet to identify proxies for community- or societal-wide levels of reintegrative shaming.

This study instead will examine the more testable micro-level arguments of RST. Specifically, adolescents are taken as the units of analysis, and the focus is on the relationship between their perceptions of their parents’ sanctioning methods and their reports of predatory delinquency. This strategy would seem acceptable to Braithwaite (1989), who noted that “the best place to see reintegrative shaming at work is in loving families” (p. 56). The analysis will address three principal research questions: (1) What variables predict the extent to which parents respond to adolescent rule-violating behavior with reintegration and shaming? (2) Do reintegration and shaming statistically interact to affect predatory delinquency, or are their effects additive? (3) Are any observed effects of reintegration and shaming on delinquency merely a result of spuriousness?

Data and Method

Sample. The data used to examine the research questions mentioned above come from anonymous, self-administered questionnaires completed by a sample of 197 adolescents taken from a single urban area in a southwestern state of the United States. Respondents were located through their attendance in a single high school located in the central part of the urban area. This school was chosen because of its diversity in race/ethnicity and socioeconomic status. All students enrolled in physical education classes during the fall of 1998 were invited to participate in the study. Roughly 60 percent of students completed and returned the necessary consent forms and took part in the study.

Table 1 shows the demographic characteristics of the sample. Most respondents are between the ages of 14 and 17, and the sex ratio of the sample is roughly 1 to 1. The sample is diverse in terms of race/ethnicity, with Whites, Hispanics, and Africans Americans all highly represented. Family disruption is common, with only 45 percent of respondents living in a household with their biological mother and father. Also, close to 45 percent of respondents’ parents have a high school diploma or less.

Measurement of key variables. As more quantitative tests of RST emerge, knowledge of how reintegration and shaming should be measured will emerge as well. For now, however, this study makes essentially the same qualifying statement that has appeared in two prior quantitative analyses of RST (Makkai and Braithwaite 1994:368; Zhang 1995:251): Measuring reintegration and shaming is no easy task, and the measures used in this study should be improved on as more research is conducted.
Consistent with Braithwaite’s (1989:100) discussion of shaming, the key measurement concern was to identify sanctions that involved “moralizing.” Three survey items were selected and scaled. With these items, respondents were asked to indicate how much importance their mother and father place on three goals when reacting to a violation of any rule considered important by the parent: convincing the adolescent that what he or she did was immoral or unfair, making him or her feel guilty or ashamed for what was done, and having him or her “make up” for the actions by apologizing or helping to erase any harm that was done.3

Parents’ use of reintegration was measured with a scale comprising four items that correspond to the four aspects of reintegration discussed earlier. The first two items asked respondents to indicate how much they agreed or disagreed that their parents see them as good people even when upset with them and treat them with respect when they are disciplining them. For the last two items, respondents assessed how likely it is that in response to their rule violations, parents would tell them that they are “bad kids” and eventually express their forgiveness to the adolescents.

All of the shaming and reintegration items asked respondents to assess their mother and father separately. Preliminary analyses indicated that mothers and fathers did not differ in terms of their use of shaming and reintegration or the effects of those variables on predatory offending. Scores for mothers and fathers were therefore combined to create an overall score for parents. Responses to the shaming and reintegration scales were coded so that high scorers perceive high levels of the two variables.

Delinquency was measured with two different variables. The first is a nine-item scale of early childhood antisocial behavior that will be used to protect against spuriousness and examine whether childhood behavioral problems predict parents’ use of reintegrative shaming. For these items, respondents were asked to indicate the earliest age at which they committed nine offenses: breaking into a building or house, stealing things worth $50 or less, stealing things worth more than $50, purposely damaging or destroying property, taking a car for a drive without the owner’s permission, getting in a fight with someone with the idea of seriously hurting him or her, carrying a hidden weapon such as a knife or gun, drinking alcohol, and using marijuana or some other drug. For each item, responses were coded 1 if the respondent reported committing the act by age 11 or earlier and 0 if he or she had not. The nine items were summed to produce a measure of childhood antisocial behavior, with possible scores ranging from 0 to 9 and a mean of 1.24.

The second delinquency variable is a measure of adolescents’ projected involvement in the first seven offenses listed above. Importantly, each of the seven acts is an illegal violent or property offense and therefore fits within RST’s emphasis on predatory offenses. These survey items asked respondents the following question: “If you found yourself in a situation where you had the chance to do the following things [each of the seven offenses], how likely is it that you would do each one?” Respondents chose an answer from a scale of 0 to 10, where 0 means there is no chance that they would commit the act, 5 means there is a “50-50 chance,” and 10 means that they definitely would commit the act. The seven items were averaged to create a projected predatory delinquency scale, with scores ranging from 0 to 10 and a mean of 2.55. The Cronbach’s alpha for the scale is .90.

This measure of projected delinquency—rather than self-reported past delinquency—was used as a dependent variable to avoid the causal order problems that often arise in cross-sectional delinquency research. Cross-sectional studies that use self-reported past offending as the dependent variable suffer inherent causal order problems if independent variables are measured with items about respondents’ current attitudes and
perceptions—any assertion of appropriate causal order is questionable if current attitudes and perceptions are used to explain past behavior. Thus, the clear strength of a projected offending variable is that it allows for clear conceptualization of causal ordering with cross-sectional data (Tittle 1977:586).

Measures of projected offending have been used effectively by a number of other researchers (e.g., Bachman, Paternoster, and Ward 1992; Grasmick, Bursik, and Arneklev 1993; Grasmick and Bursik 1990; Jensen and Stitt 1982; Tittle 1980). A few things attest to their validity. First, variables that are known to predict self-reported offending in longitudinal designs have also been found to predict projected offending (Jensen and Stitt 1982; Tittle 1980). Second, using a two-wave panel design, Green (1989) found that projections of future deviance were highly correlated with actual subsequent deviance ($r = .80$). The current evidence therefore suggests that measures of projected offending are useful for avoiding the causal order problems associated with cross-sectional data.

### Analysis

#### The Prediction of Reintegration and Shaming

The first issue to consider involves the antecedents of parental reintegration and shaming—that is, what variables predict that adolescents’ parents will respond to their rule-violating behavior with reintegration and shaming? Braithwaite (1989) argues that involvement in interdependent relationships should be the most important factor; moreover, many demographic variables known to predict offending may do so because they increase involvement in interdependent relationships.

To consider that possibility, three regression equations were estimated for both dependent variable, reintegration and shaming. Equation (1) includes five exogenous variables: four demographic variables (age, sex, family structure, and race/ethnicity) and a measure of childhood antisocial behavior. Although Braithwaite (1989) makes no reference to how childhood behavior problems affect parental reintegration and shaming during adolescence, much research suggests that parent-child interactions are highly reciprocal (e.g., Cohen and Brook 1995; Kandel and Wu 1995; Sampson and Laub 1993).

Equations (2) and (3) consider the role of parent-child interdependency. Equation (2) adds individual measures of three parent-child interdependency variables—adolescent attachment to parents, adolescent perceptions of parents’ feelings of attachment for them, and adolescent reports of instrumental and intimate communication with parents. If Braithwaite’s (1989) predictions are correct, the parent-child interdependency variables should have significant effects on reintegration and shaming, and their inclusion in the model should substantially weaken any effects of the exogenous variables that are observed in equation (1). Equation (3) examines the same issue, but rather than considering interdependency as three separate variables, a combined measure is used. This combined measure is simply an average of its three component parts.

Table 3 shows the results of the analysis and reveals moderate support for RST’s predictions. Looking first at the results of equation (1) for reintegration, only race/ethnicity and childhood antisocial behavior significantly affect parents’ use of reintegration. Consistent with Braithwaite’s (1989) predictions, both effects are reduced (childhood antisocial behavior is rendered insignificant) when the interdependency variables are introduced into equation (2). The effects of both attachment to parents and perceived parental attachment to the child are statistically and substantively significant. The effect of parent-child communication is less impressive but is nevertheless in the predicted direction and higher than those.
observed for the exogenous variables. Equation (3) shows a similar pattern, revealing that the combined interdependency variable has a substantial effect ($\beta = .72$) on reintegrating.

Perhaps most notable about these results is the substantial increase in explained variance that occurs when the interdependency variables are included in the model. In equation (1), the explained variance for reintegrating is less than 10 percent, but in equations (2) and (3), explained variance is nearly 60 percent.

The results for shaming are generally less supportive of RST’s predictions. The results for equation (1) reveal that none of the exogenous variables have an effect on shaming, and they combine to explain just 2 percent of the variation in parental shaming. When the three interdependency variables are included in equation (2), explained variance improves to
7 percent, although none of the three have a statistically significant effect on shaming. This is due in part to the shared variance between the three measures of interdependency—equation (3) reveals that when they are combined into a single measure, the effect of interdependency on shaming ($\beta = .20$) is significant. Nevertheless, the explained variance (6 percent) in equation (3) remains low. By and large, the effect of parent-child interdependency on parental shaming is relatively modest but apparent nonetheless.

Testing for a Reintegration-Shaming Interaction

The next issue to consider involves the way in which reintegration and shaming affect predatory delinquency. RST predicts that the two interact, but it may be that their effects are additive rather than interactive—that is, the combination of reintegration and shaming may not produce an effect that exceeds the sum of each variable’s independent effects on delinquency (Hay 1998:430–31).

The typical strategy for detecting an interaction between two variables is to enter a multiplicative term into an ordinary least squares (OLS) equation that includes parameters for the two main effects. This is not the preferred strategy, however, for assessing the interaction in question here. Jointly considering reintegration and shaming yields four parental sanctioning combinations, including sanctioning that is (1) high in both reintegration and shaming, (2) high in reintegration but low in shaming, (3) low in reintegration but high in shaming, and (4) low in both reintegration and shaming. Using a multiplicative term to express this interaction would obscure how each combination is distinct from the others.

To capture these distinctions, respondents’ reintegration and shaming scores were collapsed into two categories—high or low—on the basis of whether they were above or below the median. This created the four combinations listed above: high reintegration/high shaming, high reintegration/low shaming, low reintegration/high shaming, and low reintegration/low shaming. Dummy variables were then constructed to represent the four categories.

Equation (1) of Table 4 regresses projected predatory offending on three of the dummy variables (low reintegration/low shaming is the reference category) as well as control variables for sex, age, family structure, race/ethnicity, and childhood antisocial behavior. This model does not directly bear on the issue of interaction but rather reveals how projected offending is distributed across the four categories of reintegration and shaming. The relatively large, negative coefficient for each dummy variable indicates that each category is associated with lower projected offending than the low-reintegration/low-shaming category omitted from the model. Consistent with RST, this strongly suggests the delinquency-generating effects of being exposed to neither reintegration nor shaming.

### Table 3

<table>
<thead>
<tr>
<th>Independent Variable</th>
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<th>2</th>
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<tbody>
<tr>
<td>High reintegration/</td>
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<td>.07</td>
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<tr>
<td>high shaming</td>
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<td></td>
</tr>
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<td>−.02</td>
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<td>low shaming</td>
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<td>Low reintegration/</td>
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<td>−.08</td>
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<tr>
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<td></td>
</tr>
<tr>
<td>Shaming</td>
<td>−1.16**</td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>.33</td>
<td>.36</td>
</tr>
</tbody>
</table>

**Note:** Low reintegration/low shaming is the omitted category. Both equations include controls for age, sex, race/ethnicity, and childhood antisocial behavior.

* $p < .05$. ** $p < .08$. 

In contrast to the RST’s predictions, however, the negative effect of the high-reintegration/high-shaming category—the reintegrative shaming category—is not statistically different from the effects of the other two categories included in the model. In fact, that the low-reintegration/high-shaming category—what Braithwaite (1989) refers to as stigmatization—has a negative rather than positive coefficient is itself contradictory to RST. Braithwaite clearly predicts that stigmatization should produce a higher rate of projected offending than any other category.

Although informative, equation (1) does not address the issue of interaction because main effects for reintegration and shaming were not included in the model and thus not partialed out from the effects of the dummy variables. Equation (2) includes the two main effects. The results for equation (2) suggest that reintegration and shaming affect offending additively rather than interactively. The main effects of reintegration ($\beta = -0.29$) and shaming ($\beta = -0.16$) on predatory delinquency are significant (at $p = .08$ for shaming) and of at least moderate strength. Of principal importance is that none of the three dummy variables has an effect on delinquency that is significantly different from the omitted category.6

Two things should be noted about this finding of no interaction. First, it runs counter to the findings of Makkai and Braithwaite (1994), who observed that reintegration and shaming from health inspectors interact to affect nursing homes’ compliance with regulatory standards. Second, although a finding of no interaction runs counter to RST, it does not suggest that reintegration and shaming are without importance. Quite the opposite, both variables are significantly and negatively related to projected offending, even after controlling for one another; dummy variables representing the different categories of reintegration and shaming; and theoretically relevant control variables, including childhood antisocial behavior. A tentative conclusion that can therefore be made is that reintegration and shaming appear to affect delinquency additively in these data. Each variable—but especially reintegration—exerts an independent effect on delinquency, but the combination of the two produces no effect marginal to those independent effects.

Testing for Spuriousness

Before concluding that reintegration and shaming are significant causes of offending, the possibility of spuriousness must be ruled out. The apparent effect of reintegration and shaming on delinquency may simply reflect that all three result from the same prior cause. The analyses shown in Table 4 partially protected against this by including controls for basic demographic variables and childhood antisocial behavior. Perhaps the most important source of spuriousness, however, may be parent-child interdependency—that is, reintegration and shaming may appear to be causes of delinquency only because all three are by-products of parent-child interdependency.

To consider that possibility, two OLS equations were estimated, and the results are shown in Table 5. Equation (1) regresses projected predatory delinquency on reintegration, shaming, and controls for age, sex, family structure, race/ethnicity, and childhood antisocial behavior. Consistent with the earlier findings, moderately large effects of reintegration and shaming are revealed. Both effects are statistically significant, but the standardized effect of reintegration ($\beta = -0.24$) is greatest. Equation (2) of Table 5 tests for spuriousness by adding the composite parent-child interdependency variable that combines the three separate interdependency variables used earlier. If the effects of reintegration and shaming are causal effects, they should persist even when controlling for interdependency, given RST’s clear prediction that interdependency is a cause of reintegration and shaming rather than a mediator of their effects on offending (Braithwaite 1989:99).
The results for equation (2) suggest that reintegration’s effect is spurious but that the effect of shaming is not. When parent-child interdependency is included in the equation, the effect of reintegration is entirely eliminated (the beta goes from −.24 to .05), whereas the negative effect of shaming is reduced less dramatically (the beta goes from −.17 to −.12) and remains statistically significant. Including the interdependency variable resulted in only a moderate increase (from .35 to .42) in $R^2$, pointing to the overlap between reintegration and interdependency.7

Admittedly, the failure of reintegration to retain its significance when interdependency was controlled may result from inadequate measurement of reintegration. Recall that reintegration was measured with just 4 items, whereas interdependency was measured with 12. Moreover, the newness of RST and the lack of prior quantitative tests precluded the use of empirically validated measures of either reintegration or shaming. Most of the interdependency items, on the other hand, have been used effectively in delinquency research over the past several decades. Given the obvious conceptual overlap between parental reintegration and parent-child interdependency, this analysis may have favored the better measured variable.

The enduring effect of shaming, however, is worth emphasizing. Despite the same measurement limitations faced with reintegration, equation (2) of Table 5 reveals that shaming significantly reduces predatory delinquency even after controlling for reintegration, parent-child interdependency, childhood antisocial behavior, and important demographic variables such as age, sex, race/ethnicity, and family structure. Shaming is arguably the most novel aspect of RST, and this analysis suggests its potential importance to the explanation of predatory delinquency.

### Discussion and Conclusion

The past two decades have seen an explosion in theories of crime and delinquency causation, but these theories have received limited empirical attention. This article sought to address that void by testing the micro-level portion of reintegrative shaming theory as it applies to the sanctioning methods used by parents with adolescents. Because this is one of the first explicit tests of RST, firm conclusions about the theory’s validity and defects are not warranted. Nevertheless, three key findings are worth reflecting on: (1) the strong relationship between parent-child interdependency and reintegration, (2) the apparent spuriousness of the reintegration-delinquency relationship, and (3) the durable independent effect of shaming on delinquency.

First, consistent with RST’s predictions, this study revealed a strong relationship between the level of parent-child interdependency and parents’ use of reintegration. Interdependency also had a significant effect on shaming, but its effect on reintegration was notably stronger—interdependency and reintegration share about 50 percent of their variation. If nothing else, this strong effect clearly supports the idea that parents who have a close

### Table 4

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>1</th>
<th>2</th>
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<tbody>
<tr>
<td>Reintegration</td>
<td>−.24*</td>
<td>.05</td>
</tr>
<tr>
<td>Shaming</td>
<td>−.17*</td>
<td>−.12*</td>
</tr>
<tr>
<td>Parent-child interdependency</td>
<td>—</td>
<td>−.41*</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.35</td>
<td>.42</td>
</tr>
</tbody>
</table>

*Note: Both equations include controls for age, sex, race/ethnicity, family structure, and childhood antisocial behavior.

* $p < .05.$
relationship with their children are likely to sanction in such away that reinforces that close relationship.

But this strong statistical relationship between parent-child interdependency and reintegration contributes to a second key finding: An initial effect of reintegration on delinquency disappeared when parent-child interdependency was held constant. This was interpreted as evidence that the initial effect of reintegration was spurious—reintegration was related to delinquency only because each was the result of interdependency. This interpretation is consistent with RST’s specification of causal order: Interdependency affects the level of reintegration, which in turn affects delinquency. Because reintegration is supposed to be the variable most proximate to delinquency, its effect should have remained.

An alternative possibility with these two variables is that their actual causal order is opposite what RST predicts—it may be that reintegrative sanctioning of children leads to high parent-child interdependency rather than vice versa. If that were the case, the findings presented here would be just as expected. Future research might be usefully directed toward sorting out the causal order of these variables, paying special attention to the possibility that parental reintegration and parent-child interdependency are reciprocally related to one another in the same way that many other delinquency-causing variables are (Thornberry et al. 1994).

A third key finding of this study involves the durable, independent effect of shaming on delinquency. Shaming—arguably the most novel aspect of RST (see Hay 1998:423)—was significantly and negatively related to projected delinquency even when controlling for age, sex, family structure, race/ethnicity, childhood antisocial behavior, and parent-child interdependency. Moreover the negative effect of shaming was not dependent on the level of reintegration—the effect was strong when reintegration was at both high and low levels (see equation [1] of Table 4). Although this clearly suggests the potential importance of shaming, strictly speaking, it is not entirely supportive of RST, which argues that shaming should be negatively related to delinquency only when reintegration is high.

One possibility to consider in future research is that contrary to RST, moral-based sanctions such as shaming may rarely be stigmatizing, even when used in the absence of high reintegration or interdependency. Research in developmental psychology has consistently shown that moral- and reason-based sanctions are generally effective at controlling adolescents, especially relative to sanctions based on coercion and intimidation (see, e.g., Bandura and Walters 1959; Baumrind 1991; Patterson, Reid, and Dishion 1992; Sears, Maccoby, and Levin 1957). In short, RST’s emphasis on the harmful effects of stigmatization may be appropriate, but shaming as defined by RST may not be a source of such stigmatization, even in the absence of reintegration. Future research may consider that stigmatization is likely to result not from moral-based sanctions such as shaming but rather, from such things as physical punishment, harsh verbal attacks, and similar forms of intensely antagonistic sanctioning.

In concluding, it can be noted that like most empirical tests of theory, the findings in this study are neither uniformly supportive nor unsupportive. The findings here do suggest, however, that RST and its central concept of shaming are worthy of greater empirical attention than they have received thus far. Future empirical tests may involve micro-level tests of the theory such as the one reported here or, conversely, macro-level analyses of community or societal rates of crime. Or better yet, future tests should consider the micro/macro linkages that can be derived from RST. At any rate, increased attention to RST and other recent theories will be necessary if those theories are to contribute to rather than complicate our understanding of the causes of crime.
Notes


2. Physical education is a required course for all students except those on athletic teams. Rather than taking normal physical education classes, athletes enroll in a class specific to their sport. Most students at this school fulfill the physical education requirement during their first two years of high school.

3. There is some question as to whether RST is a theory of crime causation or recidivism (Hay 1998:432). From a measurement standpoint, this is an important question. If RST is a theory of crime causation, then measurement should focus on reintegration and shaming in response to any rule-violating behavior, including noncriminal acts. On the other hand, if RST is solely a theory of recidivism, reintegration and shaming should be relevant only in response to criminal acts.

Braithwaite (1989) is not clear on the issue, so different interpretations are possible. The position taken here is that RST is a theory of both causation and recidivism. Whether it is treated as one or the other in a given study will depend largely on which sanctioning institution is the focus. For example, if the micro-level theory is tested by examining the extent of reintegrative shaming found in juvenile court dispositions, this would obviously be examining RST as a theory of recidivism because individuals would not be exposed to the sanctioning had they not already committed a crime. However, when parental sanctioning is the focus, it makes more sense to examine RST as a theory of crime causation because the vast majority (perhaps all) of parental sanctions will be directed at noncriminal rule violations. Moreover, parental sanctioning begins at an age prior to when crime is possible. So the question here becomes, “How does parental reintegrative shaming in response to all rule-violations, including noncriminal violations, prevent involvement in serious criminal violations?”

4. Admittedly, RST makes no prediction that age differences within this range (roughly 14–17) will explain offending or exposure to reintegration and shaming. Rather, it predicts that age differences should exist between those inside this range and those outside of it. Thus, including this demographic variable does not explicitly test RST’s predictions about the effects of age on reintegration and shaming.

5. The interdependency variables were measured in a way consistent with Braithwaite’s (1989) argument that interdependency approximates Hirschi’s (1969) notion of the social bond. Because parental sanctioning is the focus of this study, interdependency between the parent and child in particular was emphasized. The following scales were used, with adolescents indicating how much they agree or disagree with each statement. Each item was answered separately for mothers and fathers, and the scores were combined to create an overall score for parents. All items were coded so that high values correspond to high interdependency.

Adolescent attachment to parents:

I’m closer to my mother/father than a lot of kids are to theirs.

Having a good relationship with her/him is important to me.

I would like to be the kind of person she/he is.

Adolescent perceptions of parents’ feelings of attachment:

She/he is interested in what I do.

She/he encourages me to discuss my problems with her/him.

I think she/he shows more interest in my brothers and sisters than in me.

Other mothers/fathers seem to show more interest in their children than mine does in me.

She/he tries to understand my problems and worries.

Parent-child communication:

I often share my thoughts and feelings with my mother/father.

I enjoy letting her/him in on my “big” moments.
I often talk to her/him about problems that I am facing.

I often talk to her/him about my plans for the future.

6. Multicollinearity is a concern with regression equations that include interaction terms and the variables used to construct them. In this case, examination of variance inflation factors (VIFs) indicated no cause for concern. VIFs for the three interaction dummy variables were 3.35, 3.23, and 4.49—well below the point at which multicollinearity typically is seen as problematic (see Myers 1990:369; Stevens 1992:77). An additional equation was estimated without the control variables. This lowered the VIFs for the dummy variables slightly to 3.17, 3.10, and 4.23. This equation once again indicated that the interaction dummy variables were not significantly related to crime, but the two main effects were.

7. The $F$ test ($F = 19.9$, $df = 1,166$) for this difference is, however, significant at $p < .01$. Other analyses indicate that the $R^2$ for the model in equation (2) of Table 5 is also marginally higher than that found for an equation that only includes interdependence ($R^2 = 40$), but this difference ($F = 2.00$, $df = 2.168$) is not significant.

### References


**REVIEW QUESTIONS**

1. According to Hay, what types of factors seem to be important in determining whether parents use reintegrative disciplinary strategies, as opposed to more stigmatizing techniques? If you were (or are) a parent, do these strategies make sense to you in the disciplining of your own child(ren)?

2. From the results of this study, do the effects of reintegration and shaming tend to interact to predict offending? If so, how? If not, give your reasons why they do not seem to interact.

3. What other factors may account for the findings of this study, specifically reintegration and shaming? Did Hay find evidence that other such factors seemed to account for such findings?

4. Do you think Braithwaite’s model of reintegrative shaming could work in the United States as a whole? Explain your reasoning for your answer.

**READING**

In this selection, Terence Thornberry presents an integrated model that primarily merges two theoretical perspectives, specifically control theory and differential reinforcement/social learning theory. However, the primary distinction between previous integrated frameworks and Thornberry’s model is that Thornberry takes into account the reciprocal, or feedback, effects that certain variables may have on the increase of delinquent/criminal behavior.

For example, Thornberry claims that weak bonds to parents (a control concept) may lead to association with delinquent peers (a differential association/social learning concept), which is likely to lead to parents having even weaker bonds with the individual/youth. So it is proposed that the fact that a youth gets in trouble is likely to lead to more alienation or weaker bonds with the youth’s parents, which is quite likely in reality. Such an effect is a good example of a reciprocal effect or feedback effect, and this is just one of the many reciprocal effects that are proposed in this model. Thornberry’s integrated model of offending is full of such reciprocal (or feedback) effects, and this is what distinguishes his model from previous integrated frameworks, or any of the traditional theoretical models that attempted to explain offending.

While reading this selection, readers should consider their own experience or those of others they know who were caught once (and maybe arrested) for a relatively minor charge. The social “fallout” from this initial arrest may have resulted in more adverse reactions from parents (or others), and that made the other factors, such as delinquent peers, more prominent. Readers may notice that this type of reciprocal or feedback loop resembles labeling theory,

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in which a person commits an initial (often minor) offense and is labeled an offender, leading to worse and more frequent offending. Although Thornberry does not specifically invoke labeling theory in his theory, there is an obvious comparison to be made between the reciprocal effects he discusses and the effects of stigmatization that labeling theorists make in their explanatory models. Still, Thornberry’s integrated model was one of the first integrated frameworks that actually incorporated such reciprocal or feedback effects into the theory of why individuals engage in offending behavior.

**Toward an Interactional Theory of Delinquency**

Terence P. Thornberry

**Origins and Assumptions**

The basic premise of the model proposed here is that human behavior occurs in social interaction and can therefore best be explained by models that focus on interactive processes. Rather than viewing adolescents as propelled along a unidirectional pathway to one or another outcome—that is, delinquency or conformity—it argues that adolescents interact with other people and institutions and that behavioral outcomes are formed by that interactive process. For example, the delinquent behavior of an adolescent is formed in part by how he and his parents interact over time, not simply by the child’s perceived, and presumably invariant, level of attachment to parents. Moreover, since it is an interactive system, the behaviors of others—for example, parents and school officials—are influenced both by each other and by the adolescent, including his or her delinquent behavior. If this view is correct, then interactional effects have to be modeled explicitly if we are to understand the social and psychological processes involved with initiation into delinquency, the maintenance of such behavior, and its eventual reduction.

Interactional theory develops from the same intellectual tradition as the theories mentioned above, especially the Durkheimian tradition of social control. It asserts that the fundamental cause of delinquency lies in the weakening of social constraints over the conduct of the individual. Unlike classical control theory, however, it does not assume that the attenuation of controls leads directly to delinquency. The weakening of controls simply allows for a much wider array of behavior, including continued conventional action, failure as indicated by school dropout and sporadic employment histories, alcoholism, mental illness, delinquent and criminal careers, or some combination of these outcomes. For the freedom resulting from weakened bonds to be channeled into delinquency, especially serious prolonged delinquency, requires an interactive setting in which delinquency is learned, performed, and reinforced. This view is similar to Cullen’s structuring perspective which draws attention to the indeterminacy of deviant behavior. “It can thus be argued that there is an indeterminate and not a determinate or etiologically specific relationship between motivational variables on the one hand and any particular form of deviant behavior on the other hand” (Cullen, 1984, p. 5).

Although heavily influenced by control and learning theories, and to a lesser extent by strain and culture conflict theories, this is not an effort at theoretical integration as that term is usually used (Elliott, 1985). Rather, this
The present paper is guided by what we have elsewhere called theoretical elaboration (Thornberry, 1987). In this instance, a basic control theory is extended, or elaborated upon, using available theoretical perspectives and empirical findings to provide a more accurate model of the causes of delinquency. In the process of elaboration, there is no requirement to resolve disputes among other theories—for example, their different assumptions about the origins of deviance (Thornberry, 1987, pp. 15–18); all that is required is that the propositions of the model developed here be consistent with one another and with the assumptions about deviance stated above.

**Organization**

The presentation of the interactional model begins by identifying the central concepts to be included in the model. Next, the underlying theoretical structure of the proposed model is examined and the rationale for moving from unidirectional to reciprocal causal models is developed. The reciprocal model is then extended to include a developmental perspective, examining the theoretical saliency of different variables at different developmental stages. Finally, the influence of the person’s position in the social structure is explored. Although in some senses the last issue is logically prior to the others, since it is concerned with sources of initial variation in the causal variables, it is discussed last so that the reciprocal relationships among the concepts—the heart of an interactional perspective—can be more fully developed.

**Theoretical Concepts**

Given these basic premises, an interactional model must respond to two overriding issues. First, how are traditional social constraints over behavior weakened and, second, once weakened, how is the resulting freedom channeled into delinquent patterns? To address these issues, the present paper presents an initial version of an interactional model, focusing on the interrelationships among six concepts: attachment to parents, commitment to school, belief in conventional values, associations with delinquent peers, adopting delinquent values, and engaging in delinquent behavior. These concepts form the core of the theoretical model since they are central to social psychological theories of delinquency and since they have been shown in numerous studies to be strongly related to subsequent delinquent behavior (see Elliott et al., 1985, Chs. 1-3, for an excellent review of this literature).

The first three derive from Hirschi’s version of control theory (1969) and represent the primary mechanisms by which adolescents are bonded to conventional middle-class society. When those elements of the bond are weakened, behavioral freedom increases considerably. For that freedom to lead to delinquent behavior, however, interactive settings that reinforce delinquency are required. In the model, those settings are represented by two concepts: associations with delinquent peers and the formation of delinquent values which derive primarily from social learning theory. For the purpose of explicating the overall theoretical perspective, each of these concepts is defined quite broadly. Attachment to parents includes the affective relationship between parent and child, communication patterns, parenting skills such as monitoring and discipline, parent-child conflict, and the like. Commitment to school refers to the stake in conformity the adolescent has developed and includes such factors as success in school, perceived importance of education, attachment to teachers, and involvement in school activities. Belief in conventional values represents the granting of legitimacy to such middle-class values as education, personal industry, financial success, deferral of gratification, and the like.

Three delinquency variables are included in the model. Association with delinquent
peers includes the level of attachment to peers, the delinquent behavior and values of peers, and their reinforcing reactions to the adolescent’s own delinquent or conforming behavior. It is a continuous measure that can vary from groups that are heavily delinquent to those that are almost entirely nondelinquent. Delinquent values refer to the granting of legitimacy to delinquent activities as acceptable modes of behavior as well as a general willingness to violate the law to achieve other ends. Delinquent behavior, the primary outcome variable, refers to acts that place the youth at risk for adjudication; it ranges from status offenses to serious violent activities. Since the present model is an interactional one, interested not only in explaining delinquency but in explaining the effects of delinquency on other variables, particular attention is paid to prolonged involvement in serious delinquency.

### Model Specification

A causal model allowing for reciprocal relationships among the six concepts of interest—attachment to parents, commitment to school, belief in conventional values, association with delinquent peers, delinquent values, and delinquent behavior—is presented in Figure 1. This model refers to the period of early adolescence, from about ages 11 to 13, when delinquent careers are beginning, but prior to the period at which delinquency reaches its apex in terms of seriousness and frequency. In the following sections the model is extended to later ages.

The specification of causal effects begins by examining the three concepts that form the heart of social learning theories of delinquency—delinquent peers, delinquent values, and delinquent behavior. For now we focus on the reciprocal nature of the relationships, ignoring until later variations in the strength of the relationships. Traditional social learning theory specifies a causal order among these variables in which delinquent associations affect delinquent values and, in turn, both produce delinquent behavior (Akers, Krohn, Lanza-Kaduce, & Radosevich, 1979; Matsueda, 1982). Yet, for each of the dyadic relationships involving these variables, other theoretical perspectives and much empirical evidence suggest the appropriateness of reversing this causal order. For example, social learning theory proposes that associating with delinquents, or more precisely, people who hold and reinforce delinquent values, increases the chances of
delinquent behavior (Akers, 1977). Yet, as far back as the work of the Gluecks (1950) this specification has been challenged. Arguing that “birds of a feather flock together,” the Gluecks propose that youths who are delinquent seek out and associate with others who share those tendencies. From this perspective, rather than being a cause of delinquency, associations are the result of delinquents seeking out and associating with like-minded peers.

An attempt to resolve the somewhat tedious argument over the temporal priority of associations and behavior is less productive theoretically than capitalizing on the interactive nature of human behavior and treating the relationship as it probably is: a reciprocal one. People often take on the behavioral repertoire of their associates but, at the same time, they often seek out associates who share their behavioral interests. Individuals clearly behave this way in conventional settings, and there is no reason to assume that deviant activities, such as delinquency, are substantially different in this regard.

Similar arguments can be made for the other two relationships among the delinquency variables. Most recent theories of delinquency, following the lead of social learning theory, posit that delinquent associations lead to the formation of delinquent values. Subcultural theories, however, especially those that derive from a cultural deviance perspective (Miller, 1958) suggest that values precede the formation of peer groups. Indeed, it is the socialization of adolescents into the “lower-class culture” and its particular value system that leads them to associate with delinquent peers in the first place. This specification can also be derived from a social control perspective as demonstrated in Weis and Sederstrom’s social development model (1981) and Burkett and Warren’s social selection model (1987).

Finally, the link between delinquent values and delinquent behavior restates, in many ways, the basic social psychological question of the relationship between attitudes and behavior. Do attitudes form behavior patterns or does behavior lead to attitude formation? Social psychological research, especially in cognitive psychology and balance models (for example, Festinger, 1957; Brehm and Cohen, 1962) points to the reciprocal nature of this relationship. It suggests that people indeed behave in a manner consistent with their attitudes, but also that behavior is one of the most persuasive forces in the formation and maintenance of attitudes.

Such a view of the relationship between delinquent values and behavior is consistent with Hindelang’s findings: this general pattern of results indicates that one can “predict” a respondent’s self approval [of illegal behaviors] from knowledge of that respondent’s involvement/non-involvement [in delinquency] with fewer errors than vice-versa (1974, p. 382). It is also consistent with recent deterrence research which demonstrates that the “experiential effect,” in which behavior affects attitudes, is much stronger than the deterrent effect, in which attitudes affect behavior (Paternoster, Saltzman, Waldo, & Chiricos, 1982; Paternoster, Saltzman, Chiricos, & Waldo, 1983).

Although each of these relationships appears to be reciprocal, the predicted strengths of the associations are not of equal strength during the early adolescent period (see Figure 1). Beliefs that delinquent conduct is acceptable [and] positively valued may be emerging, but such beliefs are not fully articulated for 11- to 13-year-olds. Because of their emerging quality, they are viewed as more effect than cause, produced by delinquent behavior and associations with delinquent peers. As these values emerge, however, they have feedback effects, albeit relatively weak ones at these ages, on behavior and associations. That is, as the values become more fully articulated and delinquency becomes positively valued, it increases the likelihood of such behavior and further reinforces associations with like-minded peers.
Summary. When attention is focused on the interrelationships among associations with delinquent peers, delinquent values, and delinquent behavior, it appears that they are, in fact, reciprocally related. The world of human behavior is far more complex than a simple recursive one in which a temporal order can be imposed on interactional variables of this nature. Interactional theory sees these three concepts as embedded in a causal loop, each reinforcing the others over time. Regardless of where the individual enters the loop the following obtains: delinquency increases associations with delinquent peers and delinquent values; delinquent values increase delinquent behavior and associations with delinquent peers; and associations with delinquent peers increases delinquent behavior and delinquent values. The question now concerns the identification of factors that lead some youth, but not others into this spiral of increasing delinquency.

Social Control Effects

As indicated at the outset of this essay, the promise of interactional theory is that the fundamental cause of delinquency is the attenuation of social controls over the person’s conduct. Whenever bonds to the conventional world are substantially weakened, the individual is freed from moral constraints and is at risk for a wide array of deviant activities, including delinquency. The primary mechanisms that bind adolescents to the conventional world are attachment to parents, commitment to school, and belief in conventional values, and their role in the model can now be examined.

During the early adolescent years, the family is the most salient arena for social interaction and involvement and, because of this, attachment to parents has a stronger influence on other aspects of the youth’s life at this stage than it does at later stages of development. With this in mind, attachment to parents is predicted to affect four other variables. Since youths who are attached to their parents are sensitive to their wishes (Hirschi, 1969, pp. 16–19), and, since parents are almost universally supportive of the conventional world, these children are likely to be strongly committed to school and to espouse conventional values. In addition, youths who are attached to their parents, again because of their sensitivity to parental wishes, are unlikely to associate with delinquent peers or to engage in delinquent behavior.

In brief, parental influence is seen as central to controlling the behavior of youths at these relatively early ages. Parents who have a strong affective bond with their children, who communicate with them, who exercise appropriate parenting skills, and so forth, are likely to lead their children towards conventional actions and beliefs and away from delinquent friends and actions.

On the other hand, attachment to parents is not seen as an immutable trait, impervious to the effects of other variables. Indeed, associating with delinquent peers, not being committed to school, and engaging in delinquent behavior are so contradictory to parental expectations that they tend to diminish the level of attachment between parent and child. Adolescents who fail at school, who associate with delinquent peers, and who engage in delinquent conduct are, as a consequence, likely to jeopardize their affective bond with their parents, precisely because these behaviors suggest that the “person does not care about the wishes and expectations of other people” (Hirschi, 1969, p. 18), in this instance, his or her parents.

Turning next to belief in conventional values, this concept is involved in two different causal loops. First, it strongly affects commitment to school and in turn is affected by commitment to school. In essence, this loop posits a behavioral and attitudinal consistency in the conventional realm. Second, a weaker loop is posited between belief in conventional values and associations with delinquent peers. Youths
who do not grant legitimacy to conventional values are more apt to associate with delinquent friends who share those views, and those friendships are likely to attenuate further their beliefs in conventional values. This reciprocal specification is supported by Burkett and Warren’s findings concerning religious beliefs and peer associations (1987). Finally, youths who believe in conventional values are seen as somewhat less likely to engage in delinquent behavior.

Although belief in conventional values plays some role in the genesis of delinquency, its impact is not particularly strong. For example, it is not affected by delinquent behavior, nor is it related to delinquent values. This is primarily because belief in conventional values appears to be quite invariant; regardless of class of origin or delinquency status, for example, most people strongly assert conventional values (Short & Strodtbeck, 1965, Ch. 3). Nevertheless, these beliefs do exert some influence in the model, especially with respect to reinforcing commitment to school.

Finally, the impact of commitment to school is considered. This variable is involved in reciprocal loops with both of the other bonding variables. Youngsters who are attached to their parents are likely to be committed to and succeed in school, and that success is likely to reinforce the close ties to their parents. Similarly, youths who believe in conventional values are likely to be committed to school, the primary arena in which they can act in accordance with those values, and, in turn, success in that arena is likely to reinforce the beliefs.

In addition to its relationships with the other control variables, commitment to school also has direct effects on two of the delinquency variables. Students who are committed to succeeding in school are unlikely to associate with delinquents or to engage in substantial amounts of serious, repetitive delinquent behavior. These youths have built up a stake in conformity and should be unwilling to jeopardize that investment by either engaging in delinquent behavior or by associating with those who do. Low commitment to school is not seen as leading directly to the formation of delinquent values, however. Its primary effect on delinquent values is indirect, via associations with delinquent peers and delinquent behavior (Conger, 1980, p. 137). While school failure may lead to a reduced commitment to conventional values, it does not follow that it directly increases the acceptance of values that support delinquency.

Commitment to school, on the other hand, is affected by each of the delinquency variables in the model. Youths who accept values that are consistent with delinquent behavior, who associate with other delinquents, and who engage in delinquent behavior are simply unlikely candidates to maintain an active commitment to school and the conventional world that school symbolizes.

**Summary.** Attachment to parents, commitment to school, and belief in conventional values reduce delinquency by cementing the person to conventional institutions and people. When these elements of the bond to conventional society are strong, delinquency is unlikely, but when they are weak the individual is placed at much greater risk for delinquency. When viewed from an interactional perspective, two additional qualities of these concepts become increasingly evident.

First, attachment to parents, commitment to school, and belief in conventional values are not static attributes of the person, invariant over time. These concepts interact with one another during the developmental process. For some youths the levels of attachment, commitment, and belief increase as these elements reinforce one another, while for other youths the interlocking nature of these relationships suggests a greater and greater attenuation of the bond will develop over time.

Second, the bonding variables appear to be reciprocally linked to delinquency, exerting a causal impact on associations with delinquent
peers and delinquent behavior; they also are causally affected by these variables. As the youth engages in more and more delinquent conduct and increasingly associates with delinquent peers, the level of his bond to the conventional world is further weakened. Thus, while the weakening of the bond to conventional society may be an initial cause of delinquency, delinquency eventually becomes its own indirect cause precisely because of its ability to weaken further the person’s bonds to family, school, and conventional beliefs. The implications of this amplifying causal structure [are] examined below. First, however, the available support for reciprocal models is reviewed and the basic model is extended to later developmental stages.

**Developmental Extensions**

The previous section developed a strategy for addressing one of the three major limitations of delinquency theories mentioned in the introduction, namely, their unidirectional causal structure. A second limitation is the non-developmental posture of most theories which tend to provide a cross sectional picture of the factors associated with delinquency at one age, but which do not provide a rationale for understanding how delinquent behavior develops over time. The present section offers a developmental extension of the basic model.

**Middle Adolescence**

First, a model for middle adolescence, when the youths are approximately 15 or 16 years of age is presented (Figure 2). This period represents the highest rates of involvement in delinquency and is the reference period, either implicitly or explicitly, for most theories of delinquent involvement. Since the models for the early and middle adolescent periods have essentially the same structure and causal relationships (Figures 1 and 2), discussion focuses on the differences between them and does not repeat the rationale for individual causal effects.

Perhaps the most important difference concerns attachment to parents which is involved in relatively few strong relationships. By this point in the life cycle, the most salient variables involved in the production of delinquency are likely to be external to the home, associated with the youth’s activities in school.
and peer networks. This specification is consistent with empirical results for subjects in this age range (Johnson, 1979, p. 105; and Schoenberg, 1975, quoted in Johnson. Indeed, Johnson concludes that “an adolescent’s public life has as much or more to do with his or her deviance or conformity than do ‘under-the-roof’ experiences” (1979, p. 116).

This is not to say that attachment to parents is irrelevant; such attachments are involved in enhancing commitment to school and belief in conventional values, and in preventing associations with delinquent peers. It is just that the overall strength of parental effects [is] weaker than at earlier ages when the salience of the family as a locus of interaction and control was greater. The second major change concerns the increased importance of delinquent values as a causal factor. It is still embedded in the causal loop with the other two delinquency variables, but now it is as much cause as effect. Recall that at the younger ages delinquent values were seen as emerging, produced by associations with delinquent peers. Given their emergent nature, they were not seen as primary causes of other variables. At mid-adolescence, however, when delinquency is at its apex, these values are more fully articulated and have stronger effects on other variables. First, delinquent values are seen as major reinforcers of both delinquent associations and delinquent behavior. In general, espousing values supportive of delinquency tends to increase the potency of this causal loop. Second, since delinquent values are antithetical to the conventional settings of school and family, youths who espouse them are less likely to be committed to school and attached to parents. Consistent with the reduced saliency of family at these ages, the feedback effect to school is seen as stronger than the feedback effect to parents.

By and large, the other concepts in the model play the same role at these ages as they do at the earlier ones. Thus, the major change from early to middle adolescence concerns the changing saliency of some of the theoretical concepts. The family declines in relative importance while the adolescent’s own world of school and peers takes on increasing significance. While these changes occur, the overall structure of the theory remains constant. These interactive variables are still seen as mutually reinforcing over time.

**Later Adolescence**

Finally, the causes of delinquency during the transition from adolescence to adulthood, about ages 18 to 20, can be examined (Figure 3). At these ages one should more properly speak of crime than delinquency, but for consistency we will continue to use the term delinquency in the causal diagrams and employ the terms delinquency and crime interchangeably in the text.

Two new variables are added to the model to reflect the changing life circumstances at this stage of development. The more important of these is commitment to conventional activities which includes employment, attending college, and military service. Along with the transition to the world of work, there is a parallel transition from the family of origin to one’s own family. Although this transition does not peak until the early 20s, for many people its influence is beginning at this stage. Included in this concept are marriage, plans for marriage, and plans for childrearing. These new variables largely replace attachment to parents and commitment to school in the theoretical scheme; they represent the major sources of bonds to conventional society for young adults. Both attachment to parents and commitment to school remain in the model but take on the cast of exogenous variables. Attachment to parents has only a minor effect on commitment to school, and commitment
to school is proposed to affect only commitment to conventional activities and, more weakly, delinquent behavior.

The other three variables considered in the previous models—association with delinquent peers, delinquent values, and delinquent behavior—are still hypothesized to be embedded in an amplifying causal loop. As indicated above, this loop is most likely to occur among adolescents who, at earlier ages, were freed from the controlling influence of parents and school. Moreover, via the feedback paths delinquent peers, delinquent values, and delinquent behavior further alienate the youth from parents and diminish commitment to school. Once this spiral begins, the probability of sustained delinquency increases.

This situation, if it continued uninterrupted, would yield higher and higher rates of crime as the subjects matured. Such an outcome is inconsistent with the desistance that has been observed during this age period (Wolfgang, Thornberry, and Figlio, 1987).

Rates of delinquency and crime begin to subside by the late teenage years, a phenomenon often attributed to “maturational reform.” Such an explanation, however, is tautological since it claims that crime stops when adolescents get older, because they get older. It is also uninformative since the concept of maturational reform is theoretically undefined. A developmental approach, however, offers an explanation for desistance. As the developmental process unfolds, life circumstances change, developmental milestones are met (or, for some, missed), new social roles are created, and new networks of attachments and commitments emerge. The effects of these changes enter the processual model to explain new and often dramatically different behavioral patterns. In the present model, these changes are represented by commitment to conventional activity and commitment to family.

Commitment to conventional activity is influenced by a number of variables, including earlier attachment to parents, commitment to

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**Figure 3** A Reciprocal Model of Delinquent Involvement at Later Adolescence
school, and belief in conventional values. And once the transition to the world of work is made, tremendous opportunities are afforded for new and different effects in the delinquency model. Becoming committed to conventional activities, work, college, military service, and so on—reduces the likelihood of delinquent behavior and associations with delinquent peers because it builds up a stake in conformity that is antithetical to delinquency. Moreover, since the delinquency variables are still embedded in a causal loop, the effect of commitment to conventional activities tends to resonate throughout the system. But, because of the increased saliency of a new variable, commitment to conventional activities, the reinforcing loop is now set in motion to reduce rather than increase delinquent and criminal involvement. The variable of commitment to family has similar, albeit weaker, effects since the transition to the family is only beginning at these ages. Nevertheless, commitment to family is proposed to reduce both delinquent associations and delinquent values and to increase commitment to conventional activity. In general, as the individual takes on the responsibilities of family, the bond to conventional society increases, placing additional constraints on behavior and precluding further delinquency.

These changes do not occur in all cases, however, nor should they be expected to since many delinquents continue on to careers in adult crime. In the Philadelphia cohort of 1945, 51% of the juvenile delinquents were also adult offenders, and the more serious and prolonged the delinquent careers were, the greater the odds of an adult career (Wolfgang et al., 1987, Ch. 4). The continuation of criminal careers can also be explained by the nature of the reciprocal effects included in this model. In general, extensive involvement in delinquency at earlier ages feeds back upon and weakens attachment to parents and commitment to school (see Figures 1 and 2). These variables, as well as involvement in delinquency itself, weaken later commitment to family and to conventional activities (Figure 3). Thus, these new variables, commitment to conventional activities and to family, are affected by the person’s situation at earlier stages and do not “automatically” alter the probability of continued criminal involvement. If the initial bonds are extremely weak, the chances of new bonding variables being established to break the cycle towards criminal careers are low and it is likely that criminal behavior will continue. . . .

\textbf{Structural Effects}

Structural variables, including race, class, sex, and community of residence, refer to the person’s location in the structure of social roles and statuses. The manner in which they are incorporated in the interactional model is illustrated here by examining only one of them, social class of origin. Although social class is often measured continuously, a categorical approach is more consistent with the present model and with most theories of delinquency that incorporate class as a major explanatory variable—for example, strain and social disorganization theories. For our purposes, the most important categories are the lower class, the working lower class, and the middle class.

The lower class is composed of those who are chronically or sporadically unemployed, receive welfare, and subsist at or below the poverty level. They are similar to Johnson’s “underclass” (1979). The working lower class is composed of those with more stable work patterns, training for semiskilled jobs, and incomes that allow for some economic stability. For these families, however, the hold on even a marginal level of occupational and economic security is always tenuous. Finally, the middle class refers to all families above these lower levels. Middle-class families have achieved some degree of economic success and stability and can reasonably expect to remain at that level or improve their standing over time.
The manner in which the social class of origin affects the interactional variables and the behavioral trajectories can be demonstrated by comparing the life expectancies of children from lower- and middle-class families. As compared to children from a middle-class background, children from a lower class background are more apt to have (1) disrupted family processes and environments (Conger, McCarty, Wang, Lahey, & Kroop, 1984; Wahler, 1980); (2) poorer preparation for school (Cloward and Ohlin, 1960); (3) belief structures influenced by the traditions of the American lower class (Miller, 1958); and (4) greater exposure to neighborhoods with high rates of crime (Shaw & McKay, 1942; Braithwaite, 1981). The direction of all these effects is such that we would expect children from lower-class families to be initially less bonded to conventional society and more exposed to delinquent values, friends, and behaviors.

As one moves towards the working lower class, both the likelihood and the potency of the factors just listed decrease. As a result, the initial values of the interactional variables improve but, because of the tenuous nature of economic and social stability for these families, both the bonding variables and the delinquency variables are still apt to lead to considerable amounts of delinquent conduct. Finally, youths from middle-class families, given their greater stability and economic security, are likely to start with a stronger family structure, greater stakes in conformity, and higher chances of success, and all of these factors are likely to reduce the likelihood of initial delinquent involvement.

In brief, the initial values of the interactional variables are systematically related to the social class of origin. Moreover, since these variables are reciprocally related, it follows logically that social class is systematically related to the behavioral trajectories described above. Youngsters from the lowest classes have the highest probability of moving forward on a trajectory of increasing delinquency. Starting from a position of low bonding to conventional institutions and a high delinquency environment, the reciprocal nature of the interrelationships leads inexorably towards extremely high rates of delinquent and criminal involvement. Such a view is consistent with prevalence data which show that by age 18, 50%, and by age 30, 70% of low SES minority males have an official police record (Wolfgang et al., 1987).

On the other hand, the expected trajectory of middle-class youths suggests that they will move toward an essentially conforming lifestyle, in which their stakes in conformity increase and more and more preclude serious and prolonged involvement in delinquency. Finally, because the initial values of the interactional variables are mixed and indecisive for children from lower working-class homes, their behavioral trajectories are much more volatile and the outcome much less certain.

Summary. Interactional theory asserts that both the initial values of the process variables and their development over time are systematically related to the social class of origin. Moreover, parallel arguments can be made for other structural variables, especially those associated with class, such as race, ethnicity, and the social disorganization of the neighborhood. Like class of origin, these variables are systematically related to variables such as commitment to school and involvement in delinquent behavior, and therefore, as a group, these structural variables set the stage on which the reciprocal effects develop across the life cycle.

References


**REVIEW QUESTIONS**

1. Explain what is meant by reciprocal (or feedback) effects. Use a non-crime example to explain such effects.

2. Can you think of concepts or theoretical models other than labeling that Thornberry could or should have incorporated into his integrated model of crime? Explain your rationale for including such concepts or models.

3. Using your own life, or others you know, give an example of someone who follows the causal model that is proposed by Thornberry. If you can’t come up with one, explore the media for someone who does.