Criminal Capital and the Transition to Adulthood

by

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ABSTRACT

Life course criminology is characterized by a two-pronged approach to research. The first branch emphasizes social integration and involvement with pro-social institutions as turning points in the criminal career. The second branch of this work assesses how access to the institutions that facilitate social integration are conditioned by factors such as involvement in the criminal justice system. Theories of capital are chiefly concerned with social integration and the continuity of conventionality, conformity, and prosperity offered through social ties and social networks. Absent from life course criminology is a better understanding of how different forms of criminal capital can influence access to institutions like higher education, marriage, and employment during the transition to adulthood. Drawing on insights from distinct bodies of literature on peers, capital, and status attainment, the present study elaborates on the influence of criminal capital for (un)successful transitions to adulthood. Using three waves of data from the National Longitudinal Study of Adolescent to Adult Health ("Add Health"), the effects of adolescent criminal social capital on criminal cultural and human capital, and subsequent educational, occupational, and marital attainment in early adulthood are examined. Results from a series of regression models demonstrate that criminal social capital has minimal effects on fatalistic beliefs or thoughtful and reflective decision making, and that these forms of criminal capital generally have inconsistent effects on later life transitions. Implications for theory and future research are discussed.

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"You got to hold on"
- Tom Waits

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INTRODUCTION

"Friendship marks a life even more deeply than love. Love risks degenerating into obsession, friendship is never anything but sharing." – Weisel (1972)

For more than two decades, life course research has been at the center of criminology (Cullen, 2011; Farrington 2003; Sampson and Laub, 1993). Emerging from the criminal careers debate of the 1980s (e.g., Blumstein and Cohen, 1987; Gottfredson and Hirschi, 1986) and driven by Sampson and Laub's (1990, 1993) seminal re-analyses of the Glueck (1950, 1968) data, life course criminology commonly focuses on how life events such as marriage and employment reduce individual participation in crime (Piquero, 2015; Sampson and Laub 1997, 2005; Wright and Cullen, 2004). Involvement in pro-social institutions that foster social integration can facilitate desistance from crime and reduce individual participation in antisocial collectives and networks (e.g., Decker, Pyrooz, and Moule, 2014; Giordano, Cernkovich, and Holland, 2003; Warr, 1998).

A second component of life course criminology involves assessing how social and structural characteristics enable or constrain access to these same pro-social institutions (Barnes et al., 2014; Huebner, 2005; Pettit and Western, 2004; Rocque, Posick, Barkan, and Paternoster, 2015; Wilson, 1987). This latter body of research focuses chiefly on the role of engagement with the justice system in further distancing individuals, particularly minorities, from marriage, employment, and other pro-social institutions (Alexander, 2012; Soyer, 2016). Related to this, this dimension of life course research has also assessed the negative consequences of criminal behavior for social integration as individuals move from adolescence into adulthood (Hagan, 1991; Tanner, Davies, and O'Grady, 1999).

Taken together, these two bodies of literature provide a fuller picture of the social correlates and consequences of a life lived on the wrong side of the law. They do so, in essence, by focusing on how individuals acquire, use, and lose various forms of capital over their lives (Bourdieu, 1986; Coleman, 1988, 1990; Granovetter, 1983, 1985). These forms of capital— economic, personal, social, cultural—facilitate and constrain lines of actions, and are commonly associated with many of the life transitions of interest to criminologists and the criminological life course (e.g., DiMaggio and Mohr, 1985; Sampson and Laub, 1993). These transitions include finding employment, obtaining advanced levels of education, and finding a long-term romantic partner or entering into marriage (e.g., Anderson, 1999; Farrall, 2004; Mills and Codd, 2008; Reisig, Holtfreter, and Morash, 2002).

Alternative conceptualizations of capital, particularly those involving criminal activity, have also emerged in recent years, paralleling the advent of the criminological life course (Hagan, 1991, 1993; Hagan and McCarthy, 1998; Loughran, Nguyen, Piquero, and Fagan, 2013; McCarthy and Hagan, 2001). Much like their pro-social counterparts, these forms of "criminal capital"—knowledge, skills, affiliations, and beliefs associated with antisocial behavior—commonly link criminal activity to short-term economic success (e.g., profits made from selling drugs; see McCarthy and Hagan, 2001; Loughran et al., 2013). Although recent research has begun to assess the long-term consequences associated with criminal investments (Schmidt, Lopes, Krohn, and Lizotte, 2014; Pyrooz, 2014), these concepts remain theoretically under-developed and empirically under-examined (Huschek and Blokland, 2015; Piquero, 2015).

This recent research on the consequences of criminal capital (e.g., Fader, 2016; Lantz and Hutchinson, 2015; Loughran et al., 2013) raises provocative questions about (a) the relationship between different forms of criminal capital and risk factors in adolescence (Wright, Cullen, and Miller, 2001) and (b) the effects of these various forms of criminal capital on later-life outcomes. The role of peer affiliations, particularly delinquent or criminal connections, for influencing the accumulation of criminal capital, and the resulting consequences for making successful life transitions has not been adequately addressed within criminology (cf. Crosnoe and Muller, 2014; DiMaggio and Garip, 2012). Research has so far concentrated on criminal *human* capital (e.g., Hagan and McCarthy, 1998; Loughran et al., 2013), and much of the research on peers has focused only on the proximate consequences of peer affiliations for offending and victimization in adolescence (e.g., Akers, 2009; Battin, Hill, Abbott, and Catalano, 1998; Haynie, 2001; Warr, 2002). The next step for this research is better linking the social world of adolescence to the transition to adulthood, within the context of the life course framework, and better conceptualizing and incorporating dimensions of criminal capital (see also the criticism of Sampson and Laub's theory by Paternoster, Bachman, Bushway, Kerrison, and O'Connell, 2015).

Can criminal capital act as a snare in the life course, constraining successful attainment of appropriate adult roles and statuses during the transition to adulthood? Social capital theorists have previously noted that some forms or types of capital can produce deleterious outcomes for individuals, as capital may be of limited use of for, or constrain access to, social institutions (e.g., Coleman, 1990; Portes, 1998; Sandefur and Laumann, 1998). There is good reason to believe that forms of criminal capital should be

one such type. Criminal social capital, in the form of delinquent peer affiliations, can contribute to an individual's thoughts, feelings, beliefs, and behaviors. Criminal social capital would, in other words, be a conduit through which criminal human capital, criminal cultural capital, and criminal opportunities are conveyed. In turn, these forms of capital would be expected to inhibit access to major social institutions. Tentative evidence supporting the criminal capital-snare link does exist (e.g., Moffitt et al., 1996; Pyrooz, 2014), but this research has focused on distinct social groups such as gangs or the homeless, to the neglect of more general social relations.

Examining whether and how criminal social capital influences later life outcomes has important implications for criminological theory, intervention, and prevention programming. Taking a step back to assess how social structures can impact later life outcomes represents a more holistic and theoretically satisfying view of the criminological life course. Criminological theory has ample room to incorporate factors contributing to social stratification, but has focused overwhelmingly on the criminal justice system, particularly mass incarceration, as a driver of this stratification (e.g., Alexander, 2012; Pager, 2008; Pattillo, Western, and Weiman, 2004). To neglect social structures is to omit a prominent component of human development (Bronfenbrenner, 1979; Papachristos, 2011; Sampson, 2016). Thus, at a time when too much remains unknown about the life course (Piquero, 2015), taking such a step, and an expanded view of the factors influencing the acquisition and consequences of criminal capital, are necessary. Likewise, programmatic efforts that aim to inhibit or disrupt deviant peer affiliations might keep an eye not just toward long-term negative consequences, but also creating new social ties to other, more pro-social peers (Esbensen, Osgood, Peterson,

Taylor, and Carson, 2013). Indeed, if adolescent social relations meaningfully impact life chances and efforts at social integration in adulthood, programs must take more seriously the need to overcome deficits in positive and productive social relations (see Obama, 2014; Narayan, 1999). A more thorough theoretical and empirical assessment of criminal social capital, and its effects on the life course, is warranted.

To that end, the present study seeks to more explicitly integrate theories of capital into the criminological life course and assesses whether and to what extent criminal capital impacts successful transitions to adulthood. The transition to adulthood, or emerging adulthood (Arnett, 2000), refers to ages from the late teens through the mid-to-late twenties, and is a common time period for life course consequences to be assessed (e.g., Pyrooz, 2014; Sampson and Laub, 1993, 1997). The guiding research question of this dissertation is then "What effect do forms of criminal capital have on successfully moving from adolescence into emerging adulthood?" In addition, I ask "Does criminal social capital exert independent influence on the development of criminal cultural and human capital?" This question involves the direct effects of criminal social capital on these outcomes. Further, I examine whether various forms of criminal capital exert independent effects on educational, employment, and social outcomes during the transition to adulthood. Prior research has engaged in a fragmented approach to criminal capital and the life course, failing to account for diverse forms of criminal capital and the unique influences they might have on later life outcomes.

It is hypothesized that adolescent criminal social capital will influence cognitive and cultural processes that are conducive to offending. I examine three possible consequences from associating with delinquent peers, which involves dimensions of

criminal capital: (1) influence and opportunity structures informing respondent participation in delinquency, (2) informing respondent cultural scripts related to fatalism or hopelessness, and (3) influencing respondents' long-term decision making capacities. Prior research has considered the long-term consequences of each of these dimensions of criminal capital, linking them to offending and deleterious later life outcomes. This research has not, however, considered whether these forms of criminal capital are generated via criminal social capital, and whether each form of criminal capital exerts independent and unique influence on later these later life outcomes.

This conceptualization of different forms of criminal capital represents an extension of Sampson and Laub's (1993) theoretical model of crime, deviance, and informal social control, a model that has served as the basis of the criminological life course. To assess these hypotheses, three waves of data from the National Longitudinal Study of Adolescent to Adult Health ("Add Health"). The Add Health data offer the opportunity to accurately capture the characteristics and behaviors of peers, and thus criminal and non-criminal forms of social capital, which should contribute to (un)successful transitions into emerging adulthood. Particular attention is paid to peer-reported delinquency, as a measure of criminal social capital.

The remainder of this document proceeds in the following fashion: Chapter 2 provides an overview of the theoretical frameworks used in this dissertation, including theories of the life course and capital, their historical bases and diverse approaches to these theories across the social sciences. In addition, Chapter 2 more specifically examines the emergence, acquisition, and role of adolescent peers in the life course, including the acquisition of delinquent peers and criminal social capital. The theoretical

consequences of these peers for later life transitions (e.g., education, marriage, employment) are then considered in Chapter 3. Chapter 4 provides a more in-depth description of the Add Health data and the methods used to examine these outcomes. Chapter 5 assesses the relationship between criminal social capital in adolescence later acquisition of other forms of criminal human and cultural capital. Chapter 5 also contains analyses examining outcomes of interest in young adulthood (between ages 18 to 26). First, I explore the effects of criminal social, cultural, and human capital on educational attainment (graduating high school and matriculating to college). Second, the consequences of possessing criminal social, cultural, and human capital for economic outcomes (current employment and receiving public assistance) are assessed. Third, the influence of criminal forms of capital on social outcomes in young adulthood (marriage and cohabitation) is examined. Chapter 6 summarizes these findings and provides a roadmap for future research to continue unpacking the functions, forms, and roles of different forms of capital in criminological research.

CHAPTER 2
THEORETICAL FRAMEWORK

Over twenty years ago, the fortuitous finding of the Glueck's (1950, 1968) *Unraveling Juvenile Delinquency* data in a Harvard library basement (Sampson and Laub, 1993; Laub and Sampson, 1993) set in motion two major, overlapping theoretical developments in criminology. The first development, the age-graded theory of informal social control (Sampson and Laub, 1993), elaborated on the role of major institutions in precipitating changes in offending in adulthood. Re-analyzing the Glueck data, Sampson

and Laub (1993) demonstrated that employment, military service, and marriage were all associated with reductions in criminal activity in adulthood, even among men who had a history of early childhood troubles and adolescent delinquency. The second development, and of key interest to this dissertation, was Sampson and Laub's (1993) elaboration of the criminological life course. Their version of the life course is now considered to be at the core of criminology (Cullen, 2011).

The Life Course Paradigm

The life course paradigm reflects "pathways through the age differentiated life span" (Elder, 1985: 17). Of central importance to these developmental pathways are the concepts of trajectories, transitions, and turning points. Trajectories are stable lines of development, such as employment, education, or involvement in criminal behavior. Transitions are embedded within trajectories, evolving over short periods of time, and giving them meaning and form (Elder, 1998). For example, a first job or first marriage can be a transition. Turning points are events or states that can disrupt stable trajectories and have long-lasting consequences (Rutter, 1996). Examples of turning points range from victimization and incarceration to marriage and employment (Jacques and Wright, 2008; Sampson and Laub, 1993; Western, 2002).

Conceptual debates about turning points often hinge on the mechanisms distinguishing these events from those that do not substantively impact a trajectory. Indeed, some transitions may simply aggravate pre-existing, between-individual differences (Laub and Sampson, 2003: 40). Prior research finds evidence that turning points promote change through a series of cognitive shifts (Giordano, Cernkovic, and

Rudolph, 2002; Maruna, 2001), changes in an individual's social networks, relations, and routine activities (Giordano, Cernkovich, and Holland, 2002; Warr, 1998), and reciprocal investments between individuals and institutions (Sampson and Laub, 1993), as well as agency-based decisions that individuals make to distance themselves from past selves and behaviors (Laub and Sampson, 2003; Maruna, 2001). As a consequence of these intra-individual changes, participation in criminal offending typically decreases.

These concepts of turning points, trajectories, and transitions within the life course framework are supplemented by four guiding principles. First, lives are embedded and influenced by historical time and place. Elder (1998: 2) noted that historical forces shapes social trajectories and influence the timing of normative transitions (e.g., obtaining employment, marriage, and educational attainment), because of time-specific structural constraints and contingencies. Periods of economic decline, for instance, promote aggregate shifts in educational attainment, and economic booms in the early twentieth century promoted early entrance into the labor force (Modell, 1989). Second, the timing of events in the life course matters for their influence, insofar as it can impact future transitions. For example, those who marry or conceive children earlier in life may well see reductions in educational and economic attainment, relative to those who delay those transitions (e.g., Elder, 1979). Third, lives are linked and interdependent, such that difficulties experienced by parents, peers, and partners can negatively impact individuals in meaningful ways. Such interdependence naturally draws attention to the social milieus in which people are located (e.g., Papachristos, 2009). Fourth, human agency matters for decision making, and is an important influence in individuals' construction of their own lives (e.g., Elder, 1998; Laub and Sampson, 2003: 33). These concepts and principles

form the basis for understand continuity and change in behavior (e.g., offending) over time (Farrington, 2003; Sampson and Laub, 1993).

The life course paradigm's emphasis on developmental trajectories and turning points can be considered the intellectual heir to research on life transitions, particularly role theory and social stress research (George, 1993). Role theories (e.g., Brim, 1966; Linton, 1936) emphasize the importance of roles, or the expected behaviors of those occupying specific social statuses. Individuals assume various roles over their lifetimes (e.g., student, parent, employee), and are socialized on the behaviors associated with those roles. Social norms act as a basis for role transitions, such that taking on new roles is normative and expected (e.g., Massoglia and Uggen, 2010). Individuals who do not take on age-normative roles may experience stigmatization and other forms of social sanctions (Clausen, 1968). Role entries and exits are life transitions (e.g., Ebaugh, 1988; George, 1980), yet role theories have difficulties in explaining non-normative transitions, or those transitions that occur "off-time" (George, 1993). George (1993) noted that the major limitation of role theories is the absence of population heterogeneity and social contexts. That is, role theories omit a not unsubstantial portion of social life when considering if, when, why, and how individuals adopt specific roles.

In contrast to role theory, research on the impact of social stressors has been more sensitive to the contingencies influencing adverse individual outcomes. Individuals on the social fringes were expected to experience more negative life events, which would in turn produce negative health outcomes (Kessler, 1979; Srole et al., 1962). Mixed results in early stress literature re-oriented research to focus on the conditions under which one or more life stresses would promote negative outcomes (George, 1993). Much like role

theories, though, stress research often omitted social structures and contexts (Jacobson, 1989; Pearlin, 1989). Nevertheless, these contingencies do include social relations, consistent with psychological perspectives on healthy adaptation to negative life events (e.g., Dykstra, 1995; Gupta and Korte, 1994). In this case, peers can offer support during a period of stress, thus allowing individuals to more successfully cope with negative experiences. Here, peers generally play a role in assisting individuals after specific events have occurred, rather than contributing to the occurrence of those events in the first place.

From the bodies of research on role transitions and social stress, respectively, George (1993) highlights the possibility that peers and other affiliations (e.g., friendships, romantic relations, and acquaintances; more generally, one's social milieu) might influence and be influenced by transitions. One view, that peers are an important mediator between stress and negative outcomes, is less relevant for the present research. Alternatively, the notion that an individual's social milieus might also promote non-normative transitions, or constrain access to these transitions, is worthy of further exploration. In this view, peer groups and other adolescent relations to which individuals belong and maintain might influence "normative" transitions. That is, peers become especially salient during adolescence, exerting influence on individual behavior and choices, which can in turn lead to difficulties transitioning to young adulthood. For example, prior research on gang affiliations highlight the role of these milieus for diminished educational achievements later in life (Pyrooz, 2014; Thornberry, Krohn, Lizotte, Smith, and Tobin, 2003). This is consistent with the notion of "negative duration dependence," wherein entrance into, or time spent in, a given state reduces the likelihood that an individual transitions to a new state (Hogan and Astone, 1986).

"Negative duration dependence" is conceptually similar to the criminological notion of state dependence. State dependent explanations of crime suggest that the behaviors of today can set in motion social processes that will later have causal significance on behavior. Offending today might lead to incarceration tomorrow, and reduce the probability of landing a job thereafter. Future behavior is then a consequence of more proximate and evolving social circumstances (e.g., Agnew, 2006; Akers, 2009; Anderson, 1999; Lemert, 1951). The state dependence perspective is consistent with the second guiding principle of the life course, in that the events of today can have causal significance on the events that might (or might not) occur tomorrow.

The alternative to state dependence is population heterogeneity, or the notion that individual differences distributed across the population have persisting effects that yield highly stratified life outcomes. For example, Gottfredson and Hirschi (1990) suggested that negative life-experiences, such as involvement in crime, associating with deviant peers, and troubles with school, work, and family life were all a consequence of low self-control. Thus, no single event or experience can exhibit causal significance, since it is wholly a consequence of a latent trait, such as self-control (see also Nagin and Paternoster, 2000). Of course, population heterogeneity and state dependence frameworks are not the only explanations for difficulties or success in the criminological life course (e.g., Giordano et al., 2002; Laub and Sampson, 2003; Paternoster and Bushway, 2009), but do provide a general lens with which to view the life course.

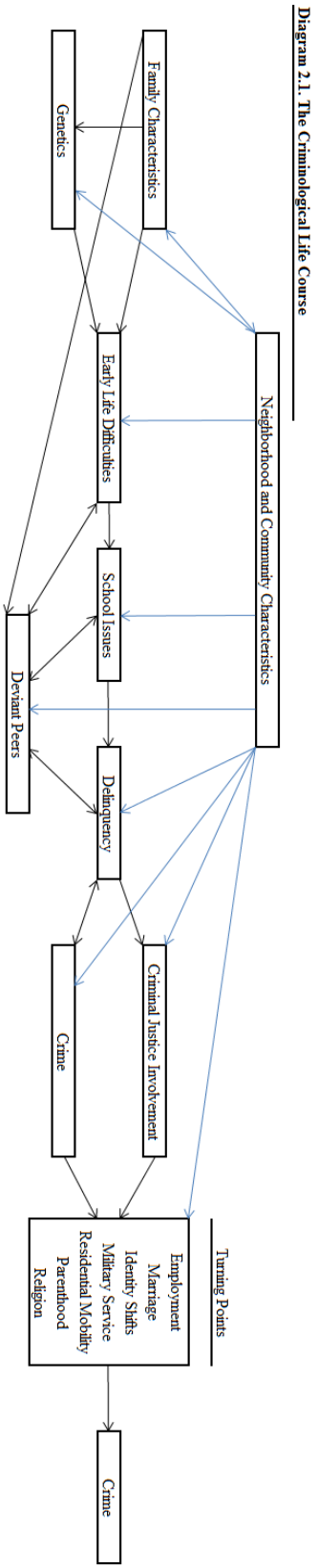
Other theorists have subsequently integrated these two concepts (e.g., Moffitt, 1993). Moffitt and colleagues (1996: 404, 2002) later elaborated on a particular type of state dependence model involving "snares." Snares are events, characteristics, and

occurrences which "diminish the probability of a conventional lifestyle," or, in the language of role theories, contribute to non-normative transitions. Paralleling the "snare" label is the concept of cumulative disadvantage, wherein individuals incrementally mortgage their futures by engaging in antisocial behavior (e.g., Laub and Sampson, 1993; Moffitt, 1993; Thornberry, 1987). Cumulative disadvantage reflects a combination of stable individual differences (e.g., self-control, IQ), but also a snowballing process whereby adolescent behavior can further marginalize individuals from pro-social institutions in emerging and later adulthood. Early, negative familial processes cascade into other life domains, including school, peers, and engagement with the criminal justice system. Sampson and Laub (1997) place particular emphasis on criminal justice sanctions for difficulties in obtaining adult social bonds (e.g., employment, marriage) (see also Moffitt et al., 1996: 404; 2011). As Sampson and Laub noted (1997: 155):

> To assume that individual differences influence the choices one makes in life (which they certainly do) does not mean that social mechanisms emerging from those choices can then have no causal significance. Choices generate constraints and opportunities that themselves have effects not solely attributable to individuals. As situational theorists have long pointed out, the same person—with the same attributes and traits—acts very different in different situations.

The core of the criminological life course, drawn predominantly from Sampson and Laub (1993: 492) is depicted in Diagram 2.1. The diagram specifies the pathways between neighborhood and community, family, and school characteristics on affiliation with deviant peers, offending, and access to the events, states, and statuses commonly acknowledged to be turning points in the life course (e.g., Sampson and Laub,

Diagram 2.1. The Criminological Life Course



1993; Uggen, 2000). In brief, and as acknowledged by Sampson and Laub (1993: 244-245), the structural features of communities and neighborhoods and the informal control processes associated with families and schools (e.g., supervision and attachment) contribute to antisocial behavior in childhood, affiliation with delinquent peers, and delinquency in adolescence (Knoester, Haynie, and Stephens, 2006). Adolescent delinquency, in turn, corresponds to later involvement in crime and possible engagement with the justice system, which in turn influence later life outcomes (see also Thornberry, 1987). These outcomes, educational attainment, romantic relations, and employment among them, influence involvement in future criminal activity as an individual ages.

To be sure, Sampson and Laub (1993) downplayed the role that experiences and contexts beyond criminal behavior and criminal justice contact might play in influencing later life outcomes. This is the case regarding the choice of peers an individual associates with, and the skills, abilities, wants, and needs those peers bring to a relationship. It should be noted that, in the Glueck data analyzed by Sampson and Laub, heavy truncation of the deviant peer affiliation measure is present (Glueck and Glueck, 1950: 163). Nearly every child in the "delinquent" group self-reported affiliating with delinquent peers, to say nothing of other characteristics present in these relationships (e.g., the character, culture, or extent of these delinquent affiliations). When coupled with their control-oriented theory, this practical constraint naturally limited Sampson and Laub's ability to assess any impact that peers, or non-familial relations more generally, might have on future life outcomes. Peers, for instance, can constrain economic or social opportunities by reinforcing attitudes or beliefs about those social institutions (e.g., rejecting legitimate employment, embracing conflict with educators, downplaying the

value of marriage, believing that such concerns are a waste of time, or that failure in these pursuits is inevitable), promoting involvement in illicit activities, as well as by limiting the necessary skills, beliefs, and social ties that facilitate the successful transition to adulthood (Rendon, 2014). These considerations are central to the notion of capital, especially social capital. Theories of capital, and their relation to the life course (e.g., Halfon and Hochstein, 2002), are discussed next.

Theories and Forms of Capital

Capital refers to a constellation of characteristics that can facilitate or constrain individual and community action. Various forms of capital are common to the social sciences: economic, social, human, and cultural capital. *Economic capital* refers to wealth and ownership over the means and tools of production or accumulated human labor (e.g., Bourdieu, 1985; Lin, 2002; Marx, 1939). In contrast, the other forms of capital available to individuals are less tangible or material. *Social capital* reflects the resources able to be derived from the relationships and networks that individuals maintain (Coleman, 1988, 1990; Granovetter, 1985, 2005; Loury, 1977). *Human capital,* or personal capital, is the personal skills and knowledge that individuals possess (Becker, 1964; Coleman, 1988; Schultz, 1961), as well as indicators of these skills, including, diplomas, certificates, and professional licensing. *Cultural capital* reflects the practices and beliefs of individuals, as well as other "soft" skills (Bourdieu, 1986; DiMaggio, 1982; DiMaggio and Mohr, 1985; McNeal, 1999).[1] The present study is primarily concerned with social capital, and the

[1] Continuity in capital is anticipated, at least in Coleman's (1988) theory.

consequences associated with this and other forms of capital. These areas are next examined in greater depth.

Early writings on social capital emphasized its place in joining influential stream of sociological and economic thought. On one hand, sociology historically conceived of man as being "oversocialized," or lacking intrinsic motivations for action (Coleman, 1988; Granovetter, 1985; Wrong, 1961). Economics, on the other hand, over-estimated actor rationality, to the neglect of the roles, constraints, and opportunities offered to actors within social structures and spaces (Baker, 1983; Ben-Porath, 1980; Coleman, 1988; Williamson, 1975). In response to these criticisms, more nuanced theories of social behavior emerged. For example, Granovetter's (1985; also 1973, 1983) conceptualization of embeddedness recognized the need for integrating and incorporating informal relational structures into models of economic behavior (see Uzzi, 1996). Similar thinking is found in the prominent versions of social capital developed by Coleman (1988), Bourdieu (1986), Lin (2002, 2008), and Putnam (1995, 2000).

Coleman's (1988) theory of social capital focused on overlapping interpersonal obligations, expectations, and trust. Here, social capital is “a variety of different entities, with two elements in common: they all consist of some aspect of social structures, and they facilitate certain actions of actors-whether persons or corporate actors-within the structure… making possible the achievement of certain ends that in its absence would not be possible” (Coleman, 1988: S98).[2] Relationships sufficiently entailing these characteristics are especially useful for the dissemination of information and diffusion of

[2] It should be noted that individuals can presumably maintain social relations from which they do not derive any particular tangible benefit. Likewise, individuals may maintain a modicum of social capital simply by existing in social space. An example would be receiving the assistance of a kind stranger.

social norms. Individuals and corporate actors are better able to accomplish goals as social capital increases. Bourdieu's (1986) version of social capital emphasized the role of group membership, and the benefits derived from membership. Membership in larger networks, networks where a greater portion of members can be mobilized, or networks characterized by higher levels of capital, can facilitate action or profit for individuals. Note that this profit need not be of the economic variety, but can also be tied to any other forms of capital (e.g., group membership can increase a particular form of cultural capital or enhance one's personal capital). Although Coleman and Bourdieu's versions of social capital do not overlap entirely, they both recognize that social capital is a resource, that it is found in social relations, and is used to gain things desired by the actors (Lin, 2002; Smith, 2000). These versions of social capital were subsequently expanded upon by other theorists.

Putnam's (1993, 1995, 2000) extension of social capital theory emphasized capital as a property of communities and nation states. Like Coleman, Putnam emphasizes the roles of networks, norms, and trust in these communities. Social capital reflects degrees of civic engagement and virtuousness, in the forms of membership in volunteer and social organizations (e.g., Elks Club, Rotary, etc.). Communities possessing higher amounts of civic engagement should exhibit greater solidarity and see economic and social benefits accrue (e.g., economic prosperity, reductions in crime and other social ills). Although critics have targeted Putnam's vision of social capital as tautological (see Lin, 2002: 26; Portes, 1998; Portes and Landolt, 1996), it draws further attention to the broader social structures in which individuals are located, and how these structures impact collective and individual action (Coleman, 1988).

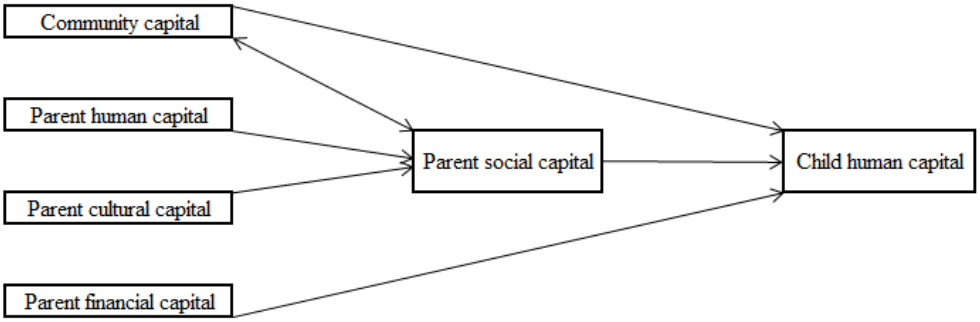
An alternative version of these structures is presented by Lin. More so than the other social capital theorists, Lin (1999a, b, 2002, 2008) places strong emphasis on the role of social relations and networks for the acquisition and use of social capital. Specifically, social capital is a consequence of positioning within a social hierarchy, location in one's network, and the purposive nature of one's actions. Social capital consequently mediates the effect of these characteristics on future outcomes or returns. Further, Lin (1999b) delineates two components of capital for action. First, individuals maintain some level of network resources, derived from parents' relations and resources; these network resources have positive and direct effects on attained statuses. Second, the mobilization of social capital partially mediates the influence of network resources on attained statuses. Relative to Coleman and others' versions of capital, Lin does not suggest that capital is a controlling force, necessarily, but is interested in the emergence and persistence of inequalities in capital and the relative utility of capital for action. Following these preliminary statements differentiating the versions of social capital, the foundations of social capital, and resulting types of other (human and cultural) capital, are examined next.

The origins of social capital are found in the family and other kinship ties (Ben-Porath, 1980; Coleman, 1988: S109-S113, 1990: 590-597). Parents transmit human and cultural capital to their offspring, via their own social and human capital, through three mechanisms: investment in the child through time and effort, formation of affective ties, and conveyance of behavioral guidelines (see also Portes, 2000; Wright et al., 2001). The first, investments through time and effort expended on children, involves speaking with them, assisting them in day-to-day activities such as homework, and generally spending

time with them (Bianchi and Robinson, 1997). The formation of affection and emotionally satisfying ties between parents and children is the second mechanism in the generation of social capital. Here, parents strive to be supportive of their children (Wright et al., 2001). The final mechanism, conveying appropriate behavioral guidelines, involves parents imparting morals on children, and emphasizing the importance of pro-social acts and knowledge (Coleman, 1990; Weiss, 2012). Such behaviors by parents set the stage for successful child development, as they relate to the other forms of capital discussed.

These transmission processes provide important caveats for the inter-generational transmission of capital (Weiss, 2012). The social capital transmitted from parents to offspring contributes to the successful acquisition of human and cultural capital by children, but the characteristics of families provide the context and capacity for this transmission. Coleman (1988: S111-S113) notes that structurally deficient families, such as single-parent households, nuclear families where both parents are employed outside the home, or situations where parents or children are distant constrain capital access and transmission. Likewise, families with more children can be considered structurally deficient, as parental attentions wax and wane for each child. For example, Teachman and colleagues (1997) found that children in traditional, two-parent households were less likely to drop out of school relative to those in single-parent households. The diagram of Coleman's (1988) basic theoretical propositions is shown below, in Diagram 2.2.

Diagram 2.2 Coleman's (1988) Depiction of the Intergenerational Transmission of Capital[3]



Here, forms of capital possessed by parents, coupled with community forms of capital, operate primarily through parental social capital, which in turn impacts the human capital of offspring. Coleman (1988) focused on educational attainment among children, demonstrating that increasing levels of parental social capital corresponded with reduced chances of high school dropout.

The accumulated forms of capital should coincide with a life of relative prosperity, conventionality, and conformity (Blau and Duncan, 1967). For instance, prior research demonstrates long-term positive effects of family social capital, such as increased political participation and civic engagement (Duke, Skay, Pettingell, and Borowsky, 2009a), educational and economic success (e.g., Furstenberg and Hughes, 1995), healthy aging (Furstenberg and Hughes, 1995; Vaillant, 2008), and acquisition of suitable romantic relations (DiMaggio and Mohr, 1985; Hunter, 2002). Despite evidence to the contrary, the successful acquisition of capital from the family does not necessarily mean a lifetime of prosperity, success, and healthy adjustment. Family processes are supplemented by social capital from outside the family (e.g., Coleman, 1988; Hagan,

[3] Cultural capital is implied in Coleman's discussion of capital. The example used by Coleman is a mother's expectations for her child to attend college. Coleman notes that this is not "pure" social capital. It entails a degree of cultural orientation toward education, thus implying the presence of cultural capital in his model.

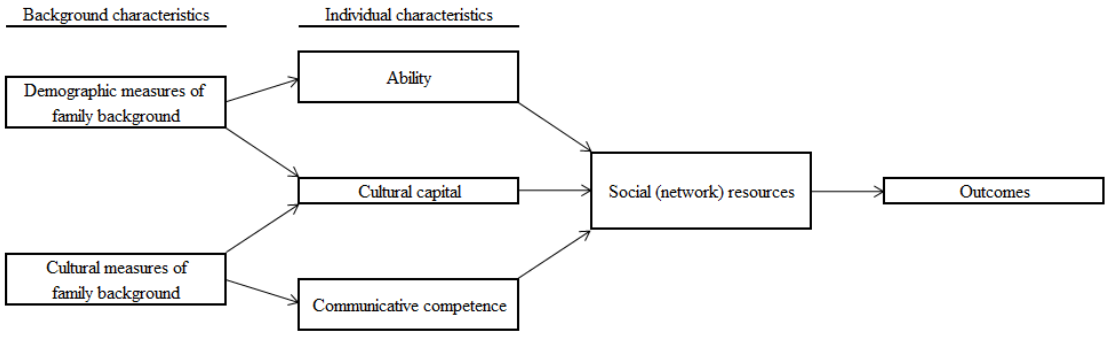
MacMillan, and Wheaton, 1996). Some of these relationships are drawn from the community at large, especially the friends of parents, as well as the acquaintances and colleagues generated from parental employment or civic engagement (Coleman, 1988).

In conjunction with these adult networks are the immediate social milieus in which children are situated as they grow up. Indeed, the influence of family capital on later life-outcomes is mediated by non-familial relations and characteristics acquired during adolescence and beyond (e.g., Bourdieu, 1986; Crosnoe and Muller, 2014; DiMaggio and Mohr, 1985; Lin, 2002; Portes, 2000). Some of these theoretical diagrams are displayed next. Note that although each of these models is distinct, and exhibit varying degrees of nuance and specificity, they all identify social capital and social relations as meaningful for later-life outcomes. To be sure, the character or timing of these relations is not necessarily specified, and continuity between networks or relationships unexamined. Nonetheless, evidence demonstrates that social capital originates first in childhood (e.g., Cairns, Leung, Buchanan, and Cairns, 1995) and plays a role in individual development thereafter.

Diagram 2.3 was presented by DiMaggio and Mohr (1985), with a specific emphasis on the role of cultural capital in the life course. Family demographic and cultural features influence individual abilities (e.g., scores on achievement tests, IQ), cultural capital (e.g., "high culture," tastes for fine art, opera, etc.), and communication competence. These individual characteristics yield social capital in children. This social capital in turn influences the likelihood of later outcomes occurring. For DiMaggio and Mohr (1985), cultural capital positively corresponded with greater educational

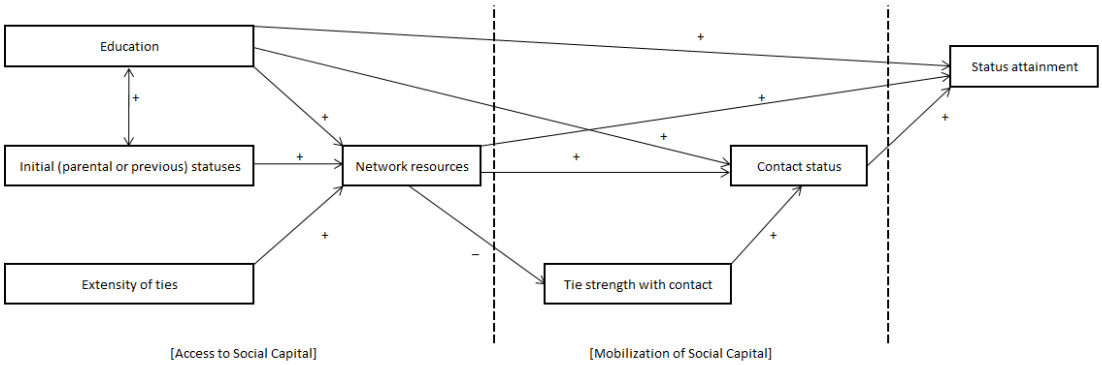
attainment, college completion, participation in graduate education, and marital partner's education.

Diagram 2.3 DiMaggio and Mohr's (1985) Depiction of Capital Transmission



Lin (1999b, 2002) has developed multiple models of the influence of social capital, or resources, on later-life outcomes. The first, presented in Diagram 2.4, distinguishes between access to, and the mobilization of, social capital and social ties. On the left-hand side of the diagram, fairly consistent with Coleman's ideas on the origins of capital, "human capital (education, experiences), initial positions (parental or prior job statuses), and ego's social ties (e.g., extensity of ties) are hypothesized to determine the extent of resources ego can access through such connections (network resources)" (Lin, 1999b: 471). The right-hand side of the model focuses on the ability of individuals to mobilize their relationships for status attainment.

Diagram 2.4 Lin's (1999) Depiction of Accessed and Mobilized Social Capital



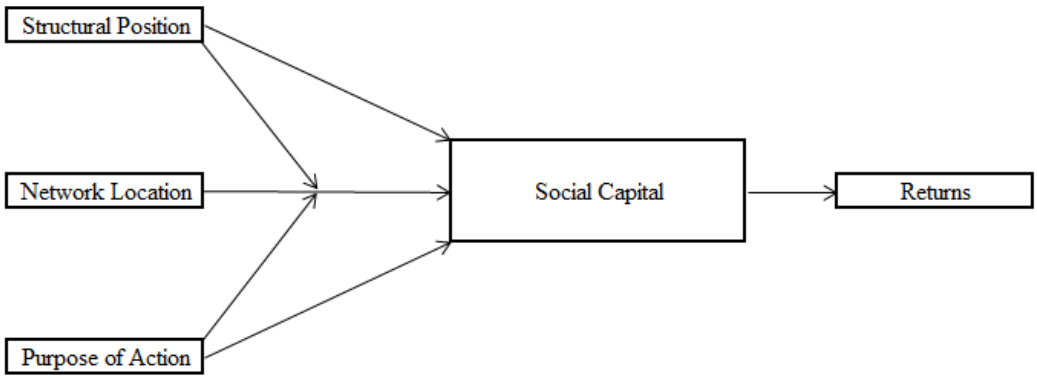
Lin's (2002:76) second model, shown in Diagram 2.5, presents a simplified version of this relationship. Here, the structural positioning of individuals, their location within a social network, and whether their action is instrumental or expressive influences their social capital. This social capital consequently shapes returns to those actions.

Portes (1998; Portes and Sensenbrenner, 1993[4]), in his criticism of the social capital paradigm, identified two issues plaguing this literature. First, that social capital remained a theoretically "mushy" concept (see also Lin, 2002). To that end, Portes (1998: 6) defined social capital as "the ability of actors to secure benefits by virtue of their membership in social networks or other social structures." In doing so, some of the issues plaguing earlier definitions, such as tautology (e.g., criticisms of Putnam, 1995), were avoided. Second, Portes (1998; Portes and Sensenbrenner, 1993) explicitly acknowledged that social capital could have either positive or negative effects for the attainment of valued statuses and other life outcomes. More specifically, four negative consequences of social capital were highlighted in his review of the literature: exclusion of outsiders, excess claims on group members, restrictions on individual freedoms, and downward

[4] Portes and Sensenbrenner focus on communities, particularly immigrant communities, and the roles of social capital in these communities. Portes (1998) focuses more closely on individuals, but both papers identify similar issues associated with social capital across these units of analysis.

leveling norms. These negative consequences involve social isolation, either as distancing from mainstream cultures or institutions, rejection of those institutions, or inwardly focused norms that ensnare group members and/or exclude outsiders. Examples of these relations are well-known to criminologists, and include membership in street gangs, organized crime, and other nominally organized criminal endeavors (e.g., Cressey, 1969; Decker and van Winkle, 1996).

Diagram 2.5 Lin's (2002) Depiction of Correlates and Consequences of Social Capital



Sandefur and Laumann (1998) similarly reconsidered Coleman's (1990) version of social capital, focusing on many of the same conceptual issues identified by Portes (1998). In their "recasting" of social capital, the pair emphasized the benefits of social capital, rather than its forms. These benefits—information, influence, and solidarity—are the mechanisms through which social capital operates. Like Portes (1998), the nuances associated with social capital were acknowledged, as some forms of social capital may correspond with it only certain benefits. These limited benefits are what Sandefur and Laumann (1998) called "effective specificity." Some forms of social capital can also be a liability for achieving certain goals, or have what Sandefur and Laumann termed

"valence." These nuances form a more complete picture of the mechanisms and potential consequences of social capital. Sandefur and Laummann (1998), however, offer little guidance about the kinds of capital that may have effective specificity or valence.

In either instance, prior research finds that social and other forms of capital are meaningful components in the acquisition of important statuses and states (e.g., high school diploma/graduate, marriage/married, job/employed, etc.) (e.g., DiMaggio and Mohr, 1985; Furstenberg and Hughes, 1995; Seibert, Kramer, and Liden, 2001; Wright et al., 2001). Likewise, it is the role that peer relationships and other social affiliations may play for later-life outcomes that remains an untapped area of inquiry for criminologists, and which helps to conjoin more closely (criminal) social capital and life course criminology. Further discussion of non-familial relations and individual embeddedness within those relationships occurs in the following section.

Non-Familial Networks, Embeddedness, and Action

The theories of social capital presented by Coleman, Bourdieu, Putnam, and Lin parallel aspects of the life course paradigm, insofar as they anticipate stable developmental pathways revolving around the intergenerational transmission of social capital. That is, theories of capital, especially Coleman (1988, 1990), hold that the practices of parents instill in children the necessary skills, beliefs, and access to relationships which facilitate success over time (see Diagram 2.2). This success reflects a stable pattern of development. Indeed, at the extreme, some capital theorists link these early parental characteristics with offspring's success in emerging adulthood. Here, experiences or affiliations in adolescence are considered irrelevant or omitted entirely

(e.g., see, for example, Duke et al., 2009a). At the same time, however, many theories of capital recognize that social resources beyond the family can also influence individual development (e.g., DiMaggio and Mohr, 1985). Additionally, there is a robust literature on peer effects, or the influence that adolescent peer relations have on individual development, especially thoughts, feelings, beliefs, behaviors, and perceptions (Brechwald and Prinstein, 2011). That is, there is good reason to believe that the social capital of adolescents, and the similarly aged peers with whom they affiliate, contributes to individual development.

Childhood and adolescent relationships result from parents' influence, such as a child making friends due to attending church or participation in a youth sports league. Other relationships emerge from participation in age-graded social institutions, such as school attendance, or by living in shared neighborhoods and communities (e.g., Crosnoe, 2004; Harding, 2009; Ladd, 1990; Shaw and McKay, 1942). Prior research demonstrates the influence that parents have on their children's friendship choices. For example, Knoester and colleagues (2006) found that adolescents who had higher quality relationships with their parents were less prone to having violent peers; or, in the language of this dissertation, less criminal social capital (or one form of that social capital). These high quality relationships also meant that children were more likely to affiliate with school-involved and high achieving peers. Such a finding is consistent with theories of social capital (Wright et al., 2001), though is not typically discussed in those terms.

Even if peer affiliations are a consequence of parenting practices, the peer relationships emerging during adolescence are highly influential for individual

development (Crosnoe and Muller, 2014; Giordano, 2003; Hartup, 1993, 1997; Hartup and Stevens, 1997). Based on this reasoning, the non-familial relationships of adolescents should mediate the effects of parental social capital on later life outcomes. If this is so, these adolescent relations can potentially be conceived of as transitions and potentially turning points, as they can redirect developmental trajectories. To better elaborate on the possible effects of these relations, and thus social capital, in the life course, I draw on the concepts of embeddedness and snares (e.g., Granovetter, 1985; Hagan, 1991, 1993; Lin, 2002; Moffitt et al., 1996; Pyrooz, Sweeten, and Piquero, 2013; Uzzi, 1996). These concepts are integral to theories of capital because they more explicitly elaborate on the role of peer and other social relations in precipitating action, and the temporal influence of these associations.

Embeddedness refers to individual immersion within networks (Granovetter, 1985), and the processes by which the relationships in these social milieus shape individual action (Uzzi, 1996). Drawing from his earlier work on the relevance of “weak” ties for employment location (Granovetter, 1973, 1983), Granovetter's (1985: 490) concept of embeddedness focuses on "the role of concrete personal relations and structures (or 'networks') of such relations in generating trust and discouraging malfeasance." Much like Coleman and other social capital theorists, Granovetter recognized that relationships facilitate easy access to information from individuals who frequently interact, and is often coupled with some social content (e.g., Uzzi, 1996). This information can then be converted into action; for Granovetter, it was the reliance of job-seekers on family, friends, teachers, and others when seeking out new employment. Considerations of embeddedness extend beyond mere jobseekers, however. For example,

Uzzi's (1996) examination of apparel industry executives found that embeddedness resulted from conveyed expectations about behavior and created opportunities for assistance (and economic benefit) between firms. Such considerations extend into the criminal underworld (e.g., Gambetta, 2009).

Expansions of this concept into the realm of criminal and gang embeddedness reflect individual involvement in relationships or groups of a particular character, or who have been examined due to exhibiting a particular trait or status (e.g., Hagan, 1993; McCarthy and Hagan, 1995; Pyrooz, Sweeten, and Piquero, 2013). This research, focused on homeless youth, gang members, hardcore street offenders, and criminals more generally, has provided preliminary evidence linking criminal embeddedness (e.g., the formation and maintenance of friendships, business contacts, and the like that involve more than a modicum of criminal behavior) and thus criminal social capital, to negative short and/or long-term economic or educational outcomes. That is, criminal forms of capital may be useful for achieving specific goals or actions among offenders, such as gaining access to a new drug supplier or locating a rival, but commonly have detrimental effects in the conventional economy.

Hagan (1991; 1993) elaborated on the concept of embeddedness, linking involvement in deviant subcultures, deviant networks, and crime to occupational prestige and unemployment. Drawing first from the notion of subcultural drift (Matza, 1964) and adolescent subcultural preferences (e.g., risk, excitement; Katz, 1988; Miller, 1958; see generally Campbell, 1969; Hebdige, 1984), Hagan (1991) first suggested that involvement in subterranean subcultures and adoption of subterranean values were negatively related to status attainment in early adulthood. Using two waves of panel data

drawn from students living in Toronto, Canada, Hagan (1991) demonstrated that participation in party-oriented subcultures (those characterized by dating, drinking, and going out to various social activities) actually increased occupational prestige, and thus status, among young men. This effect occurred only among young men who were of non-working-class origins. Among male working-class youth, involvement in a subculture of delinquency (characterized by violence against persons and property) corresponded with substantially reduced occupational prestige.

Expanding on his prior work, Hagan (1993) noted that a series of qualitative criminological inquiries depicted individuals who lacked the necessary forms of capital (e.g., human and social capital in the forms of educational attainment and connections to individuals who were currently employed) to locate or acquire jobs in the post-industrial economy. As an alternative, many individuals resorted to selling drugs and participating in more informal, illicit, economies (e.g., Anderson, 1999; Sullivan, 1989; Wilson, 1988). Using a set of panel data consisting of several hundred London boys to assess the unemployment-crime link, Hagan (1993) captured a multitude of information regarding social and personal capital possessed by respondents. Boys who had experienced familial disruptions (e.g., the arrest of a father), had criminal peers, and who possessed lower IQs participated in elevated rates of offending by age 18, which corresponded to increased chances of unemployment by age 21.

Hagan and McCarthy (1997), in their elaboration of criminal capital and criminal embeddedness among homeless youth, focused on the role of tutelage and mentoring in criminal activities. Adolescents who had peers who engaged in specific forms of offending (e.g., theft, drug selling, and prostitution) were more likely to engage in those

forms of offending, as well as have beliefs supporting those actions. As Hagan and McCarthy (1997: 156) noted, "embeddedness in criminal networks and the subsequent acquisition of criminal capital are important aspects of getting into some types of crime, in much the same way that similar processes are involved in getting a job. They are processes through which opportunities are transformed into action." Recall that social capital involves the conveyance and transfer of information. Here, Hagan and McCarthy suggest that learning about crime and being taught the methods of enacting those crimes, precipitates greater involvement in those activities.

Drawing from Hagan's work, Pyrooz and colleagues' (Pyrooz, Sweeten, and Piquero, 2013; Sweeten, Pyrooz, and Piquero, 2013) elaborated on the concept of gang embeddedness. Gang embeddedness reflects "individual immersion within an enduring deviant network" of street gangs (Pyrooz et al., 2013: 241), and is a more specific type of criminal social capital discussed by Hagan. To be sure, the concept of gang embeddedness involves more than just social relations, but also greater emotional investment into the group, and the assumption of extra-individual responsibilities consistent with Portes' (1998) discussion of negative capital. Indeed, being more embedded in the gang, maintaining more relations with fellow members, and investing more of oneself in the group, corresponds to with a series of negative outcomes. These outcomes include increased participation in criminal behavior, difficulties leaving the group, and more exposure to violence and legal sanctions (see also Decker, Pyrooz, and Moule, 2014; Pyrooz, Decker, and Webb, 2014). Affiliating with the gang also corresponds to changes in cultural orientations (e.g., street codes) and altered decision-making processes (e.g., Matsuda et al., 2013)

These increasingly fine-grained examinations of criminal social capital and embeddedness have focused on distinct social groups (e.g., street gangs and homeless youths, respectively), to the neglect of more general social relationships and settings. Further, rarely do these assessments extend beyond the relationship between criminal capital or embeddedness and offending. Indeed, as Hagan (1993:473) noted:

> A broadened application of Granovetter's concept of social embeddedness that includes consideration of the structure of criminal embeddedness would ideally be explored with crime and employment data that are more extensive than any currently available. These data would detail connections among individuals and experiences of delinquency, crime, and (un)employment across a range of community settings.

This suggestion, of better integrating actual peer relationships, families, and others into criminological studies of the life course and later-life outcomes, has so far gone unheeded.

Taken together, the works of Hagan and McCarthy, Granovetter, and others on criminal and non-criminal forms of social capital present an explanation for the importance of incorporating peer relationships into assessments of economically- and socially-oriented behaviors that feature prominently in the criminological life course.[5] Their notions of embeddedness compliment, and are easily integrated into, theories of social capital and of the life course. These complimentary notions are further supplemented by Moffitt and colleagues' (1996) concept of "snares." Following the logic of social capital and embeddedness elaborated on previously, peers and peer groups can ensnare individuals. These relationships can serve to isolate them from mainstream social institutions. Further, it is the potential results of these relationships (e.g., beliefs,

[5] For example, among respondents in Granovetter's (1995) research on job hunters, roughly one-third reported relying on friends or family. A growing body of recent research on offender reentry is focusing on the social relations of offenders for support and information relating to jobs (e.g., Berg and Huebner, 2011).

perceptions, and behaviors), that can make it increasingly difficult for individuals to re-engage with those mainstream institutions (e.g., Hagan and McCarthy, 1997, chapter 9; Harding, 2009).

Although embeddedness has typically been linked to economic outcomes, the work of Coleman, Bourdieu, Lin, and Moffitt also suggests that capital can have non-economic consequences (e.g., influence participation in non-economic, social institutions). Criminology has explored some of these consequences, though rarely has explicitly relied on a social capital framework. Further, not much scrutiny has been directed toward peer relations in these assessments. In the following sections, prior research and theory on the role of peers in the life course, including the origins and consequences of these affiliations, as well as occupational, educational, and marital attainment, are reviewed.

Peers in the life course

Consider the relationship between the major concepts of the life course and peer affiliations. Beginning in childhood, and persisting over time, the vast majority of individuals develop and maintain friendships (e.g., Hinde, Titmus, Easton, and Tamplin, 1985; Howes, 1983). The ubiquity of peers in the life course suggests that peer affiliations themselves qualify as a developmental trajectory (e.g., Young and Rees, 2013). Further, prior criminological research demonstrates that turning points such as marriage disrupt patterns of peer affiliations and time spent in the company of friends (e.g., Giordano et al., 2003; Warr, 1998; Wright and Cullen, 2004). What is more, the presence and influence of peers over time is consistent with many life course principles.

Three key features of peer relations are of relevance to the life course. First, the salience of peers, and broader aspects of youth culture, is a relatively recent historical phenomenon. The emergence of youth culture—that is, a culture oriented specifically around peers, adolescence, and adolescent behaviors like dating—occurred in the 1920s (Modell, 1989). Participation in this self-contained culture occurs during a crucial period of development—adolescence—that has become increasingly salient in contemporary society (e.g., Arnett, 2000, 2014; Johnson, Crosnoe, and Elder, 2011). Second, and related to the first point, is that the onset of peer affiliations, delinquent or otherwise, is strongly age-graded (Warr, 1993a). It is in adolescence when peers take on increased importance and grow more influential for individual development (Brown, Eicher, and Petrie, 1986). Third, that lives are interdependent clearly evokes the importance of peers and social networks for understanding human development (Dishion, McCord, and Poulin, 1999). Consequently, a better understanding the role of peers in the life course is entirely consistent with examinations of the effects of capital on human development.

Of course, different kinds of peers are present and relevant throughout the life course. Theories of social capital emphasize investment into conventional, or non-deviant, peers, whereas criminology often focuses on delinquent peers (Coleman, 1990; Hirschi, 1969; Warr, 2002; Wright et al., 2001). In either instance, it is commonly the affiliations and relationships emerging prior to and during adolescence that draw the attention and scrutiny of researchers. Of note, just as pro-social peers can be a source of social capital, so too can delinquent peers represent "criminal social capital" (Portes, 1998; Warr, 2002). It is necessary to elaborate on the origins of adolescent friendships,

particularly delinquent peers, and the short- and long-term consequences of affiliating with these peers.

Adolescent Peer Affiliations

By late childhood and early adolescence, some degree of assortative friendship formation has occurred among children (Crosnoe, 2000; Fergusson, Woodward, and Horwood, 1999; Kandel, 1978). As individuals move from childhood into adolescence, two important shifts in peer affiliations occur. First, during adolescence, peers become increasingly salient in the day-to-day lives of youth (Brown, Eicher, and Petrie, 1986; Giordano, 2003; Youniss and Haynie, 1992), with adolescents being characterized as "archetypical social animals" (Rees and Wallace, 2014: 34). During this period, adolescents explore new identities, roles, and statuses that are, in part, linked to the evolving social world around them (Barber, Eccles, and Stone, 2001; Kroger, 2004; McLean, Breen, and Fournier, 2010). These new identities, roles, and statuses, also coincide with behavioral shifts that involve participation in delinquency.

This salience coincides with the emergence of delinquent peers (e.g., Moffitt, 1993; Warr, 1993a). Warr (1993a: 22-23) demonstrated that exposure to delinquent peers begins around the age of 12, and increases through young adulthood. Much research has elaborated on the factors influencing this exposure and the maintenance of deviant affiliations. To be sure, affiliating with delinquent peers is not a random process. Broad bodies of theory and research, spanning abnormal psychology, sociology, and criminology, as well as units of analysis, have focused on the proximate and distal factors that promote having deviant peers. These theories are predominantly control-oriented in

nature (e.g., Hirschi, 1969; Kornhauser, 1978), focusing on the factors which inhibit delinquent affiliations.

Structural explanations for affiliations with delinquent peers reflect the absence of neighborhood social control (e.g., Kornhauser, 1978). Shaw and McKay (1942; see also Harding, 2009; Schaefer, Rodriguez, and Decker, 2014; Shaw, 1930) discussed how neighborhood or community social conditions can foster associations with delinquents. In communities characterized by residential instability, economic deprivation, and ethnic or racial heterogeneity, supervision is sparse or ineffectual (e.g., Anderson, 1999; Bursik and Grasmick, 1993; Sampson and Groves, 1989; Thrasher, 1927). Consequently, the prevalence of delinquent youths, and groups of delinquent youths, emerge. In addition, older boys in these communities (those in their late teens and early twenties) socialized adolescents into criminal subcultures, teaching them how to engage in various forms of offending. These control-based explanations at the neighborhood-level are shared by individual-level theories for explaining the emergence of delinquent friendships.

Much individual-level research assessing affiliation with delinquent peers draws from Hirschi's (1969) social bond theory. In brief, adolescents who are attached to institutions (e.g., family and school), involved in conventional activities, committed to conventional lines of action, and believe in the moral validity of conventional norms are less likely to engage in delinquency. Parental controls extend beyond delinquency to include who their children are friends with (Hirschi, 1969; Jensen, 1972; Jensen and Brownfield, 1983). Effective parenting practices, such as supervision, discipline, and monitoring can reduce association with delinquent peers. Prior research indicates families with close relationships reduce the likelihood of children associating with violent peers

(Henry, Tolan, and Gorman-Smith, 2001; Wright et al., 2001). Massey and Krohn's (1986) integrated social process model showed that parental attachment was strongly related to pro-social commitments and beliefs. In turns, these beliefs reduced associations with delinquents. Thornberry's (1987) interactional model similarly specified delinquent peers as the result of reduced attachment to family. Warr (1993b) found that while many adolescents do have deviant peers, those who are more attached to their parents have fewer delinquent friends.

A second body of control theory research emphasizes individual traits as driving peer affiliations (e.g., Cairns and Cairns, 1994; Dodge, 1983; Gottfredson and Hirschi, 1990). For example, Gottfredson and Hirschi (1990) suggest that low self-control is a mechanism that brings individuals together. Those children lacking in self-control are short-sighted, self-centered, impulsive, risk-taking, physical, and nonverbal (Gottfredson and Hirschi, 1990). Parents, who are attached to their children, monitor and supervise their child's behavior and recognize and address deviant behavior when it occurs instill in their children self-control (Hirschi and Gottfredson, 2003). A substantial body of research consistently finds that parenting practices significantly impact an individual's level of self-control (e.g., Burt, Simons, and Simons, 2006; Perrone, Sullivan, Pratt, and Margaryan, 2004; Unnever, Cullen, and Pratt, 2003). Self-control then influences children's sociability. Gottfredson and Hirschi (1990: 158) suggest that individuals with low self-control end up in the company of other delinquents due to rejection by more pro-social peers and concomitant difficulties associated with maintaining pro-social friendships (but see Young, 2011). Similar processes and outcomes also appear for

children who exhibit high levels of aggressiveness (e.g., Cairns and Cairns, 1994; Dodge, 1983).

These structural and individually-oriented explanations for affiliating with (delinquent) peers parallel those offered by theories of social capital, as theories of social capital are inherently theories of social control (e.g., Bourdieu, 1986; Coleman, 1990;; see Wright, Cullen, and Miller, 2001). Deficits in emotional and social attachments, as well as self-restraint, reflect deficiencies in social capital. As Wright and colleagues (2001) explicitly demonstrated, higher levels of parental social capital reduced the likelihood that individuals maintained delinquent peer affiliations (see also Knoester et al., 2006), and increased the odds of experiencing successful life outcomes. Further, the practices that transmit various forms of capital from parent to child are the same practices that instill self-control and facilitate the formation of social bonds. Likewise, expectations for conformity and conventionality pervade the control theories of criminology (e.g., Hirschi, 1969). These same theories make explicit claims about the impact of peers in the life course.

Criminal Social Capital and Its Consequences

Peers, especially delinquent peers, are a core facet of criminology (e.g., Haynie and Kreager, 2013; Lilly, Cullen, Ball, 2014; Warr, 2002). Beginning with the Gluecks' (1950) conclusion that "birds of a feather flock together," criminologists have debated over whether and to what extent peer affiliations contribute to individual antisocial behavior. The theories underpinning these debates make explicit claims about the nature of peer relationships and their influence on attitudes, beliefs, and behaviors. These

expectations matter if peers are expected to have long-term influence on social integration. These theories and concomitant expectations are reviewed next. Specific attention is paid toward Hirschi's (1969) cold and brittle hypothesis, which focuses on the nature of delinquent relationships, and the impact of deviant peers on offending.

The same individual-level control theories (e.g., self-control, social bond) that account for individuals forming relationships with delinquents also make explicit claims regarding these relationships and their influence on behavior. With regard to the former, Hirschi (1969: 141) proposed the "cold and brittle" hypothesis. Here, delinquents (e.g., those lacking in social bonds) were suggested to have relationships of a fundamentally different nature than their non-delinquent peers. Specifically, these relationships involved "…[delinquents,] whose social relations are cold and brittle, whose social skills are severely limited, are incapable of influencing each other in the manner suggested by those who see the peer group as the decisive factor in delinquency." As Kreager and colleagues (2011) further noted, if the cold and brittle hypothesis were true, then delinquent peer groups and affiliations would be tenuous and tempestuous, further characterized by distrust, minimal social support, and low overall quality (see also Boman, Krohn, Gibson, and Stogner, 2012; Gottfredson and Hirschi, 1990). These relationships would quickly end, supplemented with more immediately helpful criminal peers or even potentially non-delinquent peers. If relationships to delinquents are indeed "cold and brittle," then the requisite trusts and attachments necessary for them to qualify as any type of social capital, criminal or otherwise, would not exist.

Recent reviews find mixed evidence of the "cold and brittle" hypothesis (see Boman et al., 2012). Giordano, Cernkovich, and Pugh (1986) early assessment of the

hypothesis, found that among delinquents and non-delinquents, caring and trust did not significantly differ, although conflicts were more common among delinquents. A later assessment by Giordano and colleagues (2010), in the context of romantic partners, found that verbal conflicts were more common among individuals who reported engaging in more delinquency. More recently, Bohman et al (2012) using dyadic friendship data, found that relationships among delinquents were considerably intimate and characterized by strong attachments. Further, it was demonstrated that low self-control among friends contributes to greater perceptions of poor relationships, though this effect was conditioned by involvement in delinquency. As Warr (2002) noted, delinquency, especially shared delinquency, can serve as glue that promotes further attachment between individuals. This is consistent with evidence found among specific criminal organizations (e.g., street gangs; Decker and van Winkle, 1996; Thrasher, 1927).

If delinquents can be attached to one another, care about one another, and involve themselves with each other, then it seems plausible that the conditions for criminal social capital do indeed exist. If criminal social capital exists, how does it manifest in other forms of criminal capital? In other words, what are the short- and long-term effects of criminal social capital for individuals? For criminologists, this question has typically focused on offending. Self-control and social bond theories also make important claims regarding the causal influence of delinquent peer affiliations, and thus criminal social capital, on offending. More specifically, these theories reject any causal impact of peers on behavior. Rather, any peer effects are suggested to be the result of selection (either through a process of peer rejection and subsequent affiliation by levels of self-control, or on levels of social bonds, respectively). The selection argument for peer influence on

offending parallels concerns about the causal influence of social capital (see Mouw, 2003, 2006).

Theories of delinquency, and empirical evidence to date, anticipate and find that peers do substantively impact youth development, including offending behaviors (e.g., Haynie and Osgood, 2005; Ozer and Engel, 2012; Paternoster, McGloin, Nguyen, and Thomas, 2013). Consistent with theories of differential association and social learning (e.g., Akers, 1999; Sutherland, 1937), for example, prior research has found that individuals learn the definitions favorable to criminal behavior and the skills necessary to engage in a variety of criminal endeavors. This logic is consistent with research on peer influence and offending, including the dissemination of criminal human and cultural capital through social ties and experiences (e.g., Becker, 1953; Letkemann, 1973; Loughran et al., 2013; Shaw, 1930), and is evidenced in Hagan and McCarthy's (1997) discussion of tutelage and criminal skill building among homeless youths. These findings also compliment prior research on peer effects.

Peer effects, or peer influence, generally refer to the processes by which a given set of relationships (typically, but not limited exclusively to, friendships; other examples include classmates, class cohorts, romantic partners, best friends, and co-workers) shape, influence, and inform individual beliefs and behaviors (Bagwell and Schmidt, 2013; Brechwald and Prinstein, 2011). These effects demonstrate that the social milieus in which individuals exist contribute to individual development (Manski, 1993, 1995). Further, a robust body of research has examined peer effects on a multitude of behavioral and perceptual outcomes among adolescents, ranging from aggression (Espelage, Holt, and Henkel, 2003) and delinquency (Warr, 2002) to educational aspirations (Buchman

and Dalton, 2002; Cohen, 1983; Ryan, 2000, 2001). The social capital and peer effects literatures complement one another, insofar as both emphasize the role of relationships in communicating information between actors in a social space, and the influence of that information on future behaviors and beliefs. In the following sections, I review criminological evidence on the correlates of (un)successful transitions to adulthood and consider the possible contributions of criminal capital to these outcomes.

Educational Attainment in the Criminological Context

Dating back to Thrasher (1927) and the early Chicago School, criminology has long focused on the relationship between delinquency and educational attainment (see, e.g., Cohen, 1955; Glueck and Glueck, 1950; Miller, 1958). So too have capital theorists long been interested in the catalysts of successfully acquiring more advanced levels of education, and the roles that peers play in this process (e.g., Coleman, 1961; Sewell, Haller, and Portes, 1969). As Hagan (1991: 567) noted two decades ago, "adolescent deviance and adult stratification should be linked in some way, and their respective subfields could benefit from some level of integration…" Although each field diverges on its focal outcomes of interest, peers can be important contributors to both academic success and failure.

of Early subcultural theorists emphasized that lower class boys were ill-equipped for school settings, as they were disinterested in education, unaccustomed to the order and discipline of the classroom, and lacked academic support from their parents. Schools then became the battleground between middle class, mainstream culture (i.e. economic and educational aspirations and ambitions, productive uses of free time, and long-term

planning; Cohen, 1955; Miller, 1958) and lower class culture. The difficulties faced by lower class boys in school, in turn, spurred status frustrations, and resulted in increasingly antisocial behavior (Cohen, 1955). Further, these frustrations united lower class boys and facilitated the growth of delinquent subcultures and involvement in these subcultures diverted individuals from school to working-class jobs (see also Hagan, 1991; MacLeod, 1995; Willis, 1977). These subcultures are social in nature, and explicitly suggest that delinquent peers actively contribute to social marginalization from the education system.

Subsequent research concentrated on quantifying the impact of delinquency on education. Hirschi (1969) in his elaboration of social bond theory, argued that school commitment reflects commitment to conventional lines of action, and showed that school commitment was negatively related to delinquency (see also Jenkins, 1995; Krohn and Massey, 1980). Future research demonstrated a naturally reinforcing cycle of delinquency, school detachment, and disinvestment (Davies, 1995; Mensch and Kandel, 1988; Myers, Milne, Baker, and Ginsburg, 1987; Polk and Schafer, 1972; Stinchcombe, 1964). Such processes can begin early on in educational careers (Alexander, Entwhistle, and Horsey, 1997; Finn, 1989) and accrue over time, progressively pushing individuals farther away from educational institutions (Kaplan, 1975). Tanner and colleagues (1999) showed, for instance, that various forms of adolescent delinquency had negative consequences for educational attainment among men and women, and these deficiencies subsequently bled into future economic outcomes.

Across a variety of academic metrics, delinquents perform poorly compared to their non-delinquent counterparts (see Wang, Blomberg, and Li, 2005). The Glueck (1950: 144) delinquent boys were noted for their “marked dislike” of school, providing

reasons for their dislike that included a lack of interest, feeling unable to learn, and resentment about the restrictions school life placed on their daily activities. Among the Glueck boys, most did not complete high school (Sampson and Laub, 1993), but the delinquent boys had much more difficult times in school, and their experiences highlighted a number of school problems, such as conflicts with teachers, disciplinary problems, and poor academic progress. These themes of school conflict, poor progress, and disciplinary problems persist in contemporary research on high school dropout and disengagement. Simply put, delinquents do not fare well in educational environs when compared to their non-delinquent counterparts (Elliott, 1966; Elliott and Voss, 1974; Jarjoura, 1993; Mensch and Kandel, 1988; Moffitt et al., 2002; Robins, 1966).

The difficulties experienced by delinquents may also reflect diminished expectations about academic success. Sewell, Haller, and Portes (1969) stressed that "significant others"—parents, teachers, and friends alike, contribute to academic success, setting up and reinforcing expectations for success and the means of achieving that success. Some research has suggested that delinquents internalize labels as academic failures, and are treated as such by teachers and other educators (Sampson and Laub, 1997). As a consequence of this labeling, delinquent aspirations for educational achievement are reduced. Siennick and Staff (2008), using data from the National Education Longitudinal Study, found that delinquency was negatively related to college matriculation, but not college graduation, and that educational expectations exhibited independent, positive effects on entering and graduating from college. The pair suggested that these expectations may be important for understanding success or failure across other life domains beyond education.

Of course, the school difficulties experienced by adolescents are not solely attributable to their delinquency. Alternative explanations of the delinquency-educational deficit relationship focus on individual differences such as IQ and aptitude. Lane and Witty (1934) noted that delinquent boys commonly scored lower on aptitude tests, a finding replicated numerous times by subsequent research (e.g., Hirschi, 1969; for a review, see Maguin and Loeber, 1996). Propensity theories, or theories of individual differences, suggest that these issues are simply a consequence of individual traits (e.g., Gottfredson and Hirschi, 1990; Wilson and Herrnstein, 1985). Indeed, propensity theorists suggest that the aforementioned issues are simply a consequence of traits like self-control or intelligence. Individuals lacking in these areas manifest many of the problems highlighted above and subsequently do not do well in school.

In addition to these areas, recent research has also emphasized the growing salience of criminal justice contact as contributing to high school dropout and non-completion (Bernburg and Krohn, 2003; Hjalmarsson, 2008; Kirk and Sampson, 2013). Drawing on labeling theories, for instance, this research has suggested that formal state sanctions stigmatize delinquents, yield poor treatment by teachers, and individual internalization as a delinquent and as an academic failure. Prior research has found substantial negative effects of criminal justice contact on educational attainment. Sweeten (2006), for example, demonstrated that juvenile court appearances and arrests increased the likelihood of high school dropout.

If delinquents perform poorly in educational settings, what contribution can their peers make to educational outcomes? Prior research demonstrates that having delinquent peers or friends who have dropped out correspond with deleterious educational outcomes

(Battin-Pearson et al. 2000; Kaplan, Peck, and Kaplan, 1997; Ream and Rumberger, 2008). Shomaker et al. (1997) showed that disaffected students became more likely to befriend delinquents. These affiliations resulted in reduced academic motivations (rejecting school or the importance of good grades), rejection from teachers, and expressing a desire to quit school altogether. This is consistent with the suggestion of Ream and Rumberger (2008), who noted that aspects of peer socialization play an important role in school (dis)engagement and subsequent academic success or failure (see also Ryan, 2000, 2001).

This research suggests that delinquent peers themselves may not directly influence educational outcomes. Rather, delinquent peers influence social and psychological processes that serve to distance individuals from educational institutions and achieving higher levels of education. Do the resulting processes exert independent influence on later transitions, or do they operate exclusively through reduced educational attainment? I revisit this consideration in Chapter 3, but first turn to extant research on economic success and occupational attainment in adulthood.

Occupational Attainment in the Criminological Context

Forms of capital, especially social and human capital, are closely tied to status attainment (Blau and Duncan, 1967; Coleman, 1988, 1990). Beginning in the late 1960s, researchers began to explore how various forms of capital influenced occupational attainment. This early work concentrated primarily on human capital (i.e., educational attainment), as well as the employment and socioeconomic statuses of parents as the primary drivers of status attainment (Blau and Duncan, 1967; Sewell, Haller, and Portes,

1969). As the body of research examining occupational attainment expanded, this research directed greater scrutiny to the contribution of social relations. This is true both in terms of locating and obtaining jobs, as well as opportunities for career advancement (more generally, these outcomes reflect increased status attainment; e.g., Granovetter, 1995; Lin, 1999b; Montgomery, 1991; Mouw, 2006). For example, Granovetter's (1973, 1974) examination of "the strength of weak ties" involved assessing how white-collar workers acquired better paying jobs. Likewise, Lin and colleagues' (1978) exploration of social resources and information dissemination focused on how relationships with higher status and well-connected individuals lead to completed information delivery. Although this early work preceded theoretical elaboration of social capital, these literatures strongly overlap.

Lin's (1999b) review of the social capital literature highlighted two specific research methodologies used to assess the effects of capital on occupational attainment: name generators and position generators. Regarding the former, respondents provide contact information for individuals in specific roles and contexts (e.g., work, residence, intimacy). This list provides a general overview of relational strengths, as well as the capital possessed by the respondents and their affiliations. For instance, Campbell, Marsden, and Hurlbert (1986) assessed how the educational and economic characteristics of affiliations corresponded to individual status attainment. Higher affiliation statuses corresponded to higher levels of respondent income and occupational status. The latter method, position generators, focuses on respondent contacts with individuals in specific positions within a social hierarchy (e.g., occupations; Lin and Dumin, 1986). Individuals

who report having more connections closer to the top of the hierarchy are more able to achieve higher occupational attainment and statuses (Lin, 1999b).

By and large, evidence supports the positive effects of accessed social capital on occupational status attainment, regardless of whether name or position-based methods are used (see Lin, 1999b for a review). Likewise, Granovetter's (1995) review of the job location literature found similar support for the positive influence of social capital. For example, prior research indicates anywhere from roughly 25 to 50 percent of job seekers relied on information from friends, family, and other personal contacts to locate their most recent job (e.g., Corcoran, Datcher, and Duncan, 1980; Granovetter, 1995; US Department of Labor, 1975). Others relied on contacts from schools (e.g., teachers, professors; Granovetter, 1995).

Fernandez and Fernandez-Mateo (2006), in their analysis of hiring practices at a single large factory, found that social capital appeared to matter across stages of the hiring process. Recent analyses by Mouw (2003) have worked to explicate whether social capital has a *causal* influence for status attainment. Based on findings across a variety of individual datasets, Mouw (2003) concluded that much of the effects of social capital found in prior research were largely a consequence of homophily. He suggested that considering other mechanisms associated with information and influence. Considering the prospective influence of adolescent peers, particularly those characterized by involvement in delinquency, offers one way of specifying alternative means of status attainment in early adulthood.

Could criminal capital similarly impact economic or occupational outcomes, as more prosocial forms of capital appear to do (but see Mouw, 2003)? Consistent with

Portes' (1998) conceptualization of negative capital, this consideration is possible. Criminal social capital would be expected to simply not be useful for obtaining quality, aboveground employment. Presumably, criminal affiliations would occupy less prestigious positions in the social hierarchy or be isolated from more mainstream social networks or institutions which might facilitate (better) employment. This would be one potential information-based mechanism inhibiting economic advancement among delinquents. For example, research on offender reentry commonly finds that recently released offenders struggle to locate adequate employment opportunities, owing to constrained social resources (Berg and Huebner, 2011; Holzer, Raphael, and Stoll, 2003; Pager, 2004).

Ostensibly, most research involving offenders concentrates on urban offenders, who are marginalized from economic opportunities regardless of their criminal histories or current offending behavior (e.g., Anderson, 1999; Sullivan, 1989; see also Wilson, 1987). That said, prior research linking delinquency and adult status attainment suggests that delinquent peers may provide an indirect path to diminished occupational or economic attainment, through antisocial behavior and disinvestment in school (e.g., Caspi, Wright, Moffett, and Silva, 1998; Chen and Kaplan, 2003). An alternative information stream would not be about opportunities to employment, but rather about the perceptions of those opportunities and of employment more generally. Here, peers can shape general attitudes or beliefs, or influence how individuals will interact with colleagues and coworkers. Anderson (1999), for example, suggested that individuals who adhered to the "code of the street"—cultural norms about respect—would be unlikely to maintain employment where they were repeatedly mistreated by colleagues or customers.

That said, even heavily marginalized individuals do not outright reject employment prospects, nor do they dismiss the importance of gainful employment (see Massoglia and Uggen, 2010; Wilson, 1996).

It could be that individuals who would affiliate with delinquent peers would have poor interactional styles not conducive to interacting with strangers, customers, and authorities figures such as employers (e.g., Gottfredson and Hirschi, 1990). In other words, these individuals would have a deficit of prosocial human capital. The alternative to this is not simply an absence of prosocial capital (human, social, or cultural), but rather that individuals would instead possess higher levels of criminal capital that would be influential occupational or economic attainment. What does this kind of criminal capital look like, and can it be influential on these outcomes independent of offending or criminal justice contact? I review criminological research on marriage and cohabitation before revisiting these questions.

Marital Attainment in the Criminological Context

Criminologists have long been interested in marriage (see Knight, Osborn, and West, 1977). Marriage is an especially salient relationship for many adults, and a growing body of work stresses that marriage can facilitate desistance from crime (e.g., Laub and Sampson, 2003; King, Massoglia, and MacMillan, 2007; Sampson and Laub, 1993). But how do individuals, particularly offenders, obtain romantic relationships, and later marriages? Laub and Sampson (2003: 45) suggest that, for marriage, "Selection is surely operating at some level, but most marriages originate in fortuitous contacts rooted in everyday routine activities."

As Paternoster et al. (2015) recently noted, however, Sampson and Laub do little to address how or why offenders find good jobs or good partners, and why they do not resist the efforts of potential partners and employers to enact varying degrees of informal social control. I contend that the cognitive and cultural processes generated from deviant peer affiliations are a potential means of understanding why offenders may resist these attempts at control not see the value in involvement with these social institutions. Such processes dampen potential attachment to marriage, but also education and economic institutions that make individuals more suitable partners, or marriage material. What is known in criminology about romantic relationships and marriage is next elaborated on.

Just as they matter for employment, so too do forms of capital matter for individual involvement in romantic relationships. This is true beginning in adolescence (Dunphy, 1963). Dunphy's (1963) influential research on adolescent romantic relations delineated between two peer structures during this time: small cliques of same-sex friends and larger, mixed-sex groups or crowds. Crowds emerge from the slow merging of the same-sex cliques, and in turn facilitate the onset of romantic relations (see also Connelly and Johnson, 1996). Connolly and colleagues (2000) found that friendships are a contemporaneous influence on romantic relationships in middle adolescence, which in turn influence future romantic relationships in late adolescence. Likewise, social competency (a form of human capital) and social capital increase participation in adolescent romantic relationships (e.g., Furman, Ho, and Low, 2008; Kuttler and LaGreca, 2008). Echoing the life transition literature, peers have also been found to be an important support mechanism when experiencing difficulties while in romantic relationships (Collins, Welsh, and Furman, 2009; Connolly and Goldberg 1999).

Peers are not, however, passive agents as individuals move into or out of relationships. Friends can be a source of support when an individual wants to initiate a relationship (Connolly and Goldberg 1999). Likewise, peoples' experiences in friendships provide a basis for their interactions with partners in romantic relationships (Furman and Shomaker 2008; Furman et al., 2002). Negative interactions, such as those more common among aggressive or delinquent peers, are likely to constrain entrance into romantic relationships, as well as influence behavior during these relationships. For example, delinquent peers may reinforce traditional gender roles, encourage early or risky sexual behaviors, and provide antisocial means of coping with romantic relation conflicts (e.g., Anderson, 1999; Barnes, Hoffman, Welte, Farrell, and Dintcheff, 2007). The influence of these experiences can be long lasting. Indeed, interactions with parents and peers shape individuals' behaviors while in romantic relationships, at least as far as the transition to adulthood (Meeus, Branje, Van Der Valk, and deWied, 2007). This is true, even as romantic relationships begin to take precedence over friendships (Barry, Madsen, Nelson, Carroll, and Badger, 2009). This pattern of behavior and the lingering influence of peers is likely to persist beyond romantic relationships to marriage.

As Burgess and Locke (1945) noted, the institution of marriage had, by the mid-twentieth century, undergone a substantial shift. This shift involved the movement away from institutionally-based to companion-based relationships. Here, sharp divisions of labor between husbands and wives were the norm, but each was supposed to contribute to the emotional and social well-being of the other in ways not expected in prior generations. Cherlin (2004) notes a second major shift in the institution of marriage beginning in the 1960s. Here, the shift involved the evolution of companion-based

marriages to individualized marriages, wherein individuals put off marriage for longer periods of time, had children out of wedlock, and cohabitated instead of married (see also Cherlin, 1978). These and other alternative forms of romantic relations (e.g., same sex partnerships, higher rates of divorce and remarriage), and the decline of traditional marriage practices and ideals, draw attention to the features of individuals which facilitate or constrain access to marriage. Such features are closely tied to dimensions of capital.

Sampson, Laub, and Wimer (2006), in their review of the factors influencing the likelihood of an individual marrying, focused on a number of life domains and personal characteristics. Five main areas warrant substantive discussion: individual differences, employment and economic potential, educational attainment, criminal activity, and health. To be sure, forms of capital are important parts components in obtaining romantic relationships, including marriages. Here, I first elaborate on the role of capital, in the context of Oppenheimer's (1988) assortative mating hypothesis.

Oppenheimer's (1988) integration of job-search theory and marriage mate selection describes one component of this process. In brief, job-search theory relies on a series of rational choices by actors balancing imperfect knowledge of the job market and the potential for economic success. Uncertainties of important matching attributes (e.g., compatibility, as well as the long-term benefits of a given match) can delay the onset of work or disrupt time in a given job. The cost of searching for jobs is high—expenditures, lost earning on rejected potential jobs (Stephenson, 1976)—and as a result, individuals set for themselves a "wage reservation." This reservation is the threshold at which individuals will accept a job offer, rejecting all offers below the threshold. Oppenheimer

(1988) extends this line of thinking to marriage, describing two inter-related processes through which individuals locate suitable mates: assortative mating and adaptive socialization.

Assortative mating, much like the job search, involves individuals in a market, or pool, of potential mates (Becker, 1974; Goode, 1970; Kalmijn, 1994, 1998). Because locating a suitable partner, dating, engagement, and eventually marriage can be time-intensive endeavors, individuals similarly rely on imperfect information and have a threshold about what constitutes an acceptable mate (Oppenheimer, 1988). Despite these conceptual overlaps, important caveats in the marriage-job analogy are two-fold. First, it is not usually known whether individuals are seeking a marriage partner. Oppenheimer (1988) nevertheless notes that by adolescence, individuals are beginning to enter into romantic relationships (see also Collins, 2003). Second, locating a mate co-occurs within individuals' routine activities in everyday life, such as going to school, maintaining a job, or engaging in recreation (Laub and Sampson, 2003). Oppenheimer (1988:570) suggests then to focus on the conditions which foster or impede successful transitions to marriage. Notably, criminology has focused on a fairly narrow set of factors that may play a role in obtaining marriage or other advanced forms of romantic relationships.

In their review of marriage in criminology, Sampson, Laub, and Wimer (2006) identified a handful of salient individual features influencing marriage. The first factor Sampson and colleagues (2006) identified focused on individual differences. These differences remained one of the troublesome aspects of much research in the life course, until relatively recently (see reviews by Clausen, 1993; George, 1993). These differences reflect concepts such as IQ (Herrnstein and Wilson, 1985), self-control (Gottfredson and

Hirschi, 1990), and aggressiveness (Cairns and Cairns, 1994). Common to the life course literature generally, this problem also occurred for research on marital formation. Sampson et al. (2006) showed that individual differences, specifically IQ, social competence, and stubbornness all predicted entrance into marriage between ages 17 and 32. The effects of competence and stubbornness persisted when this time parameter increased to age 70. Barnes et al. (2014: 249) similarly noted that being amenable to a long-term relationship (e.g., willing to compromise, exert self-control) is a necessary component of entrance into marriage (see also Hirschi and Gottfredson, 1995).

Similar to individual differences, prior research has also focused on the influential role of relational or marital competence for entering into, and successfully maintaining, romantic relations (Carroll, Badger, and Yang, 2006; Foote and Cottrell, 1955). This research focuses on the development of individual communication skills, emotional availability, and problem solving (Carroll et al., 2006; Conger, Cui, Bryant, and Elder, 2000; L'Abate, 1997). These characteristics have strong parallels with the individual differences identified by Sampson, Laub, and Wimer (2006). To be sure, however, competence in the context of marriage has many parallels with the capital-based arguments discussed previously. Marital competency historically referred to aspects of social, human and cultural capital, ranging from temperament and family background to social standing (Holman, 2001; Terman and Oden, 1947). As discussed below, such factors are highly influential for successfully obtaining and maintaining romantic relationships (Wamboldt and Reiss, 1989).

The second factor involves employment and economic potential, two "consistent and robust predictors" of marriage (Sampson et al., 2006: 478). Economic success and

stability increase the likelihood that individuals will enter into marriages, as men exhibiting these traits are considered attractive mates (Cooney and Hogan, 1991; Gibson-Davis, 2009; Sweeney, 2002; Xie, Raymo, Goyette, and Thornton, 2003). Individuals who manifest economic deficits, on the other hand, especially men, are unlikely to appear as good partners. In the criminological context, this is manifested most strongly by research on the struggles faced by former convicts and other offenders, those living in already economically deprived and marginalized communities (e.g., Anderson, 1999; Craig, 2015; Craig, Diamond, and Piquero, 2014; Wilson, 1987). The interpersonal and economic deficits associated with criminal behavior or criminal justice contact (see below) are "handicaps" and hurdles to be overcome as individuals move beyond adolescence and into adulthood (Massoglia and Uggen, 2010; Pager, Western, and Bonikowski, 2009).

The third factor influencing entrance into marriage is criminal behavior and involvement in the criminal justice system. King and South (2011) found a direct influence of criminal behavior on entrance into marriage. However, this effect was rendered non-significant when individuals' desire to be married was included into the model. Van Schellen and colleagues (2012) used data from the Netherlands and found that involvement in criminal offending had two consequences for marriage. First, individuals with more involvement in crime were less likely to become married. Second, for those offenders who did get married, involvement in crime corresponded with increased chances of marriage to a deviant partner. Barnes et al. (2014) examined the reciprocal and cross-lagged effects between marriage and crime among individuals who

were in their 20s and 30s, using two waves of Add Health data. Criminal behavior in emerging adulthood influenced later entrance into first marriage as well as marital status.[6]

Like crime, criminal justice contact (e.g., Schmidt, Lopes, Krohn, and Lizotte, 2014; Sweeten, 2006) plays a role on the capabilities of individuals to locate and obtain suitable partners and maintain adequate romantic relations (Huebner, 2007; Lopoo and Western, 2005). Time spent incarcerated largely, but not entirely, removes offenders from the marriage market (Western and McLanahan, 2000). Schmidt et al. (2014) take a step back from this line of argumentation, and examined the influence of adolescent arrest on marriage formation (see also Bernburg and Krohn, 2003; Lopes et al., 2012). Using data from the Rochester Youth Development study, Schmidt and colleagues (2014) found that arrest or criminal justice contact system has no direct effect on stable marriages, but did impact financial hardships, which in turn reduced the odds of being in a stable marriage. Further, to the extent that criminal records make breaking into the labor market more difficult (e.g., Pager, 2003, 2008), criminal justice contact reduces the appeal of convicted offenders to potential mates.

The fourth factor influencing marriage is educational attainment. Much like economic achievement, education is a strong predictor of entrance into marriage (Fischer, 1982). Goldscheider and Waite (1986) found that increases in educational attainment increased ones chances of being married. The authors note that education impacts the timing into marriage, as marriage typically follows peak educational attainment (see also Bloom and Bennett, 1985). In addition, increased educational attainment should correspond to increased economic stability and achievement (e.g., Card, 1999). Just as

[6] Barnes et al. (2014: 256) included a measure of drug-using peers as a predictor of later marital status and criminal behavior. It is unclear what the effect of these peers on later marital status is in their model.

criminal justice contact directly inhibits economic prospects, so too does it negatively impact educational attainment (see the review previously). Indeed, historical research on marriage emphasized the role of competency, which included adequate interpersonal skills, reasonably high levels of educational attainment, and relative economic prosperity as increasing the likelihood of marriage acquisition (Carroll et al., 2006).

The fifth factor influencing entrance into marriage is health. Prior research has typically focused on the positive effects of marriage on health (see Bloom, Asher, and White, 1978; Horwitz, White, and Howell-White, 1996; Kiecolt-Glaser and Newton, 2001). Sampson et al. (2006) note that the role of health, specifically mental health, in influencing entrance into marriage appears minimal (e.g., Brown, 2000). Nonetheless, tentative evidence supporting the impact of physical health on marriage formation does exist. Fu and Goldman (1996) showed that individuals who engaged in excessive drinking, drug use, and who exhibited poor health features such as obesity were less likely to get married. Murray (2000), in his historical analysis of men born in the 1800s, found that underweight men were less likely to marry, whereas overweight men were more likely to marry. Joung et al. (1998) analyzed a large cohort of Dutch men, finding that health status had no influence on the likelihood of entering in to marriage.

One alternative to these factors is that individuals, especially delinquents and other offenders, are not moving into marriage, but are only cohabitating with romantic partners during the transition to adulthood. Traditional progressions toward marriage have changed dramatically over the past few decades, with increases in divorce, postponement of marriage, and the rise of cohabitation (Booth, Crouter, and Shanahan, 1999; Cherlin, 1992, 2004; Seltzer, 2000). In other words, as individuals delay entrance

into marriage, they have instead begun assuming some marriage roles, such as living together. Evidence suggests that cohabitation is viewed as an important stepping stone for marriage, or a time for "feeling out" a potential long-term romantic partner. For example, among a nationally representative sample of emerging adults, nearly two-thirds agreed with the statement "'Living together with someone before marriage is a good way to avoid an eventual divorce" (Whitehead and Popenoe, 2001). That is, cohabitation reflects a choice-based relationship that is likely influenced by the characteristics individuals bring into the relationship.

Prior research has typically focused on the consequences of parental cohabitation for juvenile delinquency, rather than the effects of adolescent behaviors on later cohabitation (see Manning and Lamb, 2003 for a review). That said, some recent research has considered the correlates of entering into cohabitating relationships, as well as the factors influencing perceptions of those relationships. Lonardo, Manning, Giordano, and Longmore (2010) used data from the Toledo Adolescent Relationship Study to show that adolescent delinquency increased the likelihood of cohabitating in young adulthood. Notably, Lonardo and colleagues included a measure of low self-control, a possible confounder of the delinquency-cohabitation relationship. Thornberry and colleagues (2016) similarly demonstrated that serious involvement in delinquency increased the likelihood of cohabitating, while drug use influenced earlier cohabitation using the Rochester Youth Development Study. In contrast, delinquency had no effect individuals' likelihood of marriage.

Based on this review of the literature, there are strong theoretical reasons to believe that criminal capital could influence outcomes in emerging adulthood across a

variety of life domains (e.g., social, economic, and educational). By and large, prior research has considered this influence as offending or criminal justice contact. Criminal social capital (e.g., delinquent peers) facilitates and enhances natural proclivities to offend and provide new opportunities to engage in delinquency. The link between delinquent peers and offending is well established (Warr, 2002). This would, ostensibly create a causal chain where delinquent peers influence offending, offending increases criminal justice contact, and contact in turn reduces the likelihood of marriage, employment, and educational advancement. Alternatives to this causal chain may also be possible. Despite a strong theoretical foundation, however, limited evidence has specifically assessed either the simultaneous influence of delinquent peers and alternative versions of criminal capital for later life outcomes.

Indeed, in some instances, peer affiliations have been included in individuals' propensity to marry (e.g., King, Massoglia, and MacMillan, 2007), but in most cases, direct measures of antisocial peers have been omitted from criminological research on social and economic transitions to adulthood (but see Hagan, 1991, 1993; Moffitt et al., 1996; Piquero, 2015). If delinquent peers can act as a conduit through which beliefs, behaviors, and perceptions antithetical to mainstream social institutions flow, what might these beliefs look like? Could delinquent peers influence more just offending? Considering alternative theoretical mechanisms beyond offending that could result from delinquent affiliations, and the unique influence of these mechanisms on successful transitions to adulthood, are logical next steps for this life course research in criminology.

CHAPTER 3
FURTHER ELABORATING ON CRIMINAL CAPITAL AND OUTCOMES IN THE TRANSITION TO ADULTHOOD

The core arguments of this dissertation have, thus far, been twofold. First, that the criminological life course is commonly approached in one of two ways. One body of research commonly focuses on the relationship between institutional involvement (e.g., marriage, employment, military service) and desistance from criminal activity (e.g., Laub and Sampson, 2003; see also Paternoster, Bachman, Bushway, Kerrison, and O'Connell, 2015). For two decades, this body of research has continued to expand, and increasingly nuanced views of the life course have emerged as a consequence (Piquero, 2015).

The second body of research in the criminological life course has explored how individual access to the social institutions that facilitate desistance are conditioned by a variety of factors. These factors have typically been related to incarceration, particularly among African-Americans (e.g., Alexander, 2012; Pattillo, Weiman, Western, 2004), and involvement with the criminal justice system more generally (Pager, 2008). I have argued that, for this latter body of research, a number of questions remain unanswered and concepts unexplored. Specifically, I have suggested because of Laub and Sampson's (1993) control-oriented characterization of the criminological life course, and limitations inherent to their data, that criminology has left the long-term influence of delinquent peer affiliations (or what may be called "life course consequences") unexamined. Indeed, as a review of the literature on educational, occupational, and marital attainment in criminology suggests, the thread linking individuals to negative later-life outcomes

appears to be through delinquent peers and resulting offending (Sampson and Laub, 1993).

The second argument I have presented is that the criminological life course can be accurately characterized as assessments of capital, and the ways in which individuals obtain, lose, and use this capital as they move across developmental stages of the life span. Central to this argument is that theories of social capital exhibit a strong theoretical convergence with the criminological life course, insofar as theories of capital are control-oriented in nature, and place the onus for success on the characteristics of parents and families (e.g., Coleman, 1988). Theories of capital are explicitly interested in the acquisition of valued states and statuses that are of interest to criminologists (e.g., education, marriage, employment).

In addition, theories of capital identify specific characteristics and their relationship to these outcomes of interest (e.g., level of education, acculturation). Chief among these characteristics is social capital, or the relationships that individuals maintain and the social milieus in which those same individuals exist (e.g., DiMaggio and Mohr, 1985; Lin, 1999b; Putnam, 2000). Social capital reflects the resources that individuals can mobilize for achieving various ends, such as graduating high school, locating or obtaining suitable employment, and suitable romantic partners. Social capital is also the basis through which information (e.g., beliefs, cultural models, norms, and the like) is transmitted between individuals (Sandefur and Laumann, 1998). On its face, this recognition suggests that peers should be influential for adolescents' beliefs and behaviors, and that this influence may extend beyond adolescence into the transition to adulthood. This recognition is buttressed by growing evidence about the influence of peer

effects on individual development across a variety of life domains (Brechwald and Prinstein, 2011).

The theoretical convergence between the criminological life course and theories of capital is substantial. Despite this overlap, the life course perspective in criminology has generally omitted non-familial social relationships from its purview. Such an omission is curious, given renewed attention to the social networks of adolescents and continued interest in the influence of peers on offending (e.g., Haynie, 2001; Mullins and Wright, 2003; Warr, 2002). Portes' (1998) assessment of social capital, and the notion of negative capital (or the negative consequences of particular forms of capital), warrants further scrutiny. This is especially the case for criminologists, as the negative forms and consequences of capital discussed by Portes (1998) are central to the criminological enterprise (e.g., organized crime, gangs, embeddedness in criminal networks, or affiliating with delinquent peers, more generally).

Referring back to Diagram 2.1, which depicts Sampson and Laub's (1993: 244) theoretical model of crime, deviance, and informal social control over the life course, delinquent peers *solely* influence involvement in delinquency. It is delinquency which precipitates further criminal behaviors and engagement with the criminal justice system. Recall, however, that part of Coleman (1988) and other capital theorists' claims on the social capital-status attainment link are that social capital yields cultural and human capital. That is, relationships form the basis for the conveyance of beliefs, norms, information, and expectations. This is true with respect to parents and children or with children and their peers. A broader view of the criminological life course must necessarily acknowledge that delinquent peers are also capable of disseminating values,

beliefs, and ways of thinking about the world which are related to offending, but which can also have an influence extending beyond direct involvement in crime. These two considerations highlight one avenue for research: identifying the independent effects that different forms of criminal capital might exert on transitions made in emerging adulthood.

As discussed previously, there are two conceptions of peer influence: selection and socialization. The former refers to individuals associating with like-minded and behaviorally-similar peers (e.g., Gottfredson and Hirschi, 1990; Kandel, 1978), while the latter reflects the co-evolution of beliefs and behaviors among individuals sharing a social space (e.g., Akers, 2011; Hartup, 2005). As noted previously, under the selection model, peers should have no influence on individuals. The socialization model, alternatively, acknowledges ongoing influences from the social world can have consequences for individuals. Prior research indicates that these dual processes influence the thoughts, feelings, perceptions, and actions of adolescents (see Brechwald and Prinstein, 2011 for a recent review). As they age, individuals become more resistant, or less susceptible, to peer influence (Giordano, Cernkovich, and Holland, 2003; Monahan, Steinberg, and Cauffman, 2009; Steinberg and Monahan, 2007). That this susceptibility occurs at a time when individuals are investing in peers, peer groups, and friendships, navigating the broader social waters, and making decisions that can have long-term implications should be of interest to life course criminologists.

Socialization models specify the processes by which individuals learn about norms and behaviors, the acceptability of those norms and behaviors, and the social rewards or consequences associated with holding those norms or participating in those

behaviors. For example, Akers' (1999) social learning theory of criminal behavior specifies a handful of processes by which individuals are socialized into offending. First, individuals learn directly by affiliating with individuals who already engage in offending; specifically, these individuals develop definitions favorable to offending. These definitions can involve identification of particular acts as "good" or "bad," or "valuable" or "not of value," but also provide justifications for offending. Second, individuals can become involved in offending by modeling, or imitating, the deviant behaviors of people around them. These acts can be reinforced by the individuals whom one associates with, and positive reinforcement will facilitate continued involvement in offending. These types of socialization processes extend far beyond offending, and the consequences of this socialization may as well.

In this chapter, I elaborate on an integrated model of the criminal capital and the life course, discussing possible mechanisms of capital developed in adolescence that may impact individuals during the transition to adulthood. Elster (1998: 58) noted nearly two decades ago, "actions are caused by desires and opportunities." This succinct description of the correlates of individual behavior undergirds this integrated model of the criminological life course. Indeed, the mechanisms which link adolescent criminal social capital and outcomes in the transition to adulthood should fundamentally relate to desires and opportunities. Further, these mechanisms should, in some capacity, be related to delinquency, given its focal nature in Sampson and Laub's (1993: 244) theoretical model and persisting mention across achievements in various life domains. I specify two additional potential mechanisms that could result from criminal social capital besides offending: (1) criminal cultural capital, in the form of cultural scripts associated with

fatalism or early anticipated death, and (2) criminal human capital, characterized by the absence of thoughtful and reflective decision making.[7] In the following sections, I review relevant research on the sources and consequences of these potential mechanisms.

Fatalism

Fatalism, also characterized as early anticipated death, perceived survival chances, futurelessness, or hopelessness, refers to a belief or perception that an individual is going to die young (Brezina, Tekin, and Topalli, 2009; Caldwell, Wiebe, and Cleveland, 2006). Past research finds that adolescents greatly overestimate the likelihood that the will die young. Jamieson and Romer (2008) found that, among a national representative sample of adolescents and young adults, approximately seven percent did not believe they would live past the age of 30. Fischoff and colleagues (2000) found that roughly one-fifth of teens in the NLSY 1997 reported that they believed they would die in the subsequent year or by the age of 20. This stands in stark contrast to official vitality statistics, which indicate that annual adolescent death rates are less than one percent (Minino, Heron, Murphy, and Kochanek, 2007). Do these perceptions influence antisocial behavior?

Fatalistic beliefs have implications for short-term behavior and long-term life outcomes, insofar as it emphasizes the "here and now" (Brezina et al., 2009; Hill, Ross, and Low, 1997), disregarding future consequences of actions, and might reduce individual willingness to invest in close or meaningful relationships (Bell and Jenkins,

[7] Opportunities for offending are identified here only for the sake of thoroughness. These opportunities are the common focus of prior research, and one of the consistent predictors of negative life outcomes. My interests lie in elaborating on fatalism and thoughtful reflective decision making as potential mechanisms linking delinquent peers to difficulties in the transition to adulthood, net of engagement in offending.

1993). Individuals who see a promising and predictable future are expected to be less likely to engage in risky behavior (Hill et al., 1997), while those who anticipate an early death appear to have little incentive to focus on long-term plans or achievements (Caldwell et al., 2006). Ethnographic interviews among offenders reinforce the link between fatalism and diminished chances of successfully transitioning to adulthood. As one offender told Topalli and Wright (2004: 162), "So everyday, there's not a promise that there'll be another [day] so I just spend it [getting high and getting drunk], you know what I'm saying?" (see also Piquero, 2016).

As the above quote demonstrates, a link between fatalism and everyday behaviors appears to exist. These linkages between beliefs and behaviors have been elaborated upon by subsequent research. It must be acknowledged, however, that this research on the consequences of fatalism is split along two lines. The criminological literature overwhelmingly focuses on the fatalism-crime link (e.g., Brezina, 2000; Brezina et al., 2009; Caldwell et al., 2006; DuRant et al., 1994), whereas the research on anticipated early death commonly concentrates on health outcomes (McDade et al., 2011). Some health researchers have explored the consequences of fatalism across the life domains that feature prominently in the criminological life course (Borowsky, Ireland, and Resnick, 2009; Duke, Borowsky, Pettingell, Skay, and McMorris, 2011; Nguyen et al., 2012).

The criminal consequences of fatalism have been elaborated using a variety of data sources, including nationally representative and offender-based samples. DuRant et al. (1994), surveying adolescent residents of public housing projects, found that anticipated early death increased participation in violence. Hill, Ross, and Low (1997)

found that reduced life expectations increased the likelihood that individuals would come into conflict with authority figures such as teachers and workplace bosses. Using two waves of data from the Add Health, and drawing on interviews with active offenders from Atlanta, Brezina et al. (2009) used a fixed-effects modeling strategy to show offending and fatalism were related. Offender accounts of fatalism reinforced this relationship. Harris, Duncan, and Boisjoly (2002) similarly showed that fatalistic beliefs in the Add Health data increased the likelihood that individuals later sold drugs and used weapons. Recently, Piquero (2016) analyzed the criminal consequences of anticipated early death using the Pathways to Desistance dataset. Anticipated earlier death distinguished between offending trajectories among this sample of adolescent offenders.

Although they did not elaborate at great length, Brezina and colleagues (2009: 1119) noted that among the offenders they interviewed, fatalism contributed to "a lack of investment in conventional pursuits, namely, those associated with delayed benefits, such as school or legitimate work" (see also Hayes, Ward, and McGregor, 2016). This acknowledgement, found among a few dozen active offenders, provides tentative evidence of negative life outcomes among individuals anticipating an early death. For instance, research on the consequences of hopelessness demonstrates reductions in educational outcomes such as academic goals and grade point average (Peterson and Barrett, 1987). Other negative long-term outcomes have been examined, primarily by public health researchers, using the Add Health data.

Borowsky and colleagues (2009) provided an early assessment of the consequences of anticipated early death. The short-term consequences of fatalism in adolescence included self-harm, injuries sustained from fighting, and engaging in unsafe

sexual activities, such as unprotected sex or sex with multiple partners outside the confines of a relationship. As individuals began transitioning to adulthood, adolescent fatalistic beliefs were found to be a significant predictor of being diagnosed with HIV and being arrested. Duke et al. (2011) examined the influence of persisting fatalistic beliefs on outcomes in emerging adulthood. The authors found that, compared to individuals who grew optimistic about their chances of survival, those individuals who continued to anticipate an early death were more likely to experience violence, be disengaged from their communities, and have lower levels of self-esteem. McDade et al. (2011) found that individuals who exhibited stronger fatalistic beliefs in adolescence reported more substance use (cigarette smoking) in early adulthood. Nguyen et al. (2012) similarly showed that more fatalistic beliefs in adolescence or early adulthood yielded lower levels of educational attainment, more experiences with material hardships (eviction, difficulty paying bills, having utility or telephone service shut off, and concern about food shortages), and lower levels of income when individuals were in their mid-20s.

What are the origins of anticipated early death? Much of the research on the sources of fatalistic beliefs has concentrated on family and individual risk factors. Duke et al. (2009b) found that individuals who were more socially integrated, successful in school, and had access to adequate medical care were less likely to anticipate an early death. Alternatively, individuals who engaged in binge drinking, participated in violence, and experienced emotional distress were more likely to believe themselves to be heading toward an early demise. Piquero (2016) showed that, among adolescent offenders in Phoenix and Philadelphia, individuals who lived in communities characterized by higher levels of disorder were more likely to anticipate dying at a younger age.

Can fatalistic beliefs also originate from social sources? Emerging evidence suggests that beliefs about anticipated early death are indeed socially structured. Zimmerman, Rees, and Farrell (2016) recently demonstrated that fatalism in the peer and school contexts corresponded with increased individual perceptions of early death. This is consistent with the sentiments expressed by one offender interviewed by Hoffman (2004), who explained "Everybody said, 'You ain't never going to make it, you are going to end up dead or you are going to be in prison and you're going to catch 25-to-life, you're going to do this.'" Are there specific peers from whom fatalistic beliefs would originate? As Brezina et al. (2009) demonstrated, offenders possess high levels of fatalism, and sharing criminal exploits is certainly a social context to convey and reinforce these kinds of beliefs.

As fatalism has a social dimension, it can be conceptualized as a form of cultural capital (see Bourdieu, 1987; Lamont and Lareau, 1988). Further, given its link to criminal offending, I contend that fatalism, or anticipated early death, functions as a form of *criminal* cultural capital. That is, fatalism is a part of an individual's cultural "toolkit" (Swidler, 1986; Sampson and Bean, 2006), which they draw from to make sense of the world around them and justify lines of action. Consistent with the findings of Brezina et al. (2009), fatalism enables individuals to overcome fears of victimization or impending violence, and social isolation, to engage in criminal offending. Fatalistic beliefs help neutralize concerns about violence and justify offending. Matza (1964) similarly suggested that fatalism precipitates a desperation which leads to continued offending. Highly fatalistic individuals can be "bad," mastering performative aspects of a successful life in criminal contexts (e.g., perceptions of toughness, a cold demeanor), but which are

unlikely to translate into investment or success in conventional activities (e.g., Anderson, 1999; Borowsky et al., 2009; Vigil, 1988).

Elster's (1998) discussion of actions being a consequence of desires and opportunities highlights the place of fatalism, which I contend is a form of criminal cultural capital, in the criminological life course. Fatalism "turns the volume down" on the relevance of mainstream social and economic institutions and long-term planning, knifing off perceived opportunities for conventional success or minimizing desires to engage those institutions. That is, just as fatalism is a precursor to offending, it is a consequence of individual social milieus, and as demonstrated by public health researchers, has consequences that extend beyond crime. In considering fatalism as a form of criminal cultural capital, I extend prior research on the consequences of anticipated early death by considering a number of social and outcomes (e.g., marriage and cohabitation, employment, welfare receipt) which have gone examined. In addition, I account for important confounders such as offending, which have been omitted from most long-term assessments of the consequences of fatalism (e.g., Duke et al., 2011; McDade et al., 2011). I next turn to a second potential mechanism linking delinquent peer affiliations to later life outcomes, thoughtful and reflective decision making.

Thoughtful and Reflective Decision-Making

Thoughtful and reflective decision-making (TRDM) refers to the cognitive processes by which individuals collect and assess information, as well as conduct post-hoc evaluations of the accuracy of those assessments. TRDM is comprised of four components: (1) collecting information pertaining to decision that must be made, (2)

thinking of alternative solutions to the problem and related decision, (3) systematically deliberating over how to determine which alternative might be best, and (4) retrospectively analyzing how good a problem solver one was in the situation (Paternoster and Pogarsky, 2009: 121). Taken together, TRDM reflects an individual's ability to "make good choices" (Paternoster and Pogarsky, 2009: 104). Prior research demonstrates that individuals who more apt and able to engage in these types of evaluations are more likely to be successful in both the short-term and the long-term (Paternoster and Pogarsky, 2009; Paternoster, Pogarsky, and Zimmerman, 2011). Couched in the language of rational choice theory, Paternoster and colleagues have noted that TRDM allows individuals to weigh the pros and cons when a number of alternatives to a singular course of action (e.g., a goal) are possible, and discriminate against options which run counter to a particular goal (see also Byrnes, 2002).

In a series of articles, Paternoster and colleagues' (2009, 2011) elaborated on the consequences of engaging higher levels of TRDM. First, Paternoster and Pogarsky (2009) used three waves of Add Health data to assess outcomes in late adolescence and early adulthood across a variety of life domains. These domains included offending, attending college or earning a college education and participating in civic and community activities such as voting in a recent presidential election or volunteering. Consistent with theoretical expectations, respondents who engaged in less TRDM were more likely to be involved in criminal activities, were less likely to aspire to attend college, to attend college, and be less involved in civic and community affairs.

Paternoster, Pogarsky, and Zimmerman (2011) further expanded on how TRDM leads to the good outcomes found by Paternoster and Pogarsky (2011), arguing that

TRDM lead to a greater accumulation of pro-social cultural and human capital. These accumulated forms of capital, in turn, facilitated greater life success. Again using three waves of Add Health data, Paternoster et al. (2011) showed that individuals who engaged in TRDM had higher grade point averages in school, were more attached to their parents and school, participated in more recreational hobbies, and pursued entertainment with their parents more frequently than those with lower TRDM. These accumulated forms of capital, in turn, mediated much of the relationship between TRDM and success in young adulthood (e.g., college attendance, reduced participation in offending, greater civic and community participation). On balance, then, findings support the positive relationship between thoughtful and reflective decision making and successful transitions to adulthood.

Largely absent from Paternoster and colleagues' (2009, 2011) research on the consequences of TRDM were the potential sources of these decision making processes, and, as a corollary of this point, whether TRDM can mediate the influence of these possible sources on later life outcomes. Paternoster and Pogarsky (2009: 105) noted that as a cognitive trait, between-person differences in TRDM should be a consequence of executive functioning and intelligence (Del Missier, Mäntylä, and Bruin, 2012; MacPherson, Phillips, and Della Sala, 2002; Moffitt, 1990, 1993).[8] In addition to these genetic predispositions, social-structural characteristics influence individuals' capacity to engage in TRDM. Notably, Paternoster and Pogarsky cite to the capital literature as

[8] It should be noted that maturity of cognitive functioning occurs at a parallel time to when individuals become less susceptible to peer influence (late teens through the mid-20s) (Gardner and Steinberg, 2005; Gogtay et al., 2004; Steinberg and Monahan, 2007). This interplay further buttresses the argument that TRDM could be a consequence of, and thus mediate, the possible relationship between criminal social capital and later life outcomes.

evidence of the social nature of TRDM (e.g., Becker, 1993). Although the example they use involves parents' human capital, it is also plausible that proximate non-familial relations could also influence individuals' TRDM. Indeed, to the extent that "good decision making" is teachable (Byrnes, Miller, and Reynolds, 1999; Ramsay and Rostain 2008; Thaler and Sunstein, 2008), multiple sources of TRDM are possible. Social sources of TRDM offer an important component for continuity in TRDM: feedback (Paternoster and Pogarsky, 2009: 122). In the absence of suitable feedback, TRDM is unlikely to develop or persist, and likely to be reduced as a consequence of delinquent peer affiliations.

To the extent that peers may influence individuals' thoughtful and reflective decision-making, little research has considered whether TRDM would be a consequence of, and therefore mediate, the relationship between peer beliefs or behaviors and later outcomes. Haynie, Soller, and Williams (2014) argued that TRDM may be a mechanism connecting peer fatalism to adolescent risk taking, by reducing considerations of the impact of delinquency on later outcomes. Although TRDM was nominally and negatively significantly related to violence delinquency among adolescents, it did not mediate the relationship between peer fatalism and adolescent violence. This remains one of the few tests of whether TRDM can mediate the relationship between various other social processes.

There is good reason to believe that, consistent with socialization perspectives, delinquent peers likely discourage TRDM. For example, prior research demonstrates that, among delinquents and other lawbreakers, techniques of neutralization are commonplace (Sykes and Matza, 1957; Maruna and Copes, 2005). Among these neutralizations, the

denial of responsibility and appeals to higher loyalties, among others, discourage thoughtful reflection about antisocial acts by placing the blame on victims or uninvolved third-parties. Similarly, in some contexts, the notion of fate parallels the denial of responsibility (e.g., Miller, 1958). Fate means that some individuals are hounded by bad lucks omens. For individuals who believe in fate or luck, these notions are "associated with a conception of the ultimate futility of directed effort towards a goal," (Miller, 1958: 11). In other words, these ways of thinking and beliefs are not conducive to thoughtful or reflective decision-making. Instead, these alternatives means of evaluation (or, in a sense, limited ability to engage in TRDM) instead lead individuals to conclude they have little control over their successes and little responsibility for their failures, and thus do not need to think critically about the decisions they make.

These considerations, of the absence of TRDM as a type of criminal capital, also suggest that it could be influential in other life domains. TRDM fits the bill as a form of individual differences emphasized by Sampson et al. (2006). Indeed, individuals who are unable to think critically about their decisions and the consequences of those decisions seem unlikely to make good romantic partners, students, and employees. Paternoster and colleagues' (2009, 2011) findings lend some credence to this, especially in relation to higher education. As Clausen (1991) similarly suggested, adolescent competency should result in obtaining more education and lower rates of divorce as an individual ages. Using data drawn from California adolescents born in the late 1920s and early 1930s, Clausen (1991) demonstrated that indeed, more competent adolescents tended to fair better as they moved into adulthood and middle age.

Consistent with Elster's (1998) quote regarding actions, desires, and opportunities, we would then anticipate that affiliating with delinquent peers would be negatively related to thoughtful and reflective decision-making. Further, we would expect that criminal social capital would orient individuals away from long-term goals toward more short-term status goals and poor decision-making. That is, criminal social capital should generate increased levels of criminal human capital (e.g., reduced levels of TRDM) and in turn reduce perceived opportunities for conventional success which might otherwise be available to individuals. As a result, lower levels of TRDM would be expected to reduce the likelihood of successfully transitioning to adulthood (e.g., attending college, obtaining gainful employment, and entering into marriage or cohabitation) and instead contribute to social marginalization.

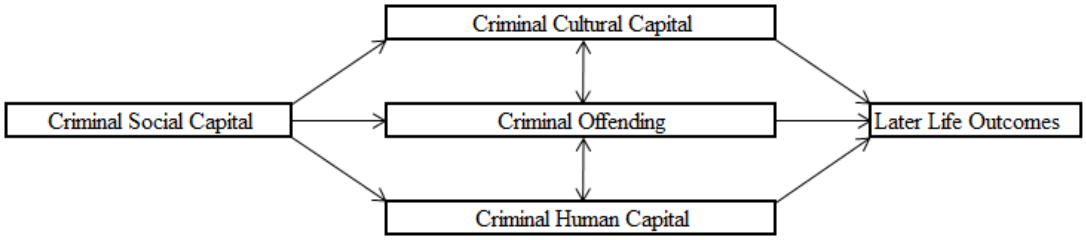
These considerations of TRDM as a form of criminal human capital, or a cognitive process which may result from affiliating with delinquent peers and contribute to unsuccessful transitions to adulthood, represent two important contributions to the nascent research on TRDM. First, I consider whether delinquent peers are a source of TRDM, an area that has only been speculative to date. Second, I expand on the outcomes examined by Paternoster and colleagues (2009, 2011), by examining high school graduation, marriage and cohabitation, and economic outcomes in emerging adulthood. Such outcomes were not included in their prior research on the consequences of TRDM.

An Integrated Model of Criminal Capital and the Life Course

Although peers are central to the study of crime, and prior research continues to identify criminal behavior as a central component of the criminological life course (as

both independent predictors and outcomes), the influence and consequences of delinquent peer affiliations remain conspicuously under-examined in life course criminology. In some cases (e.g., Hagan, 1991; Moffitt et al., 1996), delinquent peer affiliations have been included as statistical controls; in other cases, the focal point of study has been membership in specific sub-group membership (e.g., homeless youth, street gangs; Hagan and McCarthy, 1997; Pyrooz, 2014). These accounts of capital and offending have contributed greatly to understanding the causes and consequences of social marginalization among these groups, much more remains to be learned.

Diagram 3.1 Criminal Capital and the Life Course



In conceptualizing of the criminological life course as the accrual and loss of various forms of capital (e.g., social, cultural, human, and economic), I have provided a more thorough accounting of the features of social life that may contribute to deleterious outcomes in young adulthood (and perhaps beyond). In doing so, a more holistic consideration of the influence of delinquent peers has been presented. Consistent with theories of capital, it has been suggested that delinquent peers are able to influence criminal forms of cultural and human capital (in the forms of fatalistic beliefs and thoughtful and reflective decision making, respectively). These resulting forms of capital should then be consequential for status attainment during the transition to adulthood.

In Diagram 3.1, these relationships and considerations are presented as an integrated model of the criminological life course. I focus specifically on the criminal capital components of the life course. Generally speaking, the criminal relations that individuals maintain avail those individuals to three distinct capital pathways (though there are good reasons to believe these pathways overlap, are mutually reinforcing over time, and compound individual deficits in more prosocial forms of capital). To the extent that prior research has found each of these areas to impact success transitions to adulthood, I assess whether and to what extent these various forms of capital independently influence success or failure during the transition to adulthood. Examining these forms of capital jointly is necessary, given that these competing visions of offending behavior are rarely included together in analyses of offending and later-life outcomes. These considerations, of the sources and consequences of criminal forms of capital, motivate the present analysis. To formally assess whether criminal forms of capital independently impact successful transitions to adulthood, the current study uses data from the National Longitudinal Study of Adolescent to Adult Health. More in-depth discussion of this data is presented in the subsequent chapter.

CHAPTER 4
DATA AND METHODS

Data

This dissertation uses data from the National Longitudinal Study of Adolescent to Adult Health, or "Add Health" for short. The Add Health is a longitudinal study of a nationally representative sample of adolescents in grades 7-12 in the United States during the 1994-1995 school year. Incorporating systematic sampling methods and implicit

stratification into the Add Health study design ensured this sample is representative of US schools with respect to region of country, urbanicity, school size, school type, and ethnicity (Harris, 2013). Add Health was developed in response to a mandate from the U.S. Congress to fund a study of adolescent health and was designed by a nation-wide team of multidisciplinary investigators from the social, behavioral, and biomedical sciences. The original purpose of the research program was to help explain the causes of adolescent health and health behavior with special emphasis on the effects of multiple contexts of adolescent life (Harris, 2013).

Four waves of data have been collected for the Add Health to date (Harris, 2013). The first three waves of data, covering adolescence and the transition to adulthood, are used in the current study. The first wave of data, collected during the 1994-1995 school year, consisted of survey data administered on a single day within one class period lasting no more than one hour (Harris, 2005). Over 90,000 total students were surveyed across 132 schools for this original wave. This original, *in-school* survey, served as the basis for the *in-home* surveys that also took place in Wave 1. Approximately 21,000 students from the original, in-school survey participated in the Wave I follow-up in-home survey, which focused on a wider variety of questions surrounding family life, school, delinquency, dating, and expectations about the future. Included among these 21,000 students were the students in the saturated school sample. All students (a total of 3,702 students) at sixteen (two large, 14 smaller) schools were interviewed at home approximately 6 months after the original in-school data collection effort, and comprise this saturated sample. These 16 schools provide rich social network data and insights into the social milieus in which adolescents are embedded (Harris, 2005). In addition, parents of individuals who

participated in the in-home surveys also completed a survey regarding financial, educational, health, and community characteristics.

Wave II data collection proceeded in 1996, for all adolescents in grades 7 through 11 in Wave I (plus 12th graders who were part of the genetic sample and the adopted sample) (N=14,738). Adolescent *in-home* interviews used audio-CASI technology (audio-computer assisted self-interview) on laptop computers for sensitive health status and health-risk behavior questions (Harris, 2005). Taken together, Waves I and II constitute the adolescent period in Add Health and contain unique data about family context, school context, and the peer context (Harris, 2005). In contrast to earlier waves, Wave III concentrates on the entrance of respondents into early adulthood. Conducted between August 2001 and April 2002, when respondents were between the ages of 18 and 26, the Wave III survey focused on areas such as labor market experience and participation, involvement in higher education, relationships, parenting, civic participation, and community involvement (Harris, 2013). Over three-quarters of those originally participating in the Wave I in-home interviews (N=15,170) were surveyed for Wave III (Harris, 2005).

Data for the present study are drawn from Wave I in-home interviews with respondents and their parents, Wave II in-home interviews with respondents, and Wave III interviews with respondents. Specifically, I use data from the saturated sample—students in those schools for which thorough social network data was collected (Harris, 2005). These data are especially useful for answering questions regarding the influence of adolescent social capital on later-life outcomes, as they accurately capture this capital, compared to individuals' perceptions of social capital (e.g., Reisig et al., 2002). The

networking components present in the saturated sample in Waves allow for accurately capturing the characteristics of peers in a given social environment (i.e., the school) (see Haynie, 2001; Young, 2014). As Pollard and colleagues (2013) noted, 98% of the saturation school sample (N=3,702) completed the Wave I in-home interview; 75% of adolescents from the Wave I saturation sample (N=2,776) were re-interviewed at Wave II, and 80% of adolescents from the Wave I saturation sample (N=2,959) completed an interview for Wave III. Information on individuals' peers, coupled with information about respondent's parents in the Wave I data, and the focus on transitions to adulthood at Wave III allow for a thorough test of the correlates and consequences of adolescent criminal capital. A fuller description of the study variables follows.

Dependent Variables

The current study is interested in the effects of adolescent criminal capital on outcomes during the transition to adulthood. Three specific areas of interest are assessed in Wave III: marriage and cohabitation, educational attainment, and employment.

Two social outcomes are included as dependent variables. *Marriage* and *Cohabitation* are examined using answers to the following questions, with variable name in parentheses: "How many times have you been married?" (H3MR1). Responses have been recoded such that individuals have or have not ever been married (1 = yes, 0 = no). A measure of cohabitation is also included, with respondents being asked "Have you ever lived with someone in a marriage-like relationship for one month or more?" (H3MR8). Affirmative responses to this question were also coded as 1, while negative responses were coded as 0 (Halliday Hardie and Lucas, 2010). Because this coding scheme may

mask important differences (e.g., cohabitating repeatedly, or more generally, failing at romantic relationships), a second measure capturing the number of times a respondent has cohabitated is also examined (H3MR9).[9]

Two economic outcomes at Wave III are also assessed. First, respondents were asked if they were currently *employed* during the Wave III interview: "Are you currently working for pay for at least 10 hours a week?" (H3LM7). A second economic outcome examines if the respondent received food stamps or other forms of *public assistance* (AFDC [Aid to Families with Dependent Children], public assistance, welfare, or a state TANF program; housing assistance) during any part of 2000 or 2001 (H3EC1C, H3EC1D, and H3EC1E, respectively). Any affirmative responses to these three questions were coded as "1," and negative answers were coded as "0."

Educational attainment is examined using two dummy variables based on respondents' reports of the highest grade or year of regular school they have completed (H3ED1). Two outcomes of interest are examined using dummy variables: *high school completion* (completed at least 12 years of school) and *college matriculation* (completed more than 12 years of school). Each measure is coded dichotomously, with affirmative answers to each question were coded as "1," and negative responses were coded as "0." In other words, *high school completion* captures individuals who did graduate (=1) and those who did not (=0), while college matriculation captures individuals who attended college (=1) and those who did not (=0).

[9] Multiple marriages are rare in the Wave III data, with only a total of 66 people out of the entire Wave III sample being married more than once. In contrast, the number of cohabitations ranges from 0 to 10.

Independent Variables

Independent variables in the present study are drawn predominantly from the Wave I in-home survey of parents, as well as the in-home surveys of adolescents from Waves I and II. Adolescent variables are described first, as they are the focal point of the study. Parental characteristics, which serve as the basis for adolescent capital, are then discussed. The present study is interested in isolating the effects of adolescent capital on the transition to adulthood, with specific focus on criminal social capital.

Criminal social capital in Wave I is measured using peer self-reports of delinquency (e.g., Haynie, 2001; Haynie and Osgood, 2005). Students in the saturated sample were asked to identify up to 10 of their closest friends (5 male and 5 female) during the Wave I in-home surveys. Each individual reported on participation in a variety of delinquent behaviors in the 12 months prior to the survey (see the self-reported delinquency variable below). Criminal social capital is measured by taking the average of the available self-reported delinquency scores for all identifiable in-school friends with valid (non-missing) offending scores. Respondents who did not report any identifiable in-school peers were coded as having zero criminal social capital.[10]

Process Variables

The process variables used here reflect theoretically relevant which may be influenced by deviant peers, as well as impact outcomes during the transition to adulthood. Each of these variables is measured during the Waves I and II in-home interviews, and capture aspects of criminal human and cultural capital.

[10] This consideration is revisited in the sensitivity analysis at the end of Chapter 5.

Respondent self-reported delinquency is assessed in Waves I and II using a series of self-report measures. Fifteen delinquency measures were available at Wave I, and thirteen measures were available at Wave II. Variables names for each wave are indicated in parentheses following a description of each item: (1) paint graffiti or signs on someone else's property or in a public place? (H1DS1, H2DS1); (2) deliberately damage property that didn't belong to you? (H1DS2, H2DS2); (3) lie to your parents or guardians about where you had been or whom you were with? (H1DS3, H2DS3); (4) take something from a store without paying for it? (H1DS4, H2DS4); (5) get into a serious physical fight (H1DS5; Wave I only); (6) hurt someone badly enough to need bandages or care from a doctor or nurse (H1DS6; Wave 1 only); (7) run away from home? (H1DS7, H2DS5); (8) drive a car without its owner's permission? (H1DS8, H2DS6); (9) steal something worth more than $50? (H1DS9, H2DS7); (10) go into a house or building to steal something? (H1DS10, H2DS8); (11) use or threaten to use a weapon to get something from someone? (H1DS11, H2DS9); (12) sell marijuana or other drugs? (H1DS12, H2DS10); (13) steal something worth less than $50? (H1DS13, H2DS11); (14) take part in a fight where a group of your friends was against another group? (H1DS14, H2DS13); (15) be loud, rowdy, or unruly in a public place? (H1DS15, H2DS12).

Delinquency scales were originally collected as ordinal level measures ranging from 0 (Never) to 3 (5 or more times). In the present study, these scales have been recoded as dichotomous indicators, where 1 indicates participation in a given act (for a similar approach, see Paternoster and Pogarsky, 2009; Young, 2014). Thus, the delinquency score for each individual is a variety score of delinquent acts committed in the past year, and can range from 0 to 15 in Wave I and 0 to 13 in Wave II (see Sweeten,

2012). Because dichotomous indicators are used for each offense, Cronbach's alpha is inappropriate for assessing psychometric adequacy. Kuder-Richardson coefficients are interpretable in the same fashion as Chronbach's alpha, but can be applied to scales comprised of binary items. KR coefficients are consequently reported (Kuder and Richardson, 1937). These summated scales exhibit suitable variability and psychometric properties (Wave 1: mean inter-item r = .23, Kuder-Richardson 20 coefficient = .80; Wave II: mean inter-item r = .22, Kuder-Richardson 20 coefficient = .77).

Fatalism is a single-item indicator available in both Waves I and II (H1EE12 for Wave I; H2EE12 for Wave II) indicating the respondent's perceived likelihood of living to the age of 35 (Brezina et al., 2009; Duke et al, 2011; McDade et al., 2011; Nguyen et al., 2012). Fatalism captures a dimension of criminal cultural capital, providing individuals with a script about how to view the world around them; this script yields a casual indifference to prominent social institutions and an emphasis on getting what one can "before their time comes" (e.g., Brezina et al., 2009). The items were each originally scaled from 1 (almost no chance) to 5 (almost certain) with 3 (about a 50-50 chance) in the middle. The items were each recoded into dichotomous variables, where respondents who thought they had no better than a 50-50 chance of living to 35 (<=3) were coded as "1" and respondents who reported having a "good chance" or "almost certainty" of living to 35 (>=4) were coded as "0" (Borowsky et al., 2009).

Thoughtful and Reflective Decision Making (TRDM) captures dimensions of decision-making processes and, more generally, human agency (Paternoster and Pogarsky, 2009; Paternoster, Pogarsky, and Zimmerman, 2011). Individuals who do not engage is this type of decision making and evaluation are more prone to neutralization

(e.g., Sykes and Matza, 1957; Maruna and Copes, 2005). In other words, the absence of TRDM can be thought of as a form of criminal human capital. Consistent with Paternoster and colleagues (2009, 2011), four items are used to construct the TRDM scale in Wave I. Respondents were asked how strongly they agreed or disagreed with the following questions: "When you have a problem to solve, one of the first things you do is get as many facts about the problem as possible" (H1PF18); "When you are attempting to find a solution to a problem, you usually try to think of as many different ways to approach the problem as possible" (H1PF19); "When making decisions, you generally use a systematic method for judging and comparing alternatives" (H1PF20); and "After carrying out a solution to a problem, you usually try to analyze what went right and what went wrong" (H1PF21). Response categories for each question originally ranged from 1 (Strongly Agree) to 5 (Strongly Disagree). Response categories were coded such that higher scores indicate stronger agreement with each question. Item responses were summed, and the scale exhibits suitable psychometric properties (mean inter-item $r = .42$, $\alpha = .74$).

Unfortunately, all dimensions of thoughtful and reflective decision-making (TRDM) are unavailable in subsequent waves of the Add Health. In Wave II, TRDM is captured by a single item indicator shared with the Wave I scale: "After carrying out a solution to a problem, you usually try to think about what went right and what went wrong" (H2PF16). As with the Wave I item, responses to this question originally ranged from 1 (Strongly Agree) to 5 (Strongly Disagree), and were recoded such that higher scores are indicative of greater thoughtful and reflective decision-making by the respondent.

Control Variables

Control variables drawn primarily from the Wave I in-home survey are also included in all analyses as important confounders for the possible relationship between criminal social capital and the outcomes examined here. In other words, these characteristics may contribute to both affiliating with delinquent peers and successfully transitioning to adulthood.

Low Self-control, characterized by a willingness to delay gratification, is included in the analysis as a control for individual differences (e.g., Gottfredson and Hirschi, 1990; Nagin and Paternoster, 1994). Further, self-control is a strong correlate of delinquent behavior, affiliation with delinquent peers, and poor social integration (e.g., Chapple, 2005; Evans, Cullen, Burton, Dunaway, and Benson, 1997; Pratt and Cullen, 2000). Following prior research (e.g., Young, 2011), low self-control is measured using a four item scale, comprised of the following items from the Wave I in-home survey: Whether the respondent had trouble "getting along with teachers" (H1ED15), "paying attention in school" (H1ED16), "getting their homework done" (H1ED17), and "getting along with other students" (H1ED18). Response categories ranged from 0 (Never) to 4 (Everyday) for each item. Items were summed, with higher scores indicating lower levels of self-control. Overall, the scale exhibits adequate psychometric properties (mean inter-item r = .36, $\alpha = .69$).

An indicator of adolescent expectations for the future, drawn from Wave I, is also included in the analysis. This expectation can be considered a belief in conventional lines of action, and thus a pro-social form of cultural capital. Respondents were asked "On a scale of 1 to 5, where 1 is low and 5 is high, how likely is it that you will go to college?"

(H1EE2). The item was recoded such that individuals who felt they were likely to attend college (indicated by either a "4" or a "5" response) were coded as "1" and individuals who felt they were less likely to attend school were coded as "0."

Formal criminal history is included as a control, given that it that has been found in previous research to inhibit access to many of the social institutions examined here (e.g., educational attainment at the high school and college levels, marriage; Hirschfield, 2009; Pager, 2008; Pettit and Western, 2004; Sweeten, 2006). Respondents were asked to report the total number of times they were *arrested* before the age of 18 in Wave III (H3CJ5). This measure has been dichotomized, with "1" indicating a respondent experienced at least one juvenile arrest, and zero indicating a respondent having not experienced a juvenile arrest.

Parental and family variables are included as they have been theorized to be the basis for adolescent capital and a life of relative success (e.g., Coleman, 1988; Lin, 2002). *Parental educational attainment* (PA12) is measured using a five-category scale indicating various levels of educational attainment. Consistent with prior research (e.g., Bearman, Moody, and Stovel, 2004; Young, 2011), response categories ranging from 0 (no schooling) to 5 (post college professional training), as reported by the parent during the in-home interview.

Two parent household is a dummy indicator of whether the respondent stated that they live with both their mother (S11) and father (S17) in the Wave I in-school survey. Affirmative responses to both questions were coded as "1" and all other responses were coded as "0."

Respondent age, in years at Wave I, was calculated using the Stata syntax provided on the Add Health website (see http://www.cpc.unc.edu/projects/addhealth/faqs/aboutdata/index.html#what-is-the-best). Because of issues with collinearity (discussed below), the age variable was dichotomized, with individuals under the age of 17 coded as "1," and individuals 17 years of age or older coded as "0."

Respondent sex, recorded at Wave I (BIO_SEX), is a dichotomous indicator, where *male* = 1 and female = 0.

Respondent race is measured as a dichotomous indicator, *Non-Hispanic White*, with racial or ethnic minorities serving as the reference category (McGloin, 2009).

Analytic strategy

To assess the impact of adolescent criminal capital on social, economic, and educational outcomes in emerging adulthood, the present study uses a series of multivariate regression models, including ordinary least squares, logistic, and negative binomial models, to assess the hypothesized relationships described earlier. To do so, the analyses are broken up into two sections. In the first set of models, I assess the influence of affiliating with delinquent peers during Wave I on respondents' delinquency at Wave II, respondents' fatalism at Wave II, and respondents' thoughtful and reflective decision-making at Wave II. Following Haynie and Osgood (2005), I incorporate control variables from Wave 1, as well as lags, into these regressions. That is, Wave I measures of the Wave II outcomes are included in each respective regression (e.g., Matsueda and Anderson, 1998). In subsequent sets of models, I assess the long-term consequences of delinquent peer affiliations in adolescence (Wave I), and the possible pathways through

which they might influence individual opportunities and desires (Wave II), on outcomes occurring during the transition to adulthood (e.g., Wave III)

All analysis were conducted using Stata 11 SE (StataCorp., College Station, TX). The original estimation sample (individuals for whom missing data was not present, including sampling weights) prior to imputation was 2079 (56.6 percent of the total saturated sample) for the first set of analyses (predicting Wave II outcomes), owing primarily to missing data on parent's self-reported level of education (709/3702 cases, 19 percent missing data) and on the dependent variables (~27 percent for Wave II fatalism, the abbreviated Wave II TRDM measure, and Wave II delinquency in relation to the full saturated sample).[11]For the second set of analysis (predicting outcomes in Wave III), the original estimation sample was 1717 (46.4 percent of the saturated sample), due to missing data on juvenile arrest (1416/3702 cases, 38 percent missing data) and each outcome of interest (~38 percent missing data per outcome, except current employment, for which data is missing in 42.8 percent of cases).

Missing data on independent variables (from Wave I in the first set of analyses, and from Waves I and II for models assessing outcomes in Wave III) was addressed using multiple imputation, specifically the –mi- and –mvn- commands. Consistent with recommendations by Bodner (2008) and White, Royston, and Wood (2011), the number of iterations used was based on independent variables with the highest percentage of missing data. Thirty total imputations were used for each set of analyses.

Chen and Chantala (2014) note that failure to account for the design of the Add Health can result in imprecise estimates (see also Chantala and Tabor, 2010; Thomas and

[11] See footnote 12 for the syntax used to obtain variable descriptive and the reported estimation samples.

McGloin, 2013). Because of the complex nature of the Add Health's research design, the Survey Data specification (-svyset- and –svy-) was used for all data analysis (Chen and Chantala, 2014). The –svy- commands take into account the non-independence of units (e.g., children nested within schools), as well as the probability sampling structure used to select the schools. To do so, sampling clusters and strata (variables *PSUSCID* and *REGION*, respectively) are incorporated into model specifications. In addition to these sampling clusters and strata, weighting for sample representativeness was done using provided weights for Waves I and II (models with Wave II outcomes with the dependent variable only being measured once; weight variable name GSWGT2) and Waves I through III (models assessing Wave III outcomes; weight variable name GSWGT3_2). As an example, the following commands (shown in bold) form the basis for the use of Add Health data in Stata's Data Survey specification (from Chen and Chantala, 2014: 27):

svyset psuscid **[pweight=**gswgt1**], strata(**region**)**

In this particular example, the dataset has been declared to be using Survey Data (syvset), the sampling cluster has been specified (psuscid), the weight has been applied (gswgt1), and the strata have been identified (region).

Because my analyses focus only on the "saturated sample" within the Add Health, this subpopulation must also be specified. Chen and Chantala (2014) note that subpopulation analyses should not be conducted using "if" statements, as it will produce incorrect variance estimates. Instead, the subpopulation specification in conjunction with Stata's survey commands should be used. More specifically, "when the subpopulation option is used, only the cases defined by the subpopulation are included in the calculation

of the estimate, but all cases are included in the calculation of the standard errors (see Cochran, 1977; Rao, 2003)" (Chen and Chantala, 2014: 29). The "subpop" specification is consequently used in all analyses, specifying the saturated school sample as the subpopulation of interest. This specification follows the above command, appearing as the following:

svy, **subpop**(satschool): **regress** [dependent variable] [independent variable list]

The data have been specified as survey data (and would follow the svyset command line displayed previously) , the subpopulation has been identified by a dichotomous indicator (whether a respondent is enrolled in a saturated school), followed by the specific regression command (in this case, OLS regression) and then dependent and independent variables used in the regression.

To assess whether criminal social capital influences other forms of criminal capital, and the consequences of those forms of capital, my analysis proceeds in four stages. First, summary statistics and zero-order correlations between study variables are reported. Correlations provide preliminary insights into the hypothesized relationships between various forms of criminal capital, and between criminal capital and outcomes occurring during the transition to adulthood. Second, using three different multivariate regression techniques (logistic, OLS, and negative binomial regressions), I examine the relationship between Wave I criminal social capital and Wave II fatalism, thoughtful and reflective decision making, and delinquency. Third, I then conduct a series of logistic regressions examining the relationship between each of these forms of criminal capital and educational, economic, and social outcomes during the transition to adulthood. Fourth, I conduct a sensitivity analysis, replicating regressions while replacing the peer

delinquency measure with a measure of the number of out-of-school peers a respondent has. All analyses were conducted using Stata 11 SE (StataCorp., College Station, TX), accounting for clustering through the use of the Survey commands in Stata.

Summary Statistics

Unweighted, unimputed summary statistics for all study variables are presented in Table 4.1.[12]

[12] Summary statistics were obtained using the following command:
sum [varlist] if satschool==1;

To obtain pre-imputation estimation sample sizes, the following commands were used
svyset PSUSCID [pweight=GSWGT2], strata(REGION)(for variables in Waves I and II) or svyset PSUSCID [pweight=GSWGT3_2], strata(REGION) (for variables drawn from Wave III); and
svy, subpop(satschool): mean [varlist]; and estat sd (to generate standard deviations for each variable).

Table 4.1 Summary Statistics of Study Variables

Variable Name	Mean/%	SD	Min	Max
Dependent Variables				
Marriage (w3)	19.57%	-	0	1
Cohabitation (w3)	37.83%	-	0	1
Employed (w3)	76.93%	-	0	1
Public Assistance (w3)	5.60%	-	0	1
HS Graduate (w3)	87.89%	-	0	1
College Attendance (w3)	52.95%	-	0	1
TRDM (w2)	3.94	0.80	1	5
Fatalism (w2)	16.71%	-	0	1
Delinquency (w2)	1.94	2.27	0	13
Independent Variables				
Peer Delinquency (w1)	2.36	2.28	0	15
TRDM (w1)	15.34	2.48	4	20
Fatalism (w1)	14.49%	-	0	1
Delinquency (w1)	2.98	2.93	0	15
Juvenile Arrest	3.54%	-	0	1
Low Self-Control	4.04	2.87	0	16
College Likely	70.43%	-	0	1
Parental Education	2.58	1.13	0	5
Two Parent Household	53.35%	-	0	1
Younger than 17	54.97%	-	0	1
Male	51.08%	-	0	1
White	49.42%	-	0	1

Note: Percentages and standard deviations are unweighted and refer only to the saturated sample

Table 4.2 Correlation Matrix

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Marriage	-																			
2	Cohabitation	.16*	-																		
3	High School graduate	-.09*	-.24*	-																	
4	College Attendance	-.12*	-.29*	.37*	-																
5	Employed	.06*	-.00	.04	-.02	-															
6	Public Assistance	.07*	.18*	-.21*	-.16*	-.09*	-														
7	Juvenile Arrest	.03	.06*	-.18*	-.06*	.01	.02	-													
8	Fatalism (w2)	.04*	.02	-.12*	-.12*	.06*	.13*	.02	-												
9	TRDM (w2)	.03	-.02	-.00	.07*	-.01	-.02	.02	-.05*	-											
10	Delinquency (w2)	-.05*	.17*	-.10*	-.11*	-.01	.12*	.09*	.10*	-.05*	-										
11	Peer Delinquency (w1)	.04*	.12*	.02	-.04	.03	-.09*	-.01	-.07*	.03	.10*	-									
12	Fatalism (w1)	.04*	-.04	-.05*	-.05*	.01	.02	.00	.23*	-.05*	-.05*	.02	-								
13	Delinquency (w1)	.02	.21*	-.11*	-.10*	.02	.13*	.13*	.18*	-.08*	0.48*	.16*	.07*	-							
14	Low Self Control	.01	.13*	-.13*	-.09*	-.03	.05*	.09*	.06*	.00	0.24*	.07*	.09*	.32*	-						
15	College Likely	-.06*	-.13*	.22*	.39*	.03	-.05*	.02	-.09*	.08'	-.06*	-.01	-.07*	-.07*	-.09*	-					
16	Parent Education	-.06*	-.15*	.16*	.32*	-.10*	-.12*	.03	-.06*	.03	-.03	.00	-.04	-.06*	.03	.24*	-				
17	Two Parent Household	.03	-.05*	.13*	.11*	.03	-.08*	-.01	-.08*	-.06*	-.01	.08*	.02	.00	.00	.13*	-.00	-			
18	Younger than 17 (w1)	-.19*	-.14*	-.01	.00	-.07*	.02	.05*	-.01	-.05*	.09*	-.05*	-.01	-.06*	-.09*	.05*	.06*	.02	-		
19	Male	-.10*	-.03	-.02	-.03	.13*	-.06*	.06*	.00	-.05*	.02	.01	.09*	.10*	.11*	-.06*	.00	.01	-.07*	-	
20	White	.09*	.07*	.02	.04	.07*	-.08*	-.02	-.13*	.00	-.09*	.03	-.12*	-.07*	.11*	.01	.09*	.08*	.00	-.01	-

*p < .05

Table 4.2 provides correlations for all study variables.[13] These correlations offer mixed support for the link between criminal social capital (i.e. peer delinquency) and the other forms of criminal capital considered here (e.g., delinquency, fatalism and thoughtful and reflective decision making). On one hand, consistent with theoretical expectations, criminal social capital is positively and significantly correlated with Wave I (.16) and Wave II (.12) delinquency. On the other hand, criminal social capital is negatively, significantly correlated with long-term fatalism (-.07) and positively correlated with Wave II TRDM (.02). TRDM at Wave I is positively and significantly related to TRDM at Wave II (.25), negatively correlated with Wave II fatalism (-.04), and negatively, significantly correlated with Wave II delinquency (-.09). Wave I fatalism correlates positively with later fatalism (.23) and contemporaneous delinquency (.07), but is negatively correlated with long-term offending (-.05) and later TRDM (-.05).

These correlations provide preliminary evidence in regard to three theoretical questions of interest. First, it appears as though the influence of delinquent peers is primarily on offending, rather than particular ways of perceiving the world (fatalism) or making decisions (TRDM). This is consistent with prior research on peer effects on offending (e.g., Haynie, 2001; Warr, 2002), but inconsistent with characterizing of fatalism and TRDM as aspects of criminal capital. Second, TRDM operates in expected directions with respect to delinquency and fatalism (negatively), and future TRDM (positively). Even using an abbreviated measure of TRDM in Wave II, there appears to be some consistency in individuals' capacities to engage in thoughtful and reflective

[13] Correlations in the survey data were derived using the following commands:
pwcorr [varlist] if satschool==1 [aweight=GSWGT3_2], star(.05), as the –svy- command does not support correlations

decision making. Third, that fatalism is slightly, negatively correlated with contemporaneous and long-term TRDM would be expected. However, the negative correlation between fatalism and later offending is inconsistent with prior research (e.g., Brezina et al., 2009). This may be a consequences of using only a dichotomous fatalism indicator (those perceiving no better than a 50-50 chance of living to 35), which is consistent with health research (e.g., Borowsky et al., 2009), rather than the fatalism measures used by Brezina and colleagues (2009). Further, Brezina and colleagues only examined eight offenses individually (burglary, graffiti, assault, property damage, theft, robbery, pulling a knife or gun on someone, and shooting or stabbing someone, respectively; see Brezina et al., 2009: 1106 and 1109), rather than a variety score.

The correlations between different forms of criminal capital and the outcomes in the transition to adulthood also present mixed evidence on the consequences of criminal capital. As anticipated by prior research on its consequences, fatalism in Wave II is significantly, negatively correlated with both high school graduation (-.12) and college attendance (-.12). Wave II fatalism is, however, a significant, positive correlate of ever being married (.04), current employment (.06), and receiving public assistance (.13). The correlations between fatalism, marriage, and employment may seem surprising, but if fatalism is negatively correlated with educational attainment, respondents would presumably enter straight into the workforce or drop in and out of the workforce, given the positive correlation with receiving public assistance). With regard to marriage, even if fatalistic beliefs do not promote intense investment in social institutions, these beliefs may promote investment in particular persons, such as romantic partners. Indeed, this

pattern holds when also examining the correlations of Wave I fatalism and these outcomes.

Thoughtful and reflective decision making at Wave II has a significant, positive correlation with college attendance (.07), a slight, positive correlations with marriage in the transition to adulthood, and a slight negative correlation with receiving public assistance as an individual transitions to adulthood. These correlations would be anticipated by Paternoster and colleagues' (2009: 120; 2011) elaboration of TRDM. Notably, however, TRDM at Wave 2 also has a slight positive correlation with juvenile arrest, and a slight negative correlation with high school graduation and employment in young adulthood. The latter finding regarding employment may well be a consequence of individuals with higher levels of TRDM pursuing more advanced educational degrees, rather than entering the job market. One alternative explanation may also be that the absence of the additional TRDM items is causing this particular correlation. This consideration is reinforced by the positive correlations of Wave I TRDM on educational attainment and employment, and the negative correlation coefficient on juvenile arrest. In other words, only accounting for individual assessment of solutions may not be telling the whole TRDM story.

Delinquency at Wave II is a significant, negative correlate of being married (-.05), graduating high school (-.10) and college attendance (-.11), and has a nominal, negative correlation with employment during the transition to adulthood (-.01). Wave II delinquency has significant and positive correlations with having cohabitated with someone (.17) and receiving public assistance during the transition to adulthood (.12). This is consistent with prior research on delinquency and educational attainment (e.g.,

Elliott and Voss, 1974; Wang et al., 2005), delinquency and employment or economic success (e.g., Hagan, 1991, 1993; Pager, 2004), and delinquency and cohabitation (Lonardo et al., 2010; Thornberry et al., 2016).

Zero-order correlations did not exceed an absolute value of .48 (the correlation between delinquency in Waves 1 and 2), well below the commonly accepted collinearity threshold of .7 (see Licht, 1995; Tabachnick and Fidell, 2007). Further, these two variables will only be entered simultaneous into one model (the lagged regression predicting delinquency) presented in Chapter 5. This suggests multicollinearity will not be a problem for subsequent multivariate regression models. This conclusion is reinforced by the low Variance Inflation Factors (VIFs) present among the study variables, with no variables exceeding 2, a conservative cutoff point (Belsley, Kuh, and Welsch, 1980).[14]

Despite the low values on both the correlation matrix and the VIFs, the condition index depicting the relationship among the independent variables was originally high, reaching approximately 70. This extends beyond the recommended threshold of 30 by Belsley and colleagues (1980). Such ill-conditioning can have serious, negative consequences for regression analyses. Indeed, a high condition index can indicate the present of multicollinearity, which inflates standard errors and causes rather bothersome findings (e.g., reversed signs on coefficients, finding null effects on theoretically relevant variables). To address ill-conditioning, two steps were taken. First, because the condition index provided by the ‑collin‑ command does not include a variance-decomposition proportions, condition indices were re-run using the ‑coldiag2‑ command in Stata. ‑

[14] VIFs and condition indices were obtained using the –collin- command in Stata 11.

Coldiag2‐ presents these proportions in full. Second, upon visual inspection of these proportions, iterative indices were run, in order to maintain as many theoretically relevant variables in the regression as possible (e.g., peer delinquency, TRDM, fatalism, and delinquency).[15] An example of the -coldiag2- command appears as the following:

coldiag2 [independent variable list] **if** !missing[dependent variable] &
satschool==1

This specification takes into account the relationships between the independent variables, that cases may be missing data on the dependent variable, and that the condition index should focus only the saturated school sample rather than all observations in the data.

Having examined the summary statistics of all the study variables, and evaluated relevant model diagnostics, the following chapters present regression analyses examining the consequences of criminal social capital for criminal human and cultural capital, and then outcomes occurring during the transition to adulthood.

CHAPTER 5
RESULTS

This chapter examines the possible relationships and consequences of criminal social capital for certain forms of criminal human and cultural capital. In these instances, criminal social capital refers to having increasingly delinquent peers. The criminal forms

[15] As a result, the following variables, which were originally included in all analyses, were omitted from each regression model reported here: IQ, maternal attachment, GPA, school attachment, number of friends, welfare, and likelihood of marriage by 25. In addition, age was recoded from a continuous variable to a dummy variable. The removal of these variables yielded condition indices just under the problematic threshold of 30 specified by Belsley et al. (1980) (typically between 27 and 28 when predicting outcomes in Wave II, and slightly lower values when using Wave II variables to predict Wave III outcomes).

of human and cultural capital examined here include fatalistic beliefs, reductions in thoughtful and reflective decision making (TRDM), as well as future delinquency.

Table 5.1 presents three regressions, examining the effect of criminal social capital, measured as average peer delinquency of a respondent's in-school friends, on three outcomes: fatalism at Wave II, TRDM at Wave II, and delinquency at Wave II. Each regression includes a lag of the dependent variable, drawn from Wave I. Given the variety of ways which these dependent variables are scaled, different regression methods are used for each analysis. Fatalism at Wave II is a dichotomous indicator, and for which logistic regression is used. TRDM at Wave II is a five-response category item. Ordinary least squares regression is used to assess predictors of TRDM. Finally, Wave II delinquency is a summary score, or a count variable, of the number of delinquent acts individuals have participated in. Because it is a count variable, negative binomial modeling is used (Long and Freese, 2006). The negative binomial is a variant of the Poisson model, used for examining over-dispersed count data, but which relaxes the Poisson assumption that the conditional variance is equal to the conditional mean (Long, 1997)

Recall that if criminal social capital is to precipitate criminal human and cultural capital, we would anticipate that delinquent peers would (a) increase perceptions of fatalism, (b) reduce thoughtful and reflective decision making, and (c) increase participation in delinquency.

Table 5.1 Regressions Examining the Consequences of Criminal Social Capital

	Fatalism (w2)[a]				TRDM (w2)[b]				Delinquency (w2)[c]			
	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI
Peer Delinquency (w1)	-.11	.06	-.232	.003	.02	.01	-.002	.050	.03	.01*	.002	.052
TRDM (w1)	-.02	.03	-.089	.043	.08	.01***	.064	.100	.00	.02	-.035	.033
Fatalism (w1)	1.71	.29***	1.141	2.281	-.11	.07	-.244	.028	-.23	.11*	-.447	-.020
Delinquency (w1)	.14	.02***	.099	.190	-.02	.01**	-.036	-.009	.15	0.01***	.133	.176
Low Self Control	.00	.02	-.041	.049	.01	.01	-.004	.030	.07	.02**	.029	.113
College Likely	-.26	.18	-.620	.098	.08	.08	-.078	.243	.02	.11	-.197	.230
Parental Education	-.09	.08	-.240	.061	.01	.03	-.040	.066	-.03	.03	-.101	.034
Two Parent Household	-.29	.27	-.825	.239	-.08	.06	-.188	.035	.01	.07	-.121	.144
Younger than 17	-.07	.17	-.415	.269	-.11	.04*	-.195	-.025	.33	.04***	.259	.402
Male	-.45	.27	-.981	.081	-.07	.04	-.146	.015	-.04	.08	-.198	.116
White	-.45	.26	-.959	.067	-.05	.04	-.125	.019	-.19	.07*	-.339	-.048
Constant	-.81	.65	-2.089	.468	2.72	.16***	2.404	3.043	-.26	.35	-.952	.426
F-statistic		42.02***				39.58***				223.23***		
*p < .05, **p < .01, ***p<.001												
		n = 2684				n = 2683				n = 2661		

Notes: a. Logistic regression; b. OLS regression; c. negative binomial regression

Model 1 contains a logistic regression regressing fatalism (anticipating no better than a 50-50 chance of living to 35; Borowsky et al., 2009) on criminal social capital. The lagged term is positive and significant, increasing the odds of anticipating an early death by 453 percent ($\exp^{(1.71)}$). Delinquency also increases the odds of fatalistic beliefs. A one-unit increase in Wave I delinquency corresponds with a 15 percent increase in the odds of anticipated early death ($=\exp^{(.14)}$). Finally, older individuals have slightly higher odds (13 percent) of having fatalistic beliefs. We have thus answered the first research question negatively, as criminal social capital does not appear to influence criminal cultural capital.

Model 2 contains an ordinary least squares regression assessing predictors of thoughtful and reflective decision making. The lagged TRDM variable from Wave I is positive and significant, as would be expected. A one-unit increase in Wave I TRDM corresponds with a .08 unit increase in TRDM at Wave II. Delinquency in Wave 1 has a slight negative effect on later TRDM, as would also be expected, given that offending is naturally fun and satisfying, and thus self-reinforcing (Agnew, 1990; Gottfredson and Hirschi, 1990; Katz, 1988). A one-unit increase in an individual's delinquency variety

score reduces future TRDM by .02. Finally, younger individuals have reduced levels of TRDM compared to individuals 17 years of age or older. Consequently, we can conclude that criminal social capital does not influence long-term criminal human capital, in the form of TRDM. As an alternative, perhaps peers only influence decision-making in the context of situational inducements, rather than through long-term socialization efforts (Osgood et al., 1996; Warr, 2002).[16]

Model 3 contains the negative binomial regression examining Wave II delinquency. Here, peer delinquency emerges as a significant predictor, with a one-unit increase in peer delinquency corresponding to a 3 percent increase in the expected count of later offending.[17] Consistent with prior research and theoretical expectations, the lagged delinquency measure and lower levels of self-control both increase the expected delinquency counts. A one-unit increase in Wave I offending corresponds to a 16 percent increase in Wave II delinquency, whereas a one-unit increase in lower self-control results in a 7 percent increase in the expected delinquency count at Wave II. Also consistent with prior research, being younger increases the expected delinquency count, by 39 percent. Alternatively, fatalism at Wave I is negatively related to later offending, and TRDM has no influence on subsequent offending.

[16] Given that TRDM at Wave 2 is measured as a single item comprised of five response categories, an ordered logistic regression model was also run. Consistent with the OLS model, TRDM at Wave I had a positive effect, while increased participation in delinquency reduced subsequent TRDM, as did being younger than 17 years of age. The consistency between each model specification suggests that these findings are robust. The OLS results are presented for parsimony and ease of interpretation.

[17] To obtain the influence of each significant variable in the negative binomial model, regression coefficients were exponentiated, had 1 subtracted from them, and were then multiplied by 100 (Long and Freese, 2006; Stewart, Elifson, and Sterk, 2004). For example, the low self-control effect on Wave II delinquency is calculated as follows:

(100 * [exp(.07)-1])

Given prior research on this topic, why might this be the case? With respect to fatalism and delinquency, Brezina and colleagues (2009) provide a general list of covariates they include in their models.[18] Although a complete list of covariates is not provided in their article, based on their description (see footnote 10), it may be that important confounders were omitted from their regressions (e.g., self-control; Pratt and Cullen, 2000). Further, it is notable that even among their findings, Brezina et al. (2009: 1109) found inconsistent effects of fatalism on individual offending items. As shown in Table 4, row 3 of their fixed-effects regression models, anticipated early death has no significant effect on engaging in assaults, damaging property, theft or robbery among individuals who perceived less than a 50 percent chance of living to the age of 35.

Digging deeper into the sign flip of the fatalism variable on Wave II delinquency, alternative models excluding the lag term were also run. Given that prior delinquency is one of the best predictors of future delinquency, this was done only for diagnostic purposes. From these models which exclude the lag, it appears that the inclusion of a delinquency lag term drives the negative relationship between fatalism and later delinquency. I revisit this finding in the discussion section of this document, and its implications for future research on fatalism.

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[18] According to Brezina and colleagues (2009: 1101):
"The richness of the Add Health survey data allows us to control for an unusually extensive list of characteristics representing the socioeconomic backgrounds of respondents. Specifically, we include in our models multiple binary indicators to represent age, gender, various categories of race, Hispanic ethnicity, multiple categories for mother's and father's education, presence of mother and father in the household, an indicator for whether the respondent is the first child, various indicators for birth weight, an indicator for church attendance, various indicators for religion, binary indicators for standard test scores being in various quartiles, family income, welfare status of parents, an indicator for whether the father is the biological or stepfather, whether the respondent was born in the United States, whether the father was ever jailed, whether the respondent spent time in foster care, whether the respondent was a victim of abuse by parents or other caregivers, and weekly allowance of the respondent. These indicators amount to a total of 59 control variables. When possible, we also include state, county, and time indicators in our models."

These same considerations extend to the non-significance of TRDM. Paternoster and Pogarsky (2009) include only a single-item indicator of self-control (e.g., "When making decisions, you usually go with your 'gut feeling' without thinking too much about the consequences of each alternative."). Although this item was negatively correlated with TRDM, it may not be a strong indicator of low self-control.[19]

In addition, a close reading of these articles suggests that proper accounting for the survey design of the Add Health may not have been conducted, potentially biasing the estimates of any regressions (Chen and Chantala, 2014; see also Thomas and McGloin, 2013). For example, weights are discussed in the Paternoster and Pogarsky (2009) article, but robust standard errors are also acknowledged to have been used. At least in Stata 11 (released in July of 2009; right around the time of the article's publication; see http://www.stata.com/ support/ faqs/resources/history-of-stata/), complex survey commands were unable to include a robust function. Indeed, complex survey specifications naturally account for subject nesting (Chen and Chantala, 2014). Likewise, the article by Brezina, Tekin, and Topalli (2009) reports robust standard errors, but makes no mention of sampling weights. These are technical, post hoc considerations (several years after the fact) of why inconsistent results may be found in the present analysis. It should be noted, however, that early statistical packages may simply have been unable to adequately account for the complex design of the Add Health data.[20]

[19] This possibility is reinforced by the non-significant relationship between this measure of self-control and general delinquency and, perhaps, the positive relationship between this measure and college aspirations reported by Paternoster and Pogarsky.

[20] Neither the articles by Paternoster and colleagues (2009, 2011) nor the article by Brezina, Tekin, and Topalli (2009) indicate the specific statistical package used for analysis. Borowsky and colleagues report using SAS in their analyses of the consequences of adolescent fatalism.

Overall, these results provide only very limited support in the relationship between criminal social capital and various other forms of criminal capital examined here. That is, to the extent delinquent peers promote involvement in delinquency and offending, they do not appear to do so through the generation of fatalistic beliefs among one another (a form of criminal cultural capital) or influence cognitive processes involving thoughtful or reflective decision-making. These findings provide an answer to the first research question. In the following sections, I explore the unique impact of these diverse forms of criminal capital on educational, social, and economic outcomes occurring during the transition to adulthood.[21]

The Impact of Adolescent Criminal Capital on Educational Outcomes

The previous section examined the consequences of criminal social capital for criminal cultural and human forms of capital. The current section examines whether and to what extent these various forms of criminal capital contribute to social marginalization as individuals begin transitioning from adolescence to adulthood. This section specifically examines the consequences of various forms of criminal capital for two common indicators of educational attainment: high school graduation and college matriculation.

[21] Because the influence of delinquent peers may be age-graded (e.g., Giordano et al., 2003; Gardner and Steinberg, 2005; Gogtay et al., 2004; Steinberg and Monahan, 2007), each regression model was re-run while incorporating an interaction term between the dummy variable for age (recall the measure indicates whether a respondent is younger than 17) and peer delinquency. Consistent with the recommendation made by von Hippel (2009), the interaction term was created prior to imputation and treated as its own distinct variable during the imputation process. The peer delinquency measure was mean-centered before the interaction term was created (Jaccard and Turrisi, 2003). Despite efforts to reduce collinearity through mean-centering, the interaction terms remained highly correlated with the peer delinquency measure (.79). Results from these regressions found the interaction term to be non-significant.

Prior research on educational attainment has focused on a range of key independent variables, ranging from school attachment (Gottfredson, 1986; Hirschi, 1996; Marcus and Sanders-Reio, 2001; Mouton, Hawkins, McPhearson, and Copley, 1996) to delinquency (Battin-Pearson et al., 2000; Elliot, 1966, Elliot and Voss, 1972) and to criminal justice contact (Hirschfield, 2008; Hjmarrlson, 2008; Kirk and Sampson, 2013; Sweeten, 2006). Likewise, prior research on both TRDM and fatalism similarly highlight their importance for educational attainment (Duke et al., 2011; Paternoster and Pogarsky, 2009; Paternoster et al., 2011). Ostensibly, higher levels of TRDM have been found to increase the likelihood of academic success (Paternoster and Pogarsky, 2009; Paternoster et al., 2011), whereas fatalism reduces the likelihood of higher educational attainment (Duke et al., 2011).

Based on prior research, it would be expected that peer delinquency, individual delinquency, criminal justice contact, increased fatalism, and lower levels of TRDM would each negatively impact individual educational outcomes. Because each dependent variable (HS graduation and attending college, respectively) is dichotomous in nature, logistic regressions are used for the analysis (Long and Freese, 2006). Table 5.2 contains two logistic regressions examining the adolescent correlates of educational attainment during the transition to adulthood.

Table 5.2 Logistic Regressions Examining the Consequences of Criminal Forms of Capital for Educational Attainment

	HS Diploma				Attend College			
	b	SE	95 %	CI	b	SE	95 %	CI
Peer Delinquency (w1)	.04	.05	-.061	.146	-.04	.04	-.121	.038
TRDM (w2)	-.04	.14	-.318	.241	.09	.09	-.079	.266
Fatalism (w2)	-.61	.28*	-1.161	-.051	-.50	.14**	-.784	-.221
Delinquency (w2)	-.05	.06	-.159	.061	-.06	.03*	-.115	-.001
Juvenile Arrest	-2.15	.44***	-3.013	-1.280	-.88	.44*	-1.743	-.016
Low Self-Control	-.12	.05*	-.208	-.027	-.04	.02	-.088	.003
College Likely	1.15	.24***	.668	1.627	1.66	.19***	1.278	2.049
Parental Education	.50	.15**	.202	.797	.56	.09***	.375	.741
Two Parent Household	.82	.19***	.436	1.204	.39	.25	-.100	.872
Younger than 17 (w1)	-.26	.45	-1.158	.640	-.17	.21	-.589	.249
Male	.10	.24	-.373	.582	-.03	.21	-.451	.382
White	-.16	.21	-.588	.259	.02	.22	-.424	.461
Constant	1.00	.73	-.446	2.446	-2.54	.56***	-3.653	-1.421
F-statistic		35.54***				36.43***		
*p < .05, **p < .01, ***p<.001								
		n = 2258				n = 2258		

Model 1 in Table 5.2 assesses the predictors of having achieved a high school diploma by the time an individual begins transitioning to adulthood. Forms of criminal capital all exert negative influences of graduating. First, individuals who have fatalistic beliefs have 46 percent ($\exp^{(-.61)}$) lower odds of graduating high school, compared to those who report being more likely to live to age 35. This finding is consistent with prior research, and persists with the inclusion of confounders unexamined by prior research (e.g., delinquency, arrest, and self-control; Duke et al., 2011; Nguyen et al., 2012). Second, also consistent with prior research (e.g., Hjalmarsson, 2008; Kirk and Sampson, 2013; Sweeten, 2006), experiencing a juvenile arrest substantially reduces the odds that an individual will graduate from high school. Specifically, experiencing an arrest as a juvenile corresponds with 88 percent ($\exp^{(-2.15)}$) lower odds of graduation compared to individuals who experience no arrest. Lower levels of self-control also correspond with a lower likelihood graduating, with a one-unit increase in low self-control reducing the odds of graduation by roughly 11 percent ($\exp^{(-.12)}$). In contrast to prior research,

delinquency is not a significant predictor of high school graduation once these other aspects of criminal capital are accounted for (e.g., Battin-Pearson et al., 2000).

Protective factors in adolescence also strongly influenced respondent's likelihood of graduating high school. Respondents who believed they were likely to go to college saw substantially increased odds (216 percent; $\exp^{(1.15)}$) of graduating, as did those respondents who report living in two parent households and whose parents had higher levels of education themselves. Overall, the findings from model support some aspects of the theory of criminal capital for successful transitions to adulthood.

Model 2 in Table 5.2 examines whether the respondent reported matriculating to higher education. Here, forms of criminal capital continue to exert independent effects on the outcome of interest. First, individuals with fatalistic beliefs in adolescence have lower odds of attending college, by roughly 39 percent ($\exp^{(-.50)}$). Likewise, individuals who reported more involvement in delinquency at Wave II were less likely to attend college. A one-unit increase in adolescent delinquency corresponds to a 6 percent reduction in the odds of attending college ($\exp^{(-.06)}$). Finally, experiencing a juvenile arrest also reduces the odds of an individual matriculating by approximately 59 percent.

Alternatively, individuals who believed they were more likely to attend college, and whose parents had higher levels of education, were more likely to matriculate to college. For example, believing that one was likely to attend college corresponded to a 426 percent increase in the odds of continuing education beyond high school.

Notably, TRDM does not predict either high school graduation or college matriculation, in contrast to the findings of Paternoster and colleagues (2009, 2011). Overall, Table 5.2 provides some support for the influence of diverse forms of criminal

capital on educational attainment, although these findings are inconsistent across outcomes. That fatalism has a persisting effect on both high school graduation and college matriculation is particularly noteworthy.[22] In the following section, I examine the consequences of criminal capital for economic success.

The Impact of Adolescent Criminal Capital on Economic Outcomes

This section assesses the relationship between various forms of criminal capital and economic outcomes in the transition to adulthood. Based on prior research, it would be anticipated that delinquent peers, criminal offending, and juvenile arrest would reduce the likelihood of current employment, and increase the likelihood of receiving public assistance. Fatalism could have one of two possibilities for employment: it could increase the likelihood of employment, as individuals would not have pursued higher levels of education (see Table 5.2), or it may reduce the likelihood of obtaining employment due to job market dropout. Similarly, if fatalism corresponds with lower levels of education and/or job market withdrawal, it would be expected that it would increase the likelihood of receiving public assistance. Prior research on the economic consequences of fatalism has concentrated on earnings (see Nguyen et al, 2012: 1458) and narrow types of material hardship, thus providing little guidance for more specific hypotheses. TRDM would be expected to reduce the likelihood of employment, as individuals would presumably

[22] Because a small number of students in the saturated sample were 12 years of age during Wave I, it is possible that they would not yet been old enough to attend college by Wave III. To account for this, models regressing college attendance on forms of criminal capital were rerun to exclude those individuals who were 12 years of age in Wave I. Results were largely consistent with the models presented in Model 2 of Table 5.2. Two minor differences emerge. First, juvenile delinquency now approaches, but does not reach statistical significance ($p = .06$). Second, juvenile arrest is not significant. These results are presented in Appendix B.

continue pursuing higher levels of education. Similarly, TRDM would be expected to reduce the receipt of public assistance.

Table 5.3 presents two logistic regressions. The first model in Table 5.3 examines whether the respondent reports currently working ten or more hours per week, and the second model examines whether the respondent reports currently receiving any form of public assistance.

Table 5.3 Logistic Regressions Examining the Consequences of Criminal Forms of Capital for Economic Attainment

	Currently Employed				Public Assistance			
	b	SE	95 %	CI	b	SE	95 %	CI
Peer Delinquency (w1)	.04	.02	-.013	.084	-.25	.09**	-.439	-.067
TRDM (w2)	-.01	.10	-.207	.194	-.04	.25	-.532	.445
Fatalism (w2)	.62	.30*	.034	1.207	.74	.54	-.321	1.801
Delinquency (w2)	.01	.04	-.067	.082	.12	.07	-.018	.266
Juvenile Arrest	.22	.60	-.972	1.412	-.42	1.01	-2.424	1.577
HS Graduate	.33	.23	-.122	.789	-1.49	.37***	-2.234	-.753
Low Self-Control	-.04	.03	-.097	.024	.04	.06	-.080	.169
College Likely	.35	.17*	.018	.673	.04	.51	-.976	1.064
Parental Education	-.24	.10*	-.440	-.036	-.42	.16*	-.730	-.103
Two Parent Household	.05	.22	-.394	.488	-.52	.27	-1.042	.011
Younger than 17 (w1)	-.35	0.16*	-.656	-.041	.37	.42	-.452	1.191
Male	.66	0.15***	.358	.952	-.83	.40*	-1.617	-.043
White	.60	0.16***	.294	.908	-.59	.28*	-1.133	-.043
Constant	.76	.42	-.074	1.597	.06	.86	-1.649	1.770
F-statistic	7.71***				6.92***			
*p < .05, **p < .01, ***p<.001								
	n = 2091				n = 2237			

In Model 1, we see that, of the criminal capital variables, only fatalism is a significant predictor of current employment in Wave III. Individuals who believe they have no better than a 50-50 chance of living to 35 are more likely to be in the labor force. Specifically, fatalistic beliefs correspond with an 86 percent increase in the odds of currently being employed. Individuals who were younger than 17 years of age at Wave I had approximately 30 percent ($\exp^{(-.35)}$) lower odds of current employment in Wave III. This is likely a consequence of movement into higher education, rather than failure in, or

withdrawal from, the labor market. Likewise, having more highly educated parents decreased the odds of current employment.

Turning to Model 2 in Table 5.3, we see that criminal social capital is the only form of criminal capital that significantly predicts receiving public assistance. More specifically, having increasingly delinquent peers reduces the odds of receiving public assistance by approximately 22 percent. Given that criminal social capital has no effect on employment, perhaps this effect is due to the provision of informal assistance (e.g., lending money) or providing illicit opportunities for moneymaking (e.g., under the table employment or drug selling). The other major predictor of public assistance is educational attainment. High school graduates, for example, see an 87 percent decrease in the odds of receiving such assistance, compared to those who do not complete high school.

These findings suggest that forms of adolescent criminal capital can be influential for later economic outcomes, though these effects are inconsistent across these outcomes. In the following section, the social consequences of criminal capital are examined.

The Impact of Adolescent Criminal Capital on Marriage and Cohabitation

The final section of the results focuses on the implications of criminal forms of capital for marriage and cohabitation, two prominent markers of status in the transition to adulthood (Cherlin, 2004; Thornberry et al., 2016). Table 5.4 contains two logistic regressions assessing predictors of whether the respondent reporting being married, and whether the respondent reported ever having cohabitated with someone.

Table 5.4 Logistic Regression Examining the Consequences of Criminal Forms of Capital for Marriage and Cohabitation

	Ever Married				Cohabitating				Number of Cohabitating Partners			
	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI
Peer Delinquency (w1)	.06	.05	-.034	.146	.10	.04*	.012	.186	.05	.02*	.008	.095
TRDM (w2)	.08	.10	-.119	.277	-.05	.07	-.191	.086	-.13	.07	-.263	.005
Fatalism (w2)	.38	.18*	.030	.738	-.14	.15	-.431	.144	-.04	.13	-.303	.219
Delinquency (w2)	-.04	.04	-.122	.035	.15	.04***	.072	.236	.11	.02***	.074	.137
Juvenile Arrest	.58	.40	-.203	1.369	.33	.43	-.516	1.182	.05	.30	-.540	.640
HS Graduate	-.71	.26**	-1.228	-.195	-1.38	.30***	-1.985	-.782	-.78	.13***	-1.031	-.533
Low Self-Control	-.03	.04	-.110	.058	.04	.02	-.005	.076	.00	.02	-.037	.044
College Likely	-.21	.25	-.700	.288	-.19	.21	-.619	.231	-.21	.13	-.470	.049
Parental Education	-.09	.08	-.247	.058	-.26	.07***	-.390	-.132	-.11	.04*	-.193	-.020
Two Parent Household	.27	.25	-.227	.762	-.16	.14	-.429	.110	-.06	.10	-.254	.131
Younger than 17 (w1)	-1.11	.21***	-1.516	-.702	-.75	.20***	-1.143	-.350	-.43	.12	-.672	-.192
Male	-.65	.25*	-1.135	-.157	-.28	.07***	-.426	-.144	-.11	.08	-.264	.035
White	.78	.31*	.174	1.389	.56	.22*	.119	.994	.45	.16**	.144	.762
Constant	-.55	.65*	-1.831	.728	1.29	.70	-.098	2.672	.41	.41	-.410	1.221
F-statistic		24.50***				43.64***				102.77***		
*p < .05, **p < .01, ***p<.001												
		n = 2254				n = 2251				n = 2256		

Model 1 in Table 5.4 regresses marriage on different forms of criminal capital. Adolescent criminal capital, in the form of fatalism, increases the likelihood of an individual reporting have ever been married. Fatalistic individuals have a 46 percent increase in the odds of being married compared to those who believe they have a better chance of living to age 35. High school graduates have reduced odds of being married by 51 percent ($\exp^{(-.71)}$), as do individuals who were younger than 17 years of age in Wave I (67 percent lower odds, $\exp^{(-1.11)}$) and males (48 percent, $\exp^{(-.65)}$)

Turning to Model 2, which examines predictors of cohabitation, two forms of criminal capital exert positive effects on cohabitation. First, peer delinquency increases the odds of cohabitation. A one-unit increase in peer delinquency corresponds with an 11 percent increase in the odds of cohabitation. Second, delinquency also increases the respondent odds of having cohabitated, with a one-unit increase in delinquency corresponding with a 16 percent increase in the odds. High school graduates (75 percent reduced odds; $\exp^{(-1.38)}$), younger respondents (53 percent reduced odds; $\exp^{(-.75)}$), and those individuals whose parents are more highly educated (23 percent reduced odds; $\exp^{(-.26)}$) are all less likely to report having cohabitated.

Because the dummy indicator for cohabitation may mask important variation in the frequency of cohabitating, I also examine the number of times an individual reports having cohabitated with someone. If criminal capital can have deleterious outcomes for social relations, it would be expected that higher levels of criminal capital would result in more frequent cohabitation. In other words, frequent cohabitation may be an indicator of poor social integration, and the inability to successfully maintain a cohabitating relationship. Model 3 in Table 5.4 contains a negative binomial model regressing the number of times a person has cohabitated with someone on criminal forms of capital. Here, both peer delinquency and individual delinquency independently influence the frequency of cohabitation. For example, a one-unit increase in peer delinquency corresponds with a 5 percent increase in the expected count of cohabitation. In a similar fashion, a one-unit increase in individual's self-reported delinquency increases the expected count of cohabitation by 11 percent. Consistent with Model 2, being a high school graduate substantially reduces the expected count of cohabitation an individual experiences (a 54 percent reduction). This result suggests that deviant peers may provide a ready pool of potential cohabitants from which an individual may draw.

Overall, these results suggest that forms of criminal capital developed in adolescence can have negative consequences, specifically for educational attainment. At the same time, some forms of criminal capital, notably fatalism, actually increase entrance into the workforce, and delinquency and deviant peers increase the odds that individuals will cohabitate in young adulthood, and possess a higher number of cohabitating partners. Although it may seem that these would be healthy and pro-social developments, this may not necessarily be the case. For example, Nguyen et al. (2012)

noted that adolescent fatalism resulted in decreased earnings, compared to individuals who were more optimistic about their chances of living to 35. This is likely due, in part, to the reduced economic opportunities that are a consequence of diminished educational achievement (see Table 5.2).[23]

Likewise, although cohabitation can precipitate marriage, prior research finds that cohabitation can just as easily be ephemeral and fleeting (e.g., Forrest, 2014; Lonardo, Manning, Giordano, and Longmore, 2010). This appears to be the case among individuals who are more involved in delinquency, and whose social circles are increasingly delinquent. In some sense, repeated cohabitation experiences indicate an inability to successfully maintain or navigate romantic relationships. Given this acknowledgement, it is not surprising that cohabitation can have little impact in the way of reducing antisocial behavior or promoting future social integration (Forrest, 2014).

Sensitivity Analysis

Because of the null findings linking peer delinquency to other forms of criminal capital, as well as social, economic, and educational outcomes during the transition to adulthood, sensitivity analyses were conducted. If the in-school peer delinquency measure poorly captures a respondent's network, it may be undervaluing the contribution of delinquent peers to the other forms of capital examined here. Specifically, an alternative specification of delinquent peers was used. When respondents were asked to

[23] To examine whether forms of criminal capital predicting both being out of the workforce and having not attended college, a dummy variable, *Unattached*, was created. Slightly more than 10 percent of the sample had not attended college and was not currently employed at the time of being interviewed in Wave III. The forms of criminal capital examined here (peer delinquency, fatalism, TRDM, and individual delinquency) were not significantly related to this joint outcome. These regressions are contained in Appendix C. As in the regressions in Appendix C, iterative models demonstrated that no form of criminal capital was a significant predictor of *unattached*.

nominate friends, they were able to specify whether or not each of those friends attended school at all, as well as whether the nominated friend attended the respondent's school or sister school (see Harding, 2008). Harding (2008) argued that having peers who are not in school at all (and consequently, he suggested, are likely to (a) be older, (b) have dropped out of school, or (c) capture both of these characteristics) can be indicative of exposure to alternative cultural models (see also Harding, 2009, 2010). These models, in part, involve aspects of criminal capital described previously.

Out of School Peers is a count of the number of out-of-school peers each respondent identified in their friendship nominations. This measure is used as an alternative measure of peer delinquency.[24] Each peer was scored as a "1" if they were acknowledged by the respondent to not be attending school (or to have not attended school, if the interview was conducted during the summer), or were scored "0" if they were not suggested to be out of school. These counts were then summed, providing a range of zero to ten friends who were able to not be attending school. To be sure, and as Harding (2008) makes clear, nothing is known about these out-of-school peers, besides the fact they are not in school. Nonetheless, if peers are older or have dropped out, as Harding (2008) suggests would be the case for peers who have left school, these friends would provide new opportunities for delinquency, and influence the adoption of alternative cultural models which inhibit social integration and life success (Harding, 2009, 2010).

[24] The variables used to identify the number of out-of-school peers are: H1MF2A, H1MF2B, H1MF2C, H1MF2D, H1MF2E, H1FF2A, H1FF2B, H1FF2C, H1FF2D, and H1FF2E. Male friends are indicated by the "MF" in the variable name, while "FF" denotes a female friend. The letter at the end of each variable name refers to a unique friend. For example, H1MF2A refers to respondent's first male friend, whereas H1MF2E refers to respondent's fifth male friend. This pattern is also followed for female friends.

Regressions examining the consequences of having a higher number of out-of-school peers are presented in Tables 5.5 through 5.8. Table 5.5 replicates the regression models in Table 5.1, substituting the out-of-school friend measure for the peer delinquency measure. Out-of-school friends do not appear to influence subsequent respondent fatalism, TRDM, or delinquency. Out-of-school friends approach statistical significance in the TRDM model (p = .052), but do not cross that threshold. Results are otherwise largely consistent with the models incorporating the delinquent peer measure.

Table 5.5 Sensitivity Analysis of the Consequences of Criminal Social Capital

	Fatalism (w2)[a]				TRDM (w2)[b]				Delinquency (w2)[c]			
	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI
Out of School Peers (w1)	.08	.05	-.027	.180	-.05	.02	-.092	.000	-.01	.01	-.034	.006
TRDM (w1)	-.03	.03	-.095	.040	.08	.01***	.064	.100	.00	.02	-.034	.035
Fatalism (w1)	1.69	.28***	1.136	2.249	-.11	.07	-.247	.034	-.23	.10*	-.439	-.024
Delinquency (w1)	.12	.02***	.081	.166	-.02	0.01**	-.029	-.005	.16	.01***	.138	.178
Low Self Control	.00	.02	-.046	.046	.01	.01	-.004	.032	.07	.02**	.029	.114
College Likely	-.25	.20	-.644	.146	.07	.09	-.113	.254	.00	.11	-.218	.227
Parental Education	-.09	.07	-.238	.059	.01	.03	-.039	.067	-.03	.03	-.094	.033
Two Parent Household	-.32	.27	-.846	.209	-.08	.05	-.186	.028	.01	.06	-.114	.142
Younger than 17	-.02	.17	-.353	.322	-.14	0.04**	-.233	-.055	.32	.04***	.246	.386
Male	-.43	.27	-.967	.101	-.08	.04	-.155	.004	-.05	.08	-.204	.114
White	-.47	.25	-.976	.026	-.04	.04	-.118	.036	-.19	0.07*	-.332	-.046
Constant	-.97	.71	-2.376	.427	2.80	0.16***	2.482	3.115	-.21	.38	-.956	.533
F-statistic	47.58***				56.84***				100.81***			
*p < .05, **p < .01, ***p<.001												
	n = 2684				n = 2683				n = 2661			

Notes: a. Logistic regression; b. OLS regression; c. negative binomial regression

Table 5.6 revisits the influence of peers for educational attainment (graduating high school and matriculating to college). Consistent with Model 1 in table 5.2, fatalism and juvenile arrest both reduce the odds of graduating high school, while living with both parents increases the likelihood of graduating. Model 2, examining predictors of college matriculation, has slight but important differences from Table 5.2. Now, fatalism and delinquency reduce the odds of attending college, as does having lower levels of self-control, while juvenile arrest is not significant. Perceiving that one has a high likelihood of attending college, and having more highly educated parents, both increase the likelihood of college attendance.

Table 5.6 Sensitivity Analysis of the Consequences of Criminal Capital for Educational Attainment

	HS Diploma				Attend College			
	b	SE	95 %	CI	b	SE	95 %	CI
Out of School Peers	-.11	.07	-.254	.033	.06	.06	-.071	.186
TRDM (w2)	-.04	.14	-.320	.235	.10	.09	-.083	.276
Fatalism (w2)	-.63	.26*	-1.146	-.104	-.50	.14***	-.776	-.229
Delinquency (w2)	-.04	.06	-.156	.069	-.06	.03*	-.117	-.004
Juvenile Arrest	-2.15	.42***	-2.990	-1.315	-.86	.46	-1.773	.050
Low Self-Control	-.11	.05	-.201	-.015	-.04	.02*	-.089	-.001
College Likely	1.10	.23***	.652	1.556	1.69	.20***	1.295	2.091
Parental Education	.49	.14	.206	.781	.55	.09***	.359	.732
Two Parent Household	.80	.19*	.421	1.180	.38	.24	-.100	.859
Younger than 17 (w1)	-.36	.43	-1.212	.496	-.12	.17	-.469	.221
Male	.06	.26	-.460	.573	-.02	.22	-.453	.406
White	-.15	.23	-.597	.305	.01	.21	-.406	.429
Constant	1.26	.73	-.179	2.692	-2.68	.63***	-3.922	-1.435
F-statistic		42.15***				32.04***		
*p < .05, **p < .01, ***p<.001								
		n = 2258				n = 2258		

Table 5.7 revisits the economic consequences criminal capital (current employment status and receipt of public assistance). Compared to Model 1 in Table 5.3, we see that fatalism remains a positive predictor of current employment, as does believing that one has a higher likelihood of going to college. Being younger and having parents with higher levels of education reduce the likelihood of current employment. These results are consistent across both model specifications. Model 2 in Table 5.7 re-examines whether an individual reported receiving public assistance. Results are again consistent with Table 5.3, as out-of-school friends reduce the likelihood of receiving assistance, as does being a high school graduate and have more highly educated parents. The difference between the two models involves the race variable, *White*, which is significant in the original model, but is not in the sensitivity analysis.

Table 5.7 Sensitivity Analysis of the Consequences of Criminal Capital for Economic Attainment

	Currently Employed				Public Assistance			
	b	SE	95 %	CI	b	SE	95 %	CI
Out of School Peers (w1)	.04	.07	-.102	.187	-.34	0.14*	-.611	-.072
TRDM (w2)	.00	.10	-.202	.198	-.10	.24	-.580	.371
Fatalism (w2)	.61	.30*	.011	1.202	.79	.58	-.351	1.940
Delinquency (w2)	.01	.04	-.061	.083	.11	.07	-.035	.255
Juvenile Arrest	.21	.60	-.977	1.406	-.42	.90	-2.200	1.369
HS Graduate	.35	.23	-.115	.814	-1.56	.39***	-2.326	-.787
Low Self-Control	-.04	.03	-.097	.022	.04	.06	-.069	.158
College Likely	.35	.17*	.007	.696	.01	.51	-.995	1.018
Parental Education	-.24	.10*	-.439	-.032	-.41	.18*	-.772	-.048
Two Parent Household	.06	.22	-.372	.487	-.65	.29	-1.222	-.070
Younger than 17 (w1)	-.33	.13*	-.587	-.064	.12	.37	-.621	.856
Male	.67	.14***	.388	.945	-.85	.42*	-1.681	-.017
White	.60	.17***	.276	.931	-.54	.27	-1.081	.001
Constant	.75	.45	-.146	1.648	.26	.86	-1.436	1.960
F-statistic	10.55***				6.99***			
*p < .05, **p < .01, ***p<.001								
	n = 2091				n = 2237			

Table 5.8 contains logistic regressions predicting marriage and cohabitation during the transition to adulthood, again replacing the peer delinquency measure with the out-of-school friend measure. Notably, having a greater number of peers who are not in school corresponds with a slight increase in the likelihood of being married in young adulthood. This is in contrast to Table 5.4, which finds delinquent peers have no effect on marriage. Otherwise, results remain largely consistent with those presented in Table 5.4 (that is, high school graduates, younger individuals, males, and whites are less likely to report ever being married). Turning to Model 2 in Table 5.8, one substantive difference emerges. In contrast to Table 5.4, out-of-school friends have no influence on cohabitation, whereas delinquent peers are positive predictors of cohabitation. Results are otherwise consistent across both Models.

Table 5.8 Sensitivity Analysis of the Consequences of Criminal Capital for Marital Attainment

	Ever Married				Cohabitating			
	b	SE	95 %	CI	b	SE	95 %	CI
Out of School Peers (w1)	.17	.07**	.046	.303	.04	.07	-.097	.187
TRDM (w2)	.10	.10	-.092	.298	-.04	.07	-.178	.098
Fatalism (w2)	.35	.18	-.003	.696	-.19	.15	-.487	.105
Delinquency (w2)	-.04	.04	-.121	.044	.16	.04***	.083	.243
Juvenile Arrest	.59	.35	-.107	1.281	.32	.45	-.569	1.208
HS Graduate	-.67	.28*	-1.213	-.118	-1.36	.31***	-1.968	-.746
Low Self-Control	-.03	.04	-.113	.052	.03	.02	-.008	.078
College Likely	-.15	.26	-.661	.356	-.21	.23	-.663	.250
Parental Education	-.10	.08	-.249	.058	-.25	0.06***	-.374	-.119
Two Parent Household	.33	.24	-.150	.805	-.13	.15	-.414	.164
Younger than 17 (w1)	-1.00	.20***	-1.391	-.609	-.74	.16***	-1.064	-.416
Male	-.59	.23*	-1.041	-.139	-.28	.08**	-.435	-.115
White	.78	.31*	.171	1.381	.56	.23*	.106	1.010
Constant	-.79	.71	-2.195	.607	1.36	.73	-.082	2.812
F-statistic		22.96***				52.16***		
*p < .05, **p < .01, ***p<.001								
		n = 2254				n = 2251		

Overall, the sensitivity analysis suggests that findings are largely robust across model specifications. Minor differences emerge regarding social outcomes, and for college matriculation when the out-of-school friend measure is used, compared to models incorporating the delinquent peer measure. To reiterate, nothing else is known about the out-of-school friends. Harding (2008) suggested these friends are older or school dropouts, and, implicitly, delinquent or criminal. Results from this sensitivity analysis do not support such an assertion. I reserve discussion of these findings, and their implications for theory and practice, for the following chapter.

CHAPTER 6
DISCUSSION

For more than two decades, life course research has been at the center of criminology (Cullen, 2011; Farrington 2003; Sampson and Laub, 1993). During this time, two common approaches to the criminological life course have emerged. The first

approach has emphasized the relationship between institutional engagement, such as marriage and employment, and desistance from criminal behavior (Sampson and Laub, 1993). A second body of research has focused on the consequences of criminal justice involvement and criminal behavior for obtaining employment and getting married. This latter body of research has focused predominantly on the effects of criminal justice involvement for African-Americans, owing to the current "era of mass incarceration" (Pager, 2008; Pratt, 2008). I have characterized these approaches within the criminological life course as focusing on how individuals acquire, use, and lose of various forms of capital over their lives (Bourdieu, 1986; Coleman, 1988, 1990; Granovetter, 1983, 1985).

The emergence and growth of the life course paradigm has been paralleled by growing interest in criminal forms of capital (Hagan, 1991, 1993; Loughran et al., 2013). Specifically, research on criminal capital has examined how criminal affiliations, skills, and knowhow have translated into short term economic gains (e.g., monetary success in illicit drug markets, Loughran et al., 2013, and criminal success among homeless youth, Hagan and McCarthy, 1997; McCarthy and Hagan, 2001). Recent research has also begun to explore the long term consequences of these deviant affiliations (Schmidt et al., 2014; Pyrooz, 2014), but has concentrated on specific antisocial groups (street gangs, homeless youths), to the neglect of more general delinquent affiliations. Indeed, the possible influence of criminal connections for life transitions has not been adequately addressed, with most research focusing on criminal human capital and offending and victimization in adolescence.

To better link the social worlds of adolescence and the transition to adulthood, the current study drew from research on the life course framework, forms of capital, and peer effects to examine whether delinquent peer affiliations in adolescence impact successful transition to adulthood. The guiding research question of this dissertation was "What effect do forms of criminal capital have on successfully moving from adolescence into emerging adulthood?" In addition, I ask "Does criminal social capital exert independent influence on the development of criminal cultural and human capital?" Fatalistic beliefs, lower levels of thoughtful reflective decision making, and delinquency were all characterized as forms of criminal capital. Using data from three waves of the National Longitudinal Study of Adolescent to Adult Health ("Add Health"), outcomes during the transition to adulthood related to educational and occupational attainment, and marriage and cohabitation were examined. Three specific findings warrant further discussion.

First, a series of logistic, OLS, and negative binomial regression models revealed that criminal social capital, as measured by the average peer delinquency among in-school friends, was not a significant predictor of individuals' later thoughtful and reflective decision-making (TRDM) capacities or fatalistic beliefs. Criminal social capital was a significant, positive predictor of later delinquency. Sensitivity analysis, replacing the in-school peer delinquency measure with the number of out-of-school peers a respondent has (Harding, 2008), found that out-of-school peers did not have any effect on these forms of criminal capital (see Table 5.5).

Two general conclusions can be drawn from these findings. First, to the extent that delinquent peers influence offending, it may be due to the conveyance of beliefs about the appropriateness of, and justifications for, offending, rather than disseminating

alternative beliefs that have also been demonstrated to influence offending (e.g., fatalism). It is certainly plausible that delinquent peers might also be fatalistic, and alternative modeling strategies that incorporate peer fatalism would be useful for exploring the interplay between these distinct forms of criminal capital (e.g., Haynie et al., 2014; Zimmerman et al., 2016). Second, given limited knowledge on TRDM, generally, and whether features of social life influence TRDM, specifically, the current study considered whether delinquent peers are consequential for later TRDM. Peer delinquency was not a significant predictor of later TRDM, in either the fully specified or iterative models. If peers do influence the decision-making capacities of individuals, it would appear that this may be a more situationally-based process, rather than through long-term socialization efforts (Osgood et al., 1996; Warr, 2002). Those with higher levels of TRDM likely find themselves in those situations less often than individuals who possess lower levels of TRDM. Further, TRDM may be an important factor protecting individuals from negative peer influences.

The second finding deserving more thorough elaboration involves the diversity of consequences associated with possessing adolescent criminal capital. As individuals begin transitioning into adulthood, various forms of criminal capital exert independent influences on the acquisition of a variety of statuses and status attainment. With respect to educational attainment, criminal justice contact strongly and negatively influenced the likelihood of an individual graduating from high school, as did possessing fatalistic beliefs. This is consistent with prior research, though these two predictors have not, to my knowledge, been examined simultaneously. Criminal capital similarly influenced the

likelihood of college matriculation. Delinquency, fatalism, and juvenile arrest all independently reduce the odds that an individual will move into higher education.

Limited evidence emerged linked adolescent criminal capital to economic outcomes in the transition to adulthood. Adolescent fatalistic beliefs increased the likelihood that an individual would be in the workforce, presumably due to diminished educational achievements and pursuits. Having delinquent peers was a negative predictor of receiving public assistance, though no other forms of criminal capital had economic consequences. I suggest this may be because peers can form an informal social safety net, perhaps availing individuals to information about odd jobs or illicit business opportunities (e.g., selling drugs). This consideration is consistent with Granovetter's (1973, 1983) work on embeddedness, and theories of social capital more generally, which emphasize that it is the information individuals can provide that is meaningful for economic attainment.

Third, the effects of criminal capital on social outcomes warrants further scrutiny. Adolescent delinquency was a positive predictor of cohabitating in young adulthood, raising provocative questions about the importance of cohabitating as a pathway between juvenile delinquency and desistance in adulthood (Forrest, 2014; Lonardo, Manning, Giordano, and Longmore, 2010; Savolainen, 2009). As Giordano et al. (2002: 1013) noted, cohabitation is increasingly common among young adults. That said, some evidence suggests that cohabitation is not an adequate replacement for marriage (Forrest, 2014), and can involve interpersonal aggression between cohabitators (Stets, 1991). These findings, to some degree, may explain why delinquency results in increased likelihood of cohabitation (see also Thornberry et al., 2016). What is more, in models

predicting the number of cohabitations, individual and peer delinquency both exerted independent, positive effects on the number of cohabitation experiences an individual participated in, Future research would do well to understand when and why delinquents enter into cohabitating relationships, and how these experiences contribute to their likelihood of later marriage formation or success in other life domains.

These results were buttressed by findings from sensitivity analyses, which examined the consequences of having more friends who were not attending school at all. Harding (2008, 2009, 2010) has argued that cross-cohort socialization can be problematic, promoting cultural values that do not lead to success and social integration (see also Shaw and McKay, 1942). His work has concentrated primarily on sexual behavior, juvenile delinquency, and educational achievement. Results here challenge Harding's contention, insofar as out of school peers were not a significant predictor of future delinquency, and actually increased the likelihood of marriage during the transition to adulthood. In other words, having friends who were not attending school do not appear to be a form of criminal capital. It must be reiterated that the limitations inherent to the out-of-school peer measure (e.g., knowing nothing else about the particular friend) inhibit a more thorough examination of their influence on individual behaviors and beliefs. Future research would do well to continue examining whether and to what extent different kinds of peers (e.g., in school, out of school) contribute to healthy and unhealthy development and success, in adolescence and beyond.

What do these findings suggest for a theory of criminal capital and the criminological life course? On one hand, it is clearly not enough to approach the criminological life course in a piecemeal fashion. By that, I mean interest in only one key

variable at a time (e.g., delinquency, criminal justice contact), rather than a holistic treatment of factors that may have independent negative consequences for life success (or failure). This criticism extends to prior work on fatalism and TRDM as well, though more with respect to focusing on narrow outcomes of interest (e.g., marriage, public assistance, employment, etc.). In some cases, these constructs and concepts exhibit inconsistent effects on life outcomes, and these inconsistencies are themselves valuable for theory development and policy implementation. Further, it is clear that, at least in some instances, these various forms of criminal capital can each independently contribute to diminished success as individuals begin transitioning to adulthood. These findings have important implications for the study of fatalism, thoughtful and reflective decision making, and their consequences for individual development and adjustment. I discuss these implications next.

With regards to fatalism, there still remains much to be learned. Based on the results obtained here, it appears that the fatalism-delinquency link may be sensitive to model specification and inclusion of potential confounders. For example, Brezina and colleagues (2009) examined individual offending items, finding inconsistent effects of fatalism on different types of delinquency and crime, while Piquero (2016) examined the influence of fatalism on offending trajectories. Others have linked fatalism to risky behaviors, such as unprotected sexual intercourse, heavy drug use, or self-harm (e.g., Borowsky et al., 2009). Are there distinct patterns to these behaviors, and can fatalism discriminate between these forms of deviance? Does fatalism breed specialization in offending? Alternatively, are the consequences of fatalism conditioned by characteristics such as self-control, gender, or neighborhood context? Could fatalism actually lead to

social withdrawal, rather than participation in offending (e.g., Merton, 1938), and if so, for whom would this occur? Such questions must necessarily be answered to ascertain the robustness of the fatalism-offending relationship.

These concerns about fatalism notwithstanding, the findings here have important policy implications. Generally speaking, more should necessarily be done to facilitate high school graduation, even among high-risk youth (Cohen, 1998; Furstenberg and Hughes, 1995), as there are many benefits associated with high school graduation. Results here show that high school graduation acts as an important protective factor in the life course, making it less likely that individuals will rely on public assistance, and more able to pursue increasingly advanced educational and economic opportunities. Although this is not a new suggestion, findings here identify an especially important individual-measure that impacts educational attainment, net of other influential confounders: adolescent fatalism. Targeted interventions specifically directed toward reducing fatalistic beliefs would be especially useful, as results here show how adolescent fatalism can have a cascading influence across life domains as individuals transition into adulthood. This occurs, in part, because of the effect of fatalism on educational attainment. Stakeholders (e.g., educators, parents, and other practitioners) should be cognizant of the diverse consequences of adolescent fatalism, and assist juveniles in working through and overcoming these beliefs.

Thoughtful and reflective decision making (TRDM) similarly remains underdeveloped, both conceptually and empirically. The present study found limited evidence of the positive effects of TRDM on later life outcomes, in both iterative models and once confounders were introduced into multivariate regression models. Paternoster

and colleagues (2009, 2011) focused on a fairly narrow set of pro-social outcomes in their elaboration of TRDM (e.g., college attendance and civic participation). Results here suggest that TRDM is of less utility for social outcomes (e.g., marriage, cohabitation, and number of cohabitating experiences). If TRDM is truly about making "good choices," then it must naturally be conditioned by individual wants and desires (see also Elster, 1998). The implication for this is that TRDM may be generally useful for understanding positive life outcomes, but it must interact with individuals' aspiration (e.g., identifying a goal, and the means of pursuing that interest). Perhaps individuals who strongly desire to marry take important steps to increase their likelihood of marriage, as do potential job seekers and college aspirants. If this is the case, how does TRDM relate to the acquisition of specific skills necessary for success in these and other life domains (e.g., Crosnoe and Muller, 2014).

Of course, the current study is not without limitations. First, the Add Health data remain one of the only available sources of prospective, longitudinal data that incorporates relational information at any time point. Despite its utility for the present study and the richness of the measures it contains, the Add Health has two substantive limitations. The first limitation is that it is somewhat dated (Haynie et al., 2014), with the early waves of data having been collected at a time when the American economy was growing and certain economic opportunities perhaps more available than they are to adolescents today. Individuals transitioning to adulthood at the turn of the twenty-first century were only beginning to experience an economic decline, one that did not persist nearly as long as the economic crash of 2000s.

The second limitation of the Add Health data is that it lacks better measures of many of the theoretical mechanisms considered here (e.g., specific measures regarding the importance of, and desire for, status attainment in emerging adulthood among respondents, constructs of more specific forms of criminal social, cultural, and human capital, and alternative indicators of achievement such as illicit earnings [Loughran et al., 2013]). These measures should be a priority for future data collection efforts, as they can more clearly identify whether and how delinquent and criminal affiliations, skills, and knowhow might inhibit successful transitions to adulthood. In the absence of alternative data sources, this is as robust of an examination of criminal social capital and the transition to adulthood as is possible.

Third, I have concentrated only on the generalities of the forms and consequences of criminal capital for later life outcomes. There may be important differences in the generation, possession, and consequences of criminal capital between males and females, between individuals residing in different neighborhoods or communities, and within and between different racial groups. The simplest difference may be capturing individual investment into criminal networks and skills. For example, some individuals derive immense benefits by accumulating criminal capital in adolescence (Young, 2014), and these investments making leaving criminal lifestyles, shedding delinquent peers, and "going straight" more difficult or unnecessary (e.g., Laferriere and Morselli, 2015; Steffensmeier and Ulmer, 2005). More accurately capturing such investments is ultimately necessary and important for understanding the criminological life course.

The theoretical model I have presented, linking delinquent peers to forms of criminal human and cultural capital, is likely to be more complex than presented here. Social processes can be mutually reinforcing and dynamic (Thornberry et al., 1994); changes in each of the characteristics examined here are possible, and perhaps even likely. For example, Duke et al. (2011) created groups based on respondents' fatalism in the first two waves of Add Health data, and examined how membership in groups of persisting and changing beliefs influenced successful outcomes in emerging adulthood. Likewise, identifying the particular events and experiences that change orientations are made difficult by the timing of waves in the Add Health data. More finely parsing the relationship between the mechanisms used here (and better measurement of those mechanisms over time) should be a priority of future research. Overall, these limitations provide broad guidance on future research efforts to flesh out the influence of adolescent forms of criminal capital on later-life outcomes. Three specific areas of future research require further attention.

The first direction for future research acknowledges that adolescent and young adult resources for occupational, educational, and marital attainment among delinquents and non-delinquents alike vary across structural contexts. I have concentrated only on individual-level processes as a preliminary assessment of the role of delinquent peers in facilitating or constraining future success and social integration in the criminological life course. A more explicit examination of peer support for many of these transitions, and how peers cope with their friends dating, working, and attending school or relocating (including being incarcerated) is worthwhile. Doing so would entail interviews with individuals in early and late adolescence, as well as emerging adulthood. How do

variations in this support fluctuate across contexts and time, within and between individuals? These contexts include school and neighborhood-based friendship networks. I have focused on school-based peers as a measure of criminal social capital, but there may be important criminal social capital beyond the confines of the schoolyard (Harding, 2008, 2009).

What are other sources of criminal capital? Prior research commonly focuses on criminal justice contact by parents (e.g., Hagan, 1993) and parent criminality (e.g., Giordano, 2010). Fader (2016) recently demonstrated how parent criminal capital can be influential for success in drug dealing. Based on interviews with drug sellers in Philadelphia, Fader (2016) showed that some families transmitted criminal capital to offspring, cousins, siblings, by introducing family members to clientele, and by providing knowledge of how to avoid apprehension by law enforcement. A complimentary view of parental criminal capital would also investigate whether and how parents introduce their children to other criminal adults, such as romantic partners, friends, or colleagues, not just potential customers. These individuals are all potential sources of criminal knowledge and skills, as well as opportunities to develop even more criminally fortuitous connections.

In addition, recent research suggests that new technologies (unavailable to individuals in the early waves of the Add Health) can help generate criminal skills, knowledge, affiliations, and beliefs. The Internet and social media are now integral components of everyday life, and provide all kinds of information, including information related to offending. Goldsmith and Brewer (2015) characterized this as "digital drift," wherein individuals get exposed to criminal values or learning opportunities online.

Others have focused on the contributions of new technologies for radicalization into terror and extremist organizations, or the diffusion of hate-based ideologies (Neumann, 2013). Considering how these varied and emerging spheres of social life influence successful or unsuccessful individual development is necessary and timely.

The second direction for future research acknowledges that peer relationships in adolescence, and beyond, change. How do these changes matter in the context of the criminological life course? Future research would assess the why's and how's of individuals friendship choices, and perceived influence of those choices over time as relationships evolve (Giordano, Cernkovich, and Holland, 2003). Friendships end as individuals begin transitioning to adulthood (Rose and Serafica, 1986). Some research has used the Wave III friendship data to examine peer effects for contemporaneous outcomes in emerging adulthood (e.g., marriage, Adamopoulou, 2012), but are largely atheoretical and ignore how individuals have arrived at their current status. Can peers who become less influential for criminal behavior in emerging adulthood still be of use for non-criminal outcomes (e.g., employment connections, introduction to potential marital partners)? Such a consideration is intuitively appealing, but requires greater attention.

The final direction for future research involves considering how skills and knowledge are transferred between offenders, and how these skills may or may not translate across criminal and non-criminal contexts. The current study concentrated on some behaviors (e.g., delinquency), but also cognitive processes and cultural orientations, and the relationship between these processes, orientations, and outcomes in the transition to adulthood. Where these skills emerge from (presumably criminal affiliations and

mentors), and how they evolve as the social milieus around individuals evolve is relevant for offender reentry and better understanding the calculus of offenders to move away from offending. Future research should work to elucidate specific criminal skills, and their consequences, more clearly. Once acquired, do these skills decay, or their influence become irrelevant to engaging social institutions and institutional actors? How do parallel skill sets, cultural norms or values, and knowhow influence successful transitions to adulthood? Are individuals with the unique "toolkits" able to find success in either environment? Do these skills diminish over time? Much remains to be learned in these areas, requiring better data than are currently available, in the Add Health or elsewhere.

In the end, the criminological life course has grown by leaps and bounds over the past two decades, including the application of progressively more sophisticated statistical methods. Theoretical growth in the criminological life course, on the other hand, has stagnated. This dissertation was an attempt to take a more expansive theoretical lens, incorporating features of social life already prominent in criminology (adolescent delinquent peers and other forms of criminal capital) and consider the meaningful contribution of these forms of capital as individuals begin the transition to adulthood.

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APPENDIX A

ITERATIVE MODELS

Fatalism (w2)

	Fatalism (w2)				Fatalism (w2)				Fatalism (w2)			
	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI
Peer Delinquency (w1)	-.08	.05	-.187	.031	-	-	-	-	-	-	-	-
TRDM (w1)	-	-	-	-	-.03	.03	-.096	.029	-	-	-	-
Fatalism (w1)	1.70	.29***	1.126	2.274	1.69	.29***	1.115	2.268	1.69	.28***	1.143	2.242
Delinquency (w1)	-	-	-	-	-	-	-	-	.13	.02***	.092	.168
Low Self Control	.05	.02*	.010	.086	.04	.02	-.004	.081	.00	.02	-.037	.046
College Likely	-.33	.20	-.713	.061	-.30	.19	-.684	.077	-.29	.21	-.712	.135
Parental Education	-.09	.08	-.249	.062	-.10	.08	-.258	.058	-.10	.08	-.252	.059
Two Parent Household	-.27	.26	-.787	.246	-.30	.26	-.809	.207	-.33	.26	-.852	.196
Younger than 17 (w1)	-.04	.16	-.362	.276	-.05	.18	-.404	.298	-.06	.17	-.395	.280
Male	-.39	.26	-.907	.134	-.39	.26	-.906	.126	-.46	.27	-.988	.071
White	-.58	.22*	-1.020	-.143	-.58	.23*	-1.029	-.134	-.46	.25	-.965	.044
Constant	-.88	.20***	-1.280	-.476	-.49	.61	-1.698	.727	-1.31	.26***	-1.830	-.781
F-statistic		32.45***				36.37***				50.87***		
*p < .05, **p < .01, ***p<.001												
		n = 2684				n = 2684				n = 2684		

Notes: Logistic regression

TRDM (w2)

	TRDM (w2)				TRDM (w2)				TRDM (w2)			
	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI
Peer Delinquency (w1)	.02	.01	-.005	.043	-	-	-	-	-	-	-	-
TRDM (w1)	.08	.01***	.065	.101	.08	.01***	.065	.101	.08	.01***	.064	.099
Fatalism (w1)	-	-	-	-	-.11	.07	-.249	.023	-	-	-	-
Delinquency (w1)	-	-	-	-	-	-	-	-	-.02	.01**	-.032	-.007
Low Self Control	.01	.01	-.009	.021	.01	.01	-.008	.024	.01	.01	-.005	.030
College Likely	.09	.08	-.068	.246	.09	.08	-.077	.248	.09	.09	-.084	.257
Parental Education	.02	.03	-.035	.069	.02	.03	-.036	.068	.02	.03	-.038	.069
Two Parent Household	-.08	.06	-.190	.031	-.07	.05	-.181	.036	-.07	.06	-.184	.042
Younger than 17 (w1)	-.11	.04*	-.197	-.023	-.11	.05*	-.204	-.023	-.11	.05*	-.206	-.023
Male	-.08	.04*	-.152	-.001	-.07	.04	-.150	.007	-.07	.04	-.151	.015
White	-.03	.04	-.106	.051	-.04	.04	-.114	.043	-.04	.04	-.114	.034
Constant	2.64	.16***	2.330	2.953	2.70	.15***	2.399	2.999	2.75	.15***	2.446	3.045
F-statistic		29.20***				46.51***				30.87***		
*p < .05, **p < .01, ***p<.001												
		n = 2683				n = 2683				n = 2683		

Notes: OLS regression

Delinquency (w2)

	Delinquency (w2)				Delinquency (w2)				Delinquency (w2)			
	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI
Peer Delinquency (w1)	.03	.01*	.002	.052	-	-	-	-	-	-	-	-
TRDM (w1)	-	-	-	-	.00	.02	-.034	.033	-	-	-	-
Fatalism (w1)	-	-	-	-	-	-	-	-	-.24	.11*	-.444	-.027
Delinquency (w1)	.15	.01***	.134	.173	.16	.01***	.137	.177	.16	.01***	.139	.177
Low Self Control	.07	.02**	.029	.111	.07	.02**	.027	.113	.07	0.02**	.030	.112
College Likely	.02	.11	-.199	.249	.02	.11	-.200	.241	.01	.12	-.221	.245
Parental Education	-.03	.03	-.096	.038	-.03	.03	-.093	.037	-.03	.03	-.098	.033
Two Parent Household	.01	.07	-.120	.142	.02	.07	-.113	.146	.02	.06	-.108	.142
Younger than 17 (w1)	.33	.04***	.255	.405	.32	.04***	.243	.403	.32	.04***	.249	.400
Male	-.05	.08	-.208	.118	-.05	.08	-.210	.118	-.04	.08	-.199	.115
White	-.18	.08*	-.337	-.015	-.17	.08*	-.329	-.017	-.19	.08*	-.341	-.042
Constant	-.32	.17	-.650	.014	-.26	.35	-.957	.440	-.22	.18	-.577	.140
F-statistic		200.60***				95.76***				101.81***		
*p < .05, **p < .01, ***p<.001												
		n = 2661				n = 2661				n = 2661		

High School Graduation

	HS grad				HS grad				HS grad				HS grad				HS grad			
	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI
Peer Delinquency (w1)	.04	.04	-.037	.123	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRDM (w2)	-	-	-	-	-.03	.14	-.296	.243	-	-	-	-	-	-	-	-	-	-	-	-
Fatalism (w2)	-	-	-	-	-	-	-	-	-.62	.25*	-1.126	-.123	-	-	-	-	-	-	-	-
Delinquency (w2)	-	-	-	-	-	-	-	-	-	-	-	-	-.07	.06	-.178	.040	-	-	-	-
Juvenile Arrest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-2.19	.37***	-2.922	-1.454
Low Self-Control	-.14	.05*	-.243	-.031	-.13	.05*	-.240	-.027	-.13	.05*	-.240	-.025	-.12	.05*	-.218	-.024	-.13	.05*	-.226	-.028
College Likely	1.10	.29***	.528	1.664	1.10	.27***	.572	1.622	1.07	.28***	.503	1.627	1.09	.27***	.552	1.620	1.18	.25***	.683	1.669
Parental Education	.48	.15**	.188	.773	.48	.15**	.188	.774	.47	.15**	.178	.758	.48	.15**	.186	.769	.51	.15**	.214	.808
Two Parent Household	.83	.22***	.389	1.261	.83	.22***	.399	1.257	.79	.21***	.377	1.201	.84	.21***	.418	1.257	.87	.21***	.445	1.289
Younger than 17 (w1)	-.37	.46	-1.288	.552	-.38	.46	-1.296	.540	-.37	.45	-1.262	.521	-.34	.44	-1.205	.530	-.30	.50	-1.287	.689
Male	.03	.24	-.439	.502	.03	.25	-.476	.530	.03	.25	-.464	.533	.04	.27	-.487	.574	.09	.22	-.341	.524
White	-.02	.22	-.465	.422	-.02	.23	-.470	.438	-.09	.26	-.600	.410	-.05	.23	-.500	.400	-.06	.20	-.449	.333
Constant	.68	.68	-.664	2.016	.86	.71	-.540	2.268	.99	.62	-.240	2.213	.85	.66	-.466	2.162	.67	.65	-.619	1.952
F-statistic	24.01***				26.59***				30.88***				29.01***				26.39***			
*p < .05, **p < .01, ***p<.001	n = 2258				n = 2258				n = 2258				n = 2258				n = 2258			

College Attendance

	Attend College				Attend College				Attend College				Attend College				Attend College			
	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI
Peer Delinquency (w1)	-.04	.04	-.114	.036	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRDM (w2)	-	-	-	-	.10	.08	-.066	.267	-	-	-	-	-	-	-	-	-	-	-	-
Fatalism (w2)	-	-	-	-	-	-	-	-	-.53	.14***	-.805	-.248	-	-	-	-	-	-	-	-
Delinquency (w2)	-	-	-	-	-	-	-	-	-	-	-	-	-.07	.03*	-.128	-.015	-	-	-	-
Juvenile Arrest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-.89	.45*	-1.781	-.001
Low Self-Control	-.06	.02*	-.108	-.015	-.06	.02**	-.109	-.017	-.06	.02*	-.106	-.014	-.05	.02*	-.097	.000	-.06	.02*	-.107	-.012
College Likely	1.68	.20***	1.286	2.066	1.67	.19***	1.287	2.044	1.66	.19***	1.279	2.043	1.68	.20***	1.288	2.069	1.69	.19***	1.308	2.077
Parental Education	.55	.09***	.368	.733	.55	.09***	.367	.731	.55	.09***	.367	.726	.55	.09***	.371	.731	.56	.09***	.379	.737
Two Parent Household	.39	.24	-.093	.869	.38	.24	-.095	.865	.36	.24	-.115	.828	.38	.24	-.101	.861	.37	.25	-.117	.854
Younger than 17 (w1)	-.23	.22	-.660	.191	-.21	.20	-.603	.175	-.22	.19	-.604	.156	-.18	.22	-.611	.243	-.21	.22	-.635	.220
Male	-.05	.21	-.463	.355	-.05	.21	-.452	.362	-.06	.21	-.466	.353	-.05	.21	-.476	.367	-.03	.19	-.409	.351
White	.12	.22	-.316	.547	.12	.21	-.300	.533	.06	.23	-.387	.514	.07	.21	-.352	.489	.10	.21	-.307	.514
Constant	-2.31	.48***	-3.258	-1.369	-2.80	.54***	-3.875	-1.719	-2.27	.43	-3.127	-1.411	-2.32	.45***	-3.209	-1.432	-2.43	.43***	-3.270	-1.582
F-statistic	19.92***				20.96***				21.30***				29.01***				32.96***			
*p < .05, **p < .01, ***p<.001	n = 2258				n = 2258				n = 2258				n = 2258				n = 2258			

Current Employment

	Currently Employed				Currently Employed				Currently Employed				Currently Employed				Currently Employed			
	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI
Peer Delinquency (w1)	.03	.02	-.017	.081	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRDM (w2)	-	-	-	-	-.01	.10	-.214	.190	-	-	-	-	-	-	-	-	-	-	-	-
Fatalism (w2)	-	-	-	-	-	-	-	-	.61	0.28*	.057	1.172	-	-	-	-	-	-	-	-
Delinquency (w2)	-	-	-	-	-	-	-	-	-	-	-	-	.02	.04	-.052	.088	-	-	-	-
Juvenile Arrest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.21	.58	-.939	1.351
HS Graduate	.23	.26	-.278	.744	.24	.26	-.276	.757	.31	.24	-.167	.792	.25	.26	-.276	.767	.26	.25	-.230	.759
Low Self-Control	-.03	.03	-.094	.035	-.03	.03	-.094	.035	-.03	.03	-.097	.029	-.03	.03	-.093	.027	-.03	.03	-.096	.036
College Likely	.33	.17*	.002	.663	.32	.17	-.011	.656	.34	.17	-.002	.677	.33	.17	-.006	.658	.32	.16	-.004	.637
Parental Education	-.24	.10*	-.443	-.038	-.24	.10*	-.447	-.037	-.24	.10*	-.444	-.032	-.24	.10*	-.445	-.038	-.24	.10*	-.448	-.040
Two Parent Household	.04	.24	-.431	.520	.05	.23	-.417	.509	.05	.23	-.405	.505	.05	.24	-.431	.524	.05	.24	-.428	.523
Younger than 17 (w1)	-.34	.15*	-.637	-.047	-.34	.15*	-.630	-.051	-.33	.15*	-.625	-.044	-.35	.16*	-.667	-.037	-.34	.14*	-.631	-.057
Male	.66	.15***	.356	.957	.66	.15***	.356	.955	.66	.16***	.344	.980	.66	.15***	.355	.960	.65	.15***	.361	.943
White	.52	.15**	.227	.807	.52	.15**	.212	.821	.59	.18**	.244	.940	.53	.14***	.254	.808	.52	.16**	.205	.834
Constant	.97	.32**	.351	1.598	1.10	.44**	.232	1.965	.85	.34*	.183	1.512	1.02	.33**	.363	1.676	1.04	.35**	.338	1.736
F-statistic		8.87***				9.58***				8.94***				9.00***				9.75***		
*p < .05, **p < .01, ***p<.001																				
		n = 2091				n = 2091				n = 2091				n = 2091				n = 2091		

Public Assistance

	Public Assistance				Public Assistance				Public Assistance				Public Assistance				Public Assistance			
	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI
Peer Delinquency (w1)	-.25	.11*	-.466	-.039	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRDM (w2)	-	-	-	-	-.15	.31	-.755	.458	-	-	-	-	-	-	-	-	-	-	-	-
Fatalism (w2)	-	-	-	-	-	-	-	-	.86	.59	-.310	2.030	-	-	-	-	-	-	-	-
Delinquency (w2)	-	-	-	-	-	-	-	-	-	-	-	-	.12	.08	-.037	.286	-	-	-	-
Juvenile Arrest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-.32	.87	-2.047	1.402
HS Graduate	-1.56	.39***	-2.329	-.789	-1.58	.39***	-2.346	-.820	-1.47	.39***	-2.241	-.693	-1.54	.39***	-2.302	-.770	-1.61	.37***	-2.342	-.880
Low Self-Control	.08	.06	-.041	.197	.06	.06	-.050	.178	.05	.05	-.050	.156	.03	.06	-.081	.150	.06	.06	-.048	.173
College Likely	.02	.50	-.974	1.023	.05	.51	-.959	1.054	.04	.51	-.979	1.058	.03	.50	-.967	1.024	.02	.50	-.978	1.021
Parental Education	-.43	0.16**	-.739	-.113	-.42	.16*	-.744	-.091	-.40	.16*	-.716	-.079	-.42	.17*	-.755	-.085	-.41	.16*	-.739	-.090
Two Parent Household	-.49	.29	-1.070	.082	-.54	.28	-1.097	.008	-.49	.30	-1.088	.100	-.54	.30	-1.140	.061	-.52	.31	-1.136	.099
Younger than 17 (w1)	.40	.40	-.404	1.195	.31	.40	-.491	1.112	.35	.41	-.452	1.159	.22	.39	-.545	.985	.33	.42	-.507	1.163
Male	-.80	.41	-1.604	.009	-.79	.45	-1.666	.096	-.77	.43	-1.618	.073	-.78	.40	-1.582	.016	-.75	.42	-1.584	.085
White	-.82	0.33*	-1.469	-.167	-.77	.32*	-1.417	-.133	-.64	.32*	-1.263	-.016	-.69	.26**	-1.196	-.178	-.79	.35*	-1.476	-.097
Constant	.38	.52	-.657	1.409	.56	1.02	-1.471	2.587	-.43	.51	-1.440	.581	-.20	.59	-1.367	.967	.00	.48	-.956	.964
F-statistic	7.34***				8.41***				6.31***				9.01***				11.04***			
n = 2237					n = 2237				n = 2237				n = 2237				n = 2237			

*p < .05, **p < .01, ***p< 001

Marriage

	Ever Married				Ever Married				Ever Married				Ever Married				Ever Married			
	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI
Peer Delinquency (w1)	.05	.04	-.039	.135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRDM (w2)	-	-	-	-	.08	.10	-.108	.275	-	-	-	-	-	-	-	-	-	-	-	-
Fatalism (w2)	-	-	-	-	-	-	-	-	.34	.17*	.008	.673	-	-	-	-	-	-	-	-
Delinquency (w2)	-	-	-	-	-	-	-	-	-	-	-	-	-.03	.04	-.115	.054	-	-	-	-
Juvenile Arrest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.53	.37	-.207	1.260
HS Graduate	-.78	.27**	-1.311	-.245	-.76	.27**	-1.301	-.213	-.73	.27**	-1.254	-.196	-.77	.28**	-1.325	-.224	-.71	.26**	-1.223	-.202
Low Self-Control	-.03	.04	-.111	.055	-.02	.04	-.109	.060	-.03	.04	-.113	.058	-.02	.04	-.104	.065	-.03	.04	-.111	.055
College Likely	-.19	.25	-.672	.299	-.21	.24	-.678	.263	-.19	.24	-.661	.281	-.20	.24	-.667	.266	-.21	.23	-.668	.256
Parental Education	-.09	.08	-.251	.062	-.10	.08	-.252	.057	-.09	.08	-.244	.064	-.10	.08	-.252	.061	-.10	.08	-.251	.057
Two Parent Household	.24	.23	-.224	.705	.27	.23	-.197	.733	.27	.23	-.180	.719	.26	.23	-.189	.714	.26	.23	-.196	.706
Younger than 17 (w1)	-1.12	.21***	-1.538	-.693	-1.11	.21***	-1.526	-.691	-1.12	.21***	-1.532	-.708	-1.10	.21***	-1.520	-.681	-1.13	.21***	-1.548	-.714
Male	-.64	.24**	-1.115	-.160	-.62	.23**	-1.075	-.166	-.63	.22**	-1.070	-.186	-.62	.23**	-1.072	-.176	-.64	0.23**	-1.097	-.174
White	.74	.32*	.114	1.363	.74	.31*	.124	1.358	.79	.31*	.170	1.414	.73	.30*	.129	1.328	.75	.31*	.131	1.359
Constant	-.12	.40	-.903	.669	-.37	.66	-1.682	.945	-.17	.37	-.900	.563	.01	.39	-.770	.789	-.06	.39	-.836	.719
F-statistic	16.52***				26.81***				21.61***				18.66***				15.40***			
*p < .05, **p < .01, ***p<.001	n = 2254				n = 2254				n = 2254				n = 2254				n = 2254			

Cohabitation

	Cohabitating				Cohabitating				Cohabitating				Cohabitating				Cohabitating			
	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI
Peer Delinquency (w1)	.11	.04**	.031	.199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRDM (w2)	-	-	-	-	-.06	.07	-.195	.077	-	-	-	-	-	-	-	-	-	-	-	-
Fatalism (w2)	-	-	-	-	-	-	-	-	-.10	.15	-.400	.195	-	-	-	-	-	-	-	-
Delinquency (w2)	-	-	-	-	-	-	-	-	-	-	-	-	.16	.04***	.085	.241	-	-	-	-
Juvenile Arrest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.40	.46	-.520	1.320
HS Graduate	-1.42	.27***	-1.963	-.883	-1.39	.27***	-1.920	-.853	-1.39	.28***	-1.947	-.841	-1.37	.26***	-1.891	-.844	-1.34	.30***	-1.932	-.746
Low Self-Control	.07	.02**	.021	.111	.07	.02**	.020	.119	.07	.02**	.021	.119	.04	.02	-.007	.081	.07	.02**	.020	.116
College Likely	-.20	.24	-.680	.273	-.22	.26	-.724	.289	-.23	.25	-.731	.275	-.21	.23	-.670	.258	-.24	.25	-.727	.255
Parental Education	-.25	.06***	-.377	-.130	-.25	.06***	-.377	-.126	-.25	.06***	-.378	-.130	-.26	.06***	-.385	-.130	-.26	.06***	-.383	-.129
Two Parent Household	-.14	.13	-.403	.127	-.11	.14	-.398	.174	-.11	.14	-.394	.179	-.12	.14	-.407	.164	-.10	.14	-.389	.181
Younger than 17 (w1)	-.63	.18**	-.985	-.268	-.65	.17***	-.977	-.323	-.64	.17***	-.981	-.304	-.75	.18***	-1.110	-.395	-.65	.18***	-1.003	-.295
Male	-.26	.07**	-.412	-.116	-.27	.09**	-.439	-.097	-.26	.09**	-.431	-.093	-.27	.07***	-.414	-.131	-.27	.09**	-.454	-.089
White	.46	.26	-.061	.984	.47	.28	-.083	1.018	.46	.27	-.070	.982	.58	.24*	.104	1.057	.47	.27	-.065	1.012
Constant	1.20	.48*	.253	2.152	1.66	.72*	.247	3.079	1.47	.47**	.534	2.396	1.23	.48*	.277	2.188	1.40	.48**	.445	2.359
F-statistic		46.44***				52.32***				52.65***				66.22***				50.72***		
*p < .05, **p < .01, ***p<.001																				
		n = 2251				n = 2251				n = 2251				n = 2251				n = 2251		

Number of Cohabitating Partners

	Number of Cohabitating Partners				Number of Cohabitating Partners				Number of Cohabitating Partners				Number of Cohabitating Partners			
	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI
Peer Delinquency (w1)	.06	.02**	.018	.104	-	-	-	-	-	-	-	-	-	-	-	-
TRDM (w2)	-	-	-	-	-.13	.07	-.255	.004	-	-	-	-	-	-	-	-
Fatalism (w2)	-	-	-	-	-	-	-	-	.01	.12	-.221	.246	-	-	-	-
Delinquency (w2)	-	-	-	-	-	-	-	-	-	-	-	-	.11	.02***	.078	.144
Juvenile Arrest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HS Graduate	-.84	.13***	-1.099	-.571	-.81	.13***	-1.074	-.556	-.82	.14***	-1.089	-.542	-.76	.11***	-.987	-.533
Low Self-Control	.03	.02	-.019	.071	.03	.02	-.016	.078	.03	.02	-.017	.077	.01	.02	-.038	.048
College Likely	-.24	.15	-.546	.063	-.23	.16	-.549	.097	-.25	.16	-.574	.072	-.25	.15	-.538	.048
Parental Education	-.12	.04**	-.199	-.034	-.11	.04*	-.200	-.027	-.12	.04**	-.199	-.033	-.11	.04*	-.190	-.023
Two Parent Household	-.03	.10	-.233	.182	-.03	.11	-.249	.192	-.01	.12	-.233	.222	-.02	.11	-.230	.194
Younger than 17 (w1)	-.35	.13**	-.604	-.099	-.37	.12*	-.599	-.140	-.36	.12**	-.602	-.114	-.42	.12**	-.661	-.189
Male	-.09	.08	-.257	.075	-.09	.09	-.259	.078	-.08	.09	-.259	.103	-.10	.09	-.268	.076
White	.39	.18*	.045	.739	.40	.18*	.030	.761	.40	.18*	.034	.760	.46	.16**	.142	.769
Constant	.07	.28	-.484	.625	.66	.45	-.236	1.550	.17	.26	-.348	.693	-.02	.26	-.547	.501
F-statistic	32.70***				36.08***				55.23***				44.72***			
n = 2256					n = 2256				n = 2256				n = 2256			

	Number of Cohabitating Partners			
	b	SE	95 %	CI
Peer Delinquency (w1)	-	-	-	-
TRDM (w2)	-	-	-	-
Fatalism (w2)	-	-	-	-
Delinquency (w2)	-	-	-	-
Juvenile Arrest	.14	.31	-.473	.758
HS Graduate	-.80	.15***	-1.105	-.503
Low Self-Control	.03	.02	-.016	.074
College Likely	-.26	.16	-.570	.060
Parental Education	-.12	.04**	-.200	-.033
Two Parent Household	-.01	.11	-.233	.220
Younger than 17 (w1)	-.36	0.13**	-.627	-.098
Male	-.08	.10	-.271	.111
White	.40	.18*	.042	.753
Constant	.17	.28	-.374	.717
F-statistic	31.51***			
n = 2256				

*p < .05, **p < .01, ***p< 001

APPENDIX B
ALTERNATIVE COLLEGE ATTENDANCE SPECIFICATION

	Attend College			
	b	SE	95 %	CI
Peer Delinquency (w1)	-.04	.04	-.123	.038
TRDM (w2)	.09	.09	-.092	.271
Fatalism (w2)	-.50	.13***	-.754	-.244
Delinquency (w2)	-.05	.03	-.112	.002
Juvenile Arrest	-.51	.41	-1.328	.304
Low Self-Control	-.04	.02	-.083	.007
College Likely	1.64	.19***	1.254	2.019
Parental Education	.56	.10***	.364	.762
Two Parent Household	.38	.24	-.097	.866
Younger than 17 (w1)	-.15	.20	-.552	.244
Male	-.01	.21	-.426	.399
White	.07	.24	-.400	.537
Constant	-2.60	.57***	-3.736	-1.460
F-statistic		36.16***		
*p < .05, **p < .01, ***p<.001				
		n = 2217		

Note. This model excludes individuals who were 12 years old at Wave 1, as they may not be old enough to attend college at Wave III

Alternative College Attendance Specification

	Attend College				Attend College				Attend College				Attend College				Attend College			
	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI	b	SE	95 %	CI
Peer Delinquency (w1)	-.04	.04	-.118	.039	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRDM (w2)	-	-	-	-	.10	.09	-.079	.273	-	-	-	-	-	-	-	-	-	-	-	-
Fatalism (w2)	-	-	-	-	-	-	-	-	-.52	.13***	-.768	-.263	-	-	-	-	-	-	-	-
Delinquency (w2)	-	-	-	-	-	-	-	-	-	-	-	-	-.07	.03*	-.123	-.011	-	-	-	-
Juvenile Arrest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-.53	.41	-1.344	.290
Low Self-Control	-.05	.02*	-.100	-.009	-.06	.02*	-.101	-.010	-.05	.02*	-.098	-.007	-.04	.02	-.092	.006	-.05	.02*	-.101	-.007
College Likely	1.66	.20***	1.272	2.053	1.65	.19***	1.274	2.034	1.65	.19***	1.260	2.031	1.66	.20***	1.271	2.055	1.67	.19***	1.290	2.052
Parental Education	.56	.10***	.363	.758	.56	.10***	.363	.758	.56	.10***	.365	.753	.56	.10***	.368	.756	.56	.10***	.366	.758
Two Parent Household	.38	.24	-.090	.858	.38	.24	-.091	.850	.35	.23	-.110	.815	.38	.24	-.092	.850	.36	.24	-.116	.842
Younger than 17 (w1)	-.21	.21	-.619	.201	-.19	.19	-.562	.183	-.20	.18	-.563	.169	-.16	.21	-.572	.247	-.19	.21	-.598	.217
Male	-.02	.20	-.413	.372	-.01	.20	-.403	.377	-.02	.20	-.412	.366	-.02	.20	-.425	.378	-.01	.19	-.386	.369
White	.16	.23	-.287	.615	.16	.22	-.272	.600	.11	.24	-.361	.582	.12	.22	-.324	.562	.16	.22	-.277	.587
Constant	-2.42	.46***	-3.330	-1.503	-2.89	.54***	-3.954	-1.825	-2.38	.42***	-3.213	-1.545	-2.43	.44***	-3.294	-1.564	-2.50	.42***	-3.344	-1.665
F-statistic	19.39***				19.46***				19.55***				29.70***				27.08***			
n = 2217					n = 2217				n = 2217				n = 2217				n = 2217			

*p < .05, **p < .01, ***p<.001

APPENDIX C
JOINT OUTCOME-NO COLLEGE AND NOT EMPLOYED

	Unattached			
	b	SE	95 %	CI
Peer Delinquency (w1)	.00	.05	-.105	.109
TRDM (w2)	.05	.14	-.230	.332
Fatalism (w2)	-.63	.38	-1.379	.121
Delinquency (w2)	.06	.06	-.056	.182
Juvenile Arrest	-.68	.93	-2.527	1.157
HS Graduate	-1.29	.33***	-1.937	-.637
Low Self-Control	.04	.03	-.007	.095
College Likely	-.80	.14***	-1.067	-.527
Parental Education	-.33	.16*	-.652	-.006
Two Parent Household	-.17	.25	-.671	.331
Younger than 17 (w1)	.05	.25	-.437	.539
Male	-.74	.23**	-1.188	-.290
White	-.79	.33*	-1.441	-.141
Constant	.72	.50	-.262	1.704
F-statistic		27.38***		
*p < .05, **p < .01, ***p<.001				
		n = 2157		

Note. Model includes individuals who were 12 years of age in Wave I

	Unattached			
	b	SE	95 %	CI
Peer Delinquency (w1)	.01	.06	-.103	.129
TRDM (w2)	.11	.13	-.153	.366
Fatalism (w2)	-.71	.36	-1.426	.006
Delinquency (w2)	.06	.07	-.070	.193
Juvenile Arrest	-.64	.95	-2.523	1.251
HS Graduate	-1.38	.33***	-2.034	-.730
Low Self-Control	.04	.02	-.008	.087
College Likely	-.74	.15***	-1.042	-.432
Parental Education	-.32	.16	-.645	.006
Two Parent Household	-.23	.24	-.706	.249
Younger than 17 (w1)	-.02	.25	-.504	.472
Male	-.77	.23**	-1.226	-.321
White	-.86	.34*	-1.525	-.196
Constant	.62	.50	-.366	1.615
F-statistic	20.63***			

*p < .05, **p < .01, ***p<.001

n = 2157

Model excludes individuals who were 12 years of age at Wave I, as they may not be old enough to attend college in Wave III