WHEN THE TIES THAT BIND UNWIND: EXAMINING THE ENDURING AND SITUATIONAL PROCESSES OF CHANGE BEHIND THE MARRIAGE EFFECT*

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Despite the continued growth of research demonstrating that marriage promotes desistance from crime, efforts aimed at understanding the mechanisms driving this effect are limited. Several theories propose to explain why we observe a reduction in offending after marriage including identity changes, strengthened attachments, reduced opportunities, and changes to routine activities. Although mechanisms are hard to measure, we argue that each proposed mechanism implies a specific change process, that is, whether the change that ensues after marriage is enduring (stable) or situational (temporary). Drawing on a medical model framework, we cast the role of marriage as a treatment condition and observe whether the effect of marriage is conditional on staying married or whether the effect persists when the "treatment" is taken away (i.e., divorce). We use 13 years of monthly level data from the National Longitudinal Survey of Youth (NLSY97), a nationally representative sample containing close to 3,000 individuals with an arrest history, to examine changes in relationship status and arrest from adolescence into young adulthood. Estimates from multilevel within-individual models reveal

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greater support for situational mechanisms in that divorce is detrimental particularly for those in longer marriages; yet they also reveal important caveats that suggest a closer examination of the marriage effect. This research adds to the growing body of knowledge regarding the marriage effect by redirecting desistance research away from asking if marriage matters to asking how marriage affects desistance. A better understanding of this change process has important implications for criminal justice policy.

A consensus has grown in the literature that marriage holds the potential to promote desistance from crime—commonly known as the "marriage effect." This relationship seems to be fairly robust and consistent across method, sample, gender, race, and sociohistorical context. Whereas much of the research has demonstrated that a marriage effect exists, what is less clear is *how* marriage reduces one's criminal involvement, although various theories have been presented to explain the mechanisms promoting desistance from crime. For instance, marriage may provide offenders with an opportunity for an identity transformation (Giordano, Cernkovich, and Rudolph, 2002; Maruna, 2001) or initiate an investment process whereby individuals regenerate and cultivate bonds to conventional society (Sampson and Laub, 1993). Conversely, marriage may function to reduce opportunities to offend because it increases direct supervision and monitoring of behavior (Gottfredson, 2005), knifes off individuals from criminogenic influences (Kirk, 2012; Warr, 1998), or changes daily routines (Osgood et al., 1996).

Although the proposed mechanisms of the marriage effect would all hypothesize a reduction in crime with marriage, an important feature of each mechanism is the specific change process they infer—why the reduction in offending happens. As we review in more detail subsequently, each mechanism has a connotation of being a stable/enduring change (e.g., social bonds and identity transformation) or a situational/temporary change (e.g., supervision, knifing off, and daily routines). With this research, we redirect the focus from *if* marriage functions as a turning point in the life course to *how* marriage promotes desistance from crime by examining the theoretical propositions of enduring or temporary change in offending. Specifically, drawing on a medical model, we cast the role of marriage as a treatment condition and argue that by examining the effect of divorce on offending trajectories, we can begin to assess whether the effect of marriage is contingent on staying married (a temporary effect) or whether the effect of getting married initiates a change that endures even if the marriage is terminated (an enduring effect). Distinguishing among these various mechanisms is more than a theoretical exercise as each has important and sometimes conflicting views of how people change, which in turn has implications

for criminal justice policy, particularly with respect to offender reentry programs and the allocation of scarce resources.

MARRIAGE AND DESISTANCE FROM CRIME

Accumulating research has revealed that key life-course transitions foster desistance from crime. In particular, evidence points to a positive effect of being married—a benefit that largely transcends gender and race—with some empirical evidence demonstrating a causal relationship (see table 1). Although there are important exceptions to this finding, after two decades of theoretical development and empirical research using official and self-reports of offending from a variety of samples (e.g., offender, general population, and community cohorts), few would challenge the notion that marriage holds the potential to redirect offending trajectories.

What is less clear is *how* marriage, or life transitions in general, reduce criminal involvement; what is the mechanism underpinning this effect? We briefly review the five most prominent mechanisms thought to encourage desistance (Laub and Sampson, 2003) and provide evidence of the inferences made for the change process linked to each. We view these change processes as falling along a continuum with some positing enduring change that once established are resistant to weakening (i.e., identity transformation and building attachments), whereas others fall on the situational end of the continuum advancing a view of change as temporary (i.e., opportunity, routine activities, and knifing off criminogenic peers and places) (see figure 1).

ENDURING PROCESSES OF CHANGE

Identity Transformation

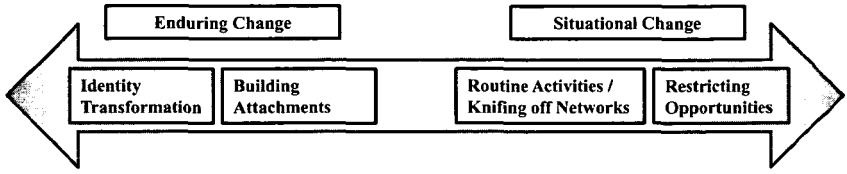
On the far left-hand side of figure 1 is the notion that marriage fosters desistance by promoting an identity transformation (Farrall, 2005; Giordano, Cernkovich, and Rudolph, 2002; Leverentz, 2010; Maruna, 2001; Paternoster and Bushway, 2009), where being married is just one aspect of a new identity. According to identity transformation arguments (Burke and Stets, 2009), a person has multiple identities and change occurs through a complex verification process involving the assessment of the perceptions of others and reflective appraisals. Accordingly, desisting individuals may reflect on their former offender-self as inconsistent with their new (married) self, or they may view their criminal life as a temporary stepping stone to their current life. Indeed, Giordano, Cernkovich, and Rudolph (2002) stated that a "replacement of self" or cognitive transformation may be more important than elements of control in maintaining one's desistance status. "While in practice these processes often coalesce, in the long run a solid

Table 1. Selection of Studies Examining the Direct Effect of Marriage on Total, Violent, and/or Property Offending

Authors	Year	Data/ Sample	Sample Type	Data Type	Gender	Race	Crime Type	Impact of Marriage
Bersani, Laub, and Nieuwbeerta	2009	Criminal Career and Life Course Study	OS	OR	M, F	90% White	T, V, P	Beneficial
Blokland and Nieuwbeerta	2005	S1: Criminal Career and Life Course Study S2: Dutch National Crime Survey	S1 : OS S2 : GP	S1: OR S2: SR	M, F	S1: 90% White S2: 95% White	T	Beneficial and Null Effects
Doherty and Ensminger	2013	Woodlawn Study	CC	OR	M, F	100% African American	T, V, P	Beneficial and Null Effects
Farrington and West	1995	Cambridge Study of Delinquent Development	CC	OR, SR	M	100% White	T	Beneficial
Giordano, Cernkovich, and Rudolph	2002	Serious adolescent female delinquents and similar males	OS	OR, SR	M, F	Mixed	T	Beneficial and Null Effects
Horney, Osgood, and Marshall	1995	Convicted males	OS	SR	M	Mixed	T, V, P	Beneficial and Null Effects
King, Massoglia, and Macmillan[a]	2007	National Youth Survey	GP	SR	M, F	Mixed	T	Beneficial and Null Effects
Piquero, MacDonald, and Parker	2002	California Youth Authority	OS	OR	M	Mixed	T, V, P	Beneficial and Null Effects
Sampson, Laub, and Wimer[a]	2006	Gluecks' Unraveling Juvenile Delinquency Study	OS	OR	M	100% White	T	Beneficial
Savolainen	2009	Convicted felony offenders	OS	OR	M	100% White	T	Null Effect

ABBREVIATIONS: CC = community cohort; GP = general population; OS = offender sample; OR = official reports; SR = self-reports; F = female; M = male; P = property offenses; T = total offenses; V = violent offenses.
[a]Uses causal inference modeling.

Figure 1. Processes of Change Continuum



replacement of self may prove the stronger ally of sustained behavior change (e.g., as the actor encounters new situations outside of the spouse's purview, divorces a focal spouse, or experiences a loss of a particular job)" (Giordano, Cernkovich, and Rudolph, 2002: 1002). Here, the change in identity is expected to foster a lasting or enduring desistance effect even in the event of divorce. Paternoster and Bushway (2009: 1108–9) made a similar argument, suggesting that the change in identity evidenced by desistance is enduring and that "when the offender's identity has changed, she has, in a metaphorical sense, 'broken with the past.'"

Thus, although identities can and do change, the process is complicated and not unequivocal—identities are "sticky" and "through the verification process, *resist* change" (Burke and Stets, 2009: 176; emphasis in original). Moreover, when identity change does occur, the process seems to be gradual in nature accumulating over a period of time (Burke and Stets, 2009: 176). Thus, as a person shifts roles from single to married abruptly, the impact on behavior (i.e., the reduction of deviant behaviors to best reflect their married identity) may be more gradual.

Building Attachments

Also found on the enduring side of the continuum in figure 1 are attachment arguments. Some of the earliest work discussing the relationship between marriage and offending argued that marriage inhibits crime by (re)bonding individuals to prosocial institutions (Hirschi, 1969; Sampson and Laub, 1993). Following a classic control theory framework, individuals strengthen their attachments to conventional institutions and thereby reduce their involvement in offending. Marriage in this sense acts as a form of social capital, promoting interdependent systems of obligation and restraint. The effect of rebuilding attachments is gradual, accumulating and strengthening over time with bonds normally formed within the first 2 years of marriage (Weiss, 1975).

Specifically, Laub, Nagin, and Sampson (1998: 225) stated, "[t]he emergence of social bonds can be likened to an investment process in that social bonds do not arise intact and full-grown but develop over time." Thus,

similar to identity transformation, "a change in criminal trajectory does not necessarily result from marriage and work alone. Rather, it is a response to an enduring attachment that emerges from entering into a marriage or job" (Laub, Nagin, and Sampson, 1998: 226). This finding suggests that the effect of marriage is not restricted to the day individuals wed but that the effect may be felt before (courtship), during, and after the day of marriage, strengthening with successive years of marriage (Laub, Nagin, and Sampson, 1998: 233). Similarly, attachment between partners does not dissolve instantaneously upon divorce, but it is more likely to involve a gradual process of "uncoupling" (Vaughan, 1986). Consistent with this notion, research has found that communication between partners is common after the dissolution of the relationship (Lannutti and Cameron, 2002) and that "there persists after the end of most marriages, whether the marriages have been happy or unhappy, whether their disruption has been sought or not, a sense of bonding to the spouse" (Weiss, 1976: 138; see also Weiss, 1975).

In sum, the processes of changing one's identity and building and diminishing attachments are posited to be gradual and more enduring, although not endless, and strengthening with each year of marriage, especially in the first few years of marriage. Thus, as the length of time spent married increases and the concomitant attachments form and/or identities change, we would expect little if any immediate change in offending upon divorce.

SITUATIONAL PROCESSES OF CHANGE

Restricting Opportunities

At the opposite end of the continuum (see figure 1) is the notion that the decline in offending following marriage results from a reduction in the opportunity to offend. In this sense, one's spouse functions as a supervisory agent controlling one's behavior. This argument most often is associated with Gottfredson and Hirschi's (1990) self-control theory. According to Gottfredson (2005), turning points do not change one's propensity to offend by rebuilding or strengthening attachments; rather, turning points (e.g., marriage) inhibit one's opportunity to offend because married individuals are under more direct supervision compared with when they were single. Any observed decrease or desistance from crime would be temporary and contingent on an individual remaining in the marriage.

Viewing marriage in this way, one would expect that the crime-inhibiting effects of marriage would be sudden. Indeed, some evidence suggests that, at least for men, specific events such as "signing on the dotted line" have an immediate impact on life trajectories (Lillard and Waite, 1995). Similarly, one would expect that these crime-inhibiting effects would vanish abruptly should the marriage dissolve, regardless of the length of marriage. This

expectation is counter to that described by the gradual investment process associated with building attachments and identity transformation ideas.

Changing Routine Activities

Related to the notion that marriage restricts one's opportunity to offend is the influence of structured and unstructured routine activities (see figure 1). Here, the importance of situational context plays a particularly key role in understanding the influence of routine activities in promoting desistance from crime. When individuals have a highly structured daily routine, they are less likely to become involved in deviant activities (Giordano, Cernkovich, and Rudolph, 2002; Osgood et al., 1996). Marriage is one aspect of this structured routine involving new family-centered obligations (often linked to parental and employment responsibilities) and opportunities (Osgood and Lee, 1993). Compared with single men, married men report significantly less leisure time and more time spent doing things "as a family" (Clarkberg, Stolzenberg, and Waite, 1995; Shelton, 1992). Moreover, extant research on the concept of routines concludes that "major life changes have been identified as the main factor leading to the formation, maintenance (in the sense of lack of change), and disruption of routines" (Zisberg et al., 2007: 446). In line with this review, Huddleston and Hawkins (1991) found that the daily routine of divorced individuals changes substantially with an increase in personal and leisure activities and a decrease in community involvement. Thus, the impact of changing routine activities on offending seems to be situational and would occur for all divorced individuals, regardless of marital length.

Knifing off from Networks

Desistance may result from the separation of individuals from past criminogenic influences and the severing of connections to deviant others and places (Kirk, 2012; Knight and West, 1975; Warr, 1998), the final situational process of change on the continuum in figure 1. Rather than having a social control effect, Warr (1998; see also Knight and West, 1975) argued that marriage functions to disrupt and dissolve relationships with deviant peers. In fact, Warr (1998: 208) posited that "marriage does in fact create pressure on spouses to limit or curtail relations with friends—not only delinquent ones, it seems, but friends in general. Failure to do so evidently produces strain in the marriage that can potentially threaten its very existence." Conversely, then, upon divorce, peer networks presumably become more salient. This observation is consistent with research that has indicated that divorce is followed by an initial reduction in social network size that levels off as the frequency of contact increases with different "actors" (Ertel, Glymour, and Berkman, 2009). Transitions like marriage also may be coupled with

a change in residence, whether it is to a new neighborhood or moving in with a spouse, which can have similar knifing off characteristics (Kirk, 2012; Laub and Sampson, 2003; Sharkey and Sampson, 2010). The separation of individuals from their previous criminogenic environments has been shown to produce sustained behavioral change (Kirk, 2012). Notably, research has yet to distinguish whether this change in behavior maintains should the individual return to his or her old neighborhood and/or peer affiliates. Thus, similar to the change process associated with routine activities, if a primary mechanism underpinning desistance is one of knifing off, then one would expect an increase in offending upon divorce.

In sum, these various mechanisms imply important change processes. The processes underlying identity transformation as well as the strengthening or rebuilding of attachments explicitly posit a gradual yet enduring effect maintained even if the situation changes (i.e., the marriage dissolves). Conversely, opportunity restriction, routine activities, and knifing off arguments suggest a temporary change that is contingent on a person staying married. Testing the veracity of these mechanisms has proven to be a difficult task; we too do not profess to test the individual contribution of each mechanism on desistance from crime. In this article, we take a step toward a greater understanding of one broad facet of these mechanisms by testing the enduring or situational features inherent in each mechanism.

THEORETICAL IMPLICATIONS FOR CRIMINAL JUSTICE POLICY

Interest in the processes of change extends beyond theoretical discussion as we foresee important links between this research and criminal justice policy, particularly efforts aimed at promoting reductions in offending. Although we concede that there are multiple pathways to desistance from crime, this research can suggest the group of mechanisms (those on the enduring end or situational end of the continuum) that is more salient in the desistance process. This information has the potential to inform criminal justice policy by providing increased precision in how to encourage and/or maintain desistance from crime. For instance, current reentry programs make inferences about how to restrict offending behavior, either explicitly or implicitly, and this research can speak directly to those programs. Should the marriage effect be caused by a gradual yet enduring process of change, it would suggest that reentry programs should concentrate on building networks to prosocial institutions, cultivating naturally occurring social support systems in the general community, and behavioral management therapies that modify thinking and reflections of identity. In the same vein, expectations for an abrupt termination of offending may be too high.

Instead, we should expect a gradual reduction of offending over time that, once established, endures.

Alternatively, should the marriage effect be the result of situational change processes, it seems likely that programs promoting continued and perhaps intensive supervision, structured daily routines, and the removal of offenders from past criminogenic environments would be more effective in inhibiting criminal involvement. Although the effect of these mechanisms is contingent on the maintenance of these programs, we could expect that the payoff in reductions in offending would be more immediate. We next introduce an innovative strategy that we use to begin to tease out the enduring or situational nature of the marriage effect.

MODELING ENDURING VERSUS SITUATIONAL PROCESSES OF CHANGE

Whereas numerous ideas have been put forth to account for the observed marriage effect in the desistance literature, movement from the identification that marriage matters toward testing the mechanisms underlying the desistance process has proven to be challenging. Although the quest for understanding the *why* or *how* question is not new, researchers continue to struggle with ways to model the process(es) or mechanism(s) behind statistical relationships largely because they are unobservable in nature (Wikström and Sampson, 2006). Whereas high-quality qualitative research has proved invaluable in shedding light on potential causal mechanisms, qualitative methods are limited in their ability to test these proposed mechanisms because of a focus on inductive reasoning. Moreover, qualitative approaches are costly and often employ small purposive samples, and the use of nonprobability sampling introduces questions of generalizability. Yet, understanding why a cause brings about an effect is fundamental to advancing theory and translating that knowledge into policy.

In response to this methodological challenge, we employ a within-individual quantitative strategy that complements and augments the existing qualitative and quantitative literatures and in doing so adds to the triangulation of multiple methods (Denzin, 1978) aimed at refining our understanding of the mechanisms of the marriage effect. Specifically, we adapt a methodological tool used often in medical research to shed light on the enduring versus situational process of change behind the marriage effect—the study of enduring effects (see, e.g., Hollon, Stewart, and Strunk, 2006). To illustrate this tool, we provide a brief hypothetical example. Suppose researchers are interested in the effect of a new drug labeled *MRG*. Previous research has shown that patients receiving *MRG* display marked improvements in their overall health. However, it is unclear whether these health

improvements will persist if patients are taken off *MRG*. To investigate whether the effect of *MRG* is enduring or temporary in nature, researchers examine whether those who are taken off the drug display worsening outcomes compared with when they were on the drug. In addition, they observe whether those patients taken off the drug are markedly worse than their peers who remained on the drug.

"During-treatment" effects are changes that occur while an individual is undergoing treatment. "Enduring" effects are changes that remain even after the treatment is stopped. Relating this analogy to the marriage effect, the during-treatment effect would be the change that occurs while an individual is married. The investigation of whether this is a during-treatment-only effect, meaning a temporary or situational effect, or an enduring effect results from what happens when an individual divorces. That is, does the treatment effect persist or does it disappear once the "drug" is no longer provided? As Gottfredson (2005: 50–1) suggested, approaches similar to this would help in understanding whether the effect of a change in a life circumstance (e.g., marriage) on desistance from crime functions to change one's propensity or disposition (i.e., increased bonds and identity transformation) or whether the observed reduction in offending is instead the result of more situational factors (e.g., the restriction of opportunities for crime).

To date, research on the effects of divorce on offending has been sparse, with most studies examining separation from a spouse in the context of studying the marriage effect. In an analysis of the influence of young adult transitions (i.e., marriage, parenthood, and separation) on conviction histories, Farrington and West (1995) found that separation was positively related to increased offending behavior compared with similar men who remained married. Horney, Osgood, and Marshall (1995) also found that the crime-inhibiting effects of marriage are limited to periods of spousal cohabitation with the likelihood of offending increasing when individuals move away from their wife. Blokland and Nieuwbeerta (2005) analyzed trajectories of offending for a large sample of Dutch offenders and found that separation/divorce was associated with increased offending regardless of one's offending trajectory. More recently, Larson and Sweeten (2012) found that among the National Longitudinal Survey of Youth 1997 (NLSY97) sample, breaking up from a dating partner (not married or cohabiting) was associated with increased criminal offending and substance use (alcohol, marijuana, and cocaine) for males and with increased alcohol and marijuana use for females.

Overall, the evidence points to a detrimental effect of divorce on involvement in crime. Yet the nuances of the effects of this transition have not been assessed. For instance, marital duration has been a missing consideration in the divorce literature mentioned here as well as in the marriage and divorce literature in general (Karney and Bradbury, 1995). With respect to

examining the mechanisms of desistance from crime, marital length is a critical aspect of the theoretical process underpinning desistance. If enduring change from marriage, stemming from an identity transformation or strong attachments, requires a gradual process, then marital duration is central. That is, we would expect little to no increase in offending upon divorce among those whose marriages were long in duration. On the other hand, if desistance originates from situational constraints, then marital duration would be irrelevant and we would expect an increase in offending upon divorce for those with short or long marriages.

The current research reframes the question of whether divorce is associated with an increase in offending by drawing on the conceptual approach of the medical model to test more directly the enduring versus temporary change processes at play. We do this not only by examining the immediate and continued impact of divorce but also by considering length of marriage with respect to offending outcomes. Specifically, we use a within-individual longitudinal approach to exploit a monthly level data set following individuals from adolescence to young adulthood. In doing so, we take a much more nuanced approach to understanding the impact of relationship status on offending, with a particular focus on the temporality of change and attention to the complexities originating from differences based on the length of marriage.

DATA, MEASURES, AND METHODS

We use data from the NLSY97, which is a representative sample of people living in the United States in 1997 who were born during the years 1980 through 1984 and were 12 to 16 years of age during the initial survey round (Center for Human Resource Research, 2005). The NLSY97 is a household sample that includes 8,984 youth in the initial survey period. Youth are interviewed on an annual basis beginning in 1997 and complete a self-administered survey that collects information on sensitive topics that reflect antisocial behavior such as crime, delinquency, and substance use. We exploit the monthly level event history data on self-reported relationship transitions and arrest in each wave across 13 years of data (1997 through 2009).

These data are well suited to study the linkages between offending and relationship status for several reasons. First, the age distribution and length of follow-up (spanning adolescence into young adulthood) allows for the observation of individuals during peak years of offending and captures the period of the life course when individuals are most likely to experience transitions into and out of relationships. Second, the NLSY97 asks about relationship status and changes in each wave of data collection including dating, cohabitation, marriage, divorce, separation, and widowhood, which allows

for a frequent and descriptive account of relationship status. Third, our key variables of interest are available at the monthly level (arrest history and relationship transitions), permitting a more nuanced focus on temporal aspects of change.

We are mindful that the NLSY97 is a general population household sample (i.e., not an offender-based sample), and it may miss some of the most serious offenders. However, nearly 3,000 respondents report a history of arrest, half of whom report multiple arrests, and many have had at least one episode of incarceration ($n = 790$). Because we are interested in the relationship between marital dissolution and offending, much of our attention centers on the subsample of respondents with an arrest history who also married ($n = 844$).

The initial large sample and high retention rate (84 percent by the 2009 survey), even among those with incarceration experiences, results in a sizeable number of respondents with an offending history. Should a respondent miss an interview wave for any reason, significant efforts are undertaken to track the individual and to report on the previous year's activities. As a result, respondents followed here have an average of 152 monthly observations of a possible 156. Thus, although attrition remains an issue, rigorous location efforts, regular and continued respondent contacts, additional incentive offerings, continuous efforts to obtain complete data over all years, and interviewer consistency reduces the amount of missing data considerably.

MEASURES

Dependent Variable

In each survey wave, respondents were asked to report on their history of arrest (prevalence and frequency) since the date of the last interview (not including arrests for minor traffic violations). Those respondents indicating at least one arrest were asked to report on the event(s) in greater detail, obtaining the year and month that each arrest occurred. Nonevent months are coded 0, whereas months with at least one documented arrest are coded 1. It is clear that the respondents have accrued a large number of arrests; one third of the respondents reported at least one arrest during the study period and in total amassed more than 10,000 arrests over the course of the study.

Time-Varying Covariates

Relationship status is collected from all respondents beginning at 16 years of age. The calculation of relationship status for each year beginning when

respondents are 14 years of age is possible given that respondents were asked to report retrospectively on relationship histories/transitions beginning with the month of their 14th birthday, stating whether they were never married and not cohabiting, never married but cohabiting, married, divorced, legally separated, or widowed.[1,2] For each relationship status indicator, single, married, legally separated, and divorced, we use a mutually exclusive dichotomous coding strategy that captures each individual's relationship transitions at the monthly level. Beginning in the first month of the first wave in 1997, all individuals are coded 1 in all months single and 0 on all other relationship variables. Then, in the month when an individual is married and all subsequent months married, respondents are coded 1 on the monthly marriage variable. Of note, the transition to marriage results in a change in coding of the monthly single variable to 0. Likewise, should an individual's marriage dissolve, he or she is coded 1 on the divorce or legal separation variable in the month when first divorced or separated and all subsequent months not married. The transition results in a change in coding of the monthly marriage variable back to 0.

Consistent with general population trends, a third (33 percent) of the full sample has "ever married" by 2009 when respondents were between 24 and 28 years of age and have been married on average 4 years (see table 2, column A). Among those who married, nearly one fifth (18 percent) divorce and 10 percent report being legally separated from their spouse. The rates of marital dissolution are greater when we look at those married with an arrest history where more than one quarter have divorced and 15 percent report being legally separated (see table 2, column C). The average time spent in either state of marital dissolution is similar regardless of the sample

1. For the youngest respondents in the data, those 12 and 13 years of age, we assume states of singlehood in the first survey years until they have reached the point when self-reported data on relationship states are available—14 years of age. We based this assumption on the fact that marriage is a near impossibility at these young ages in addition to information gleaned from the older respondents in these data, which demonstrates no instances of marriage at 14 years of age. This assumption allows for complete relationship information for all respondents beginning with the first wave of data in 1997.
2. Although we are most concerned with the removal of marriage (i.e., divorce) for this research, one advantage of these data is that we are not limited to assessing the dissolution of marriage with divorce only. This is particularly important given a growing trend whereby marriages end in legal separation but not in divorce. As Bramlett and Mosher (2002: 2) pointed out, "looking only at divorce greatly understates marital disruption." The extent to which separation and divorce are synonymous is unclear; yet the process of becoming legally separated is similar enough to divorce in that it is an indication of a relationship change albeit while still legally married.

Table 2. Descriptive Statistics by Subsample

Variables	Column A Full Sample (n = 8,984)		Column B Ever-Arrested Sample (n = 2,959)		Column C Ever-Married and Ever-Arrested Sample (n = 844)	
	Mean	(SD)	Mean	(SD)	Mean	(SD)
Monthly observations 1997 to 2009	145.09	(26.62)	148.80	(18.22)	151.82	(11.01)
Ever married by 2009	.33	(.47)	.29	(.45)		
Mean number of months married[a]	47.86	(31.30)	45.48	(30.57)	45.48	(30.57)
Ever divorced by 2009[a]	.18	(.39)	.26	(.44)	.26	(.44)
Mean number of months divorced[b]	29.05	(22.41)	30.12	(23.39)	30.12	(23.39)
Ever legally separated by 2009[a]	.10	(.30)	.15	(.36)	.15	(.36)
Mean number of months separated[c]	19.25	(19.75)	21.36	(22.34)	21.36	(22.34)
Age in 1997 (wave 1)	13.99	(1.40)	14.01	(1.39)	14.25	(1.36)
Male	.51	(.50)	.69	(.46)	.62	(.49)
Black	.27	(.44)	.31	(.46)	.19	(.40)
Household size	2.45	(1.28)	2.53	(1.35)	2.47	(1.23)
Family structure	.49	(.50)	.37	(.48)	.41	(.49)
Disadvantage	.07	(.25)	.09	(.28)	.07	(.26)
Parental education	13.26	(3.02)	12.89	(2.82)	12.72	(2.80)
At risk	.25	(.57)	.53	(.79)	.53	(.79)
Incarcerated	.09	(.28)	.27	(.44)	.24	(.43)

NOTES: The sample sizes for parental education were reduced slightly because of missing data (n = 8,628 full sample, n = 2,848 ever-married sample, and n = 813 ever-married and ever-arrested sample).

ABBREVIATION: SD = standard deviation.

[a]Mean and standard deviation values computed for those who ever married.

[b]Mean and standard deviation values computed for those who ever divorced.

[c]Mean and standard deviation values computed for those who ever legally separated.

(approximately 30 months divorced and 21 months legally separated). Although evidence suggests that divorce and separation are related, divorce is not an inevitable outcome of separation: Nearly one third of the individuals who legally separate go on to divorce, but the vast majority of those who divorce report no history of legal separation. Moreover, nearly half of those who legally separate have not divorced by the final wave in these data.

The length of marriage is a critical component to disentangling the enduring versus situational processes of change in understanding desistance. To test for variation in the effects of marital dissolution among short and long marriages, we disaggregate the ever-married, ever-arrested sample in to the following mutually exclusive marriage length groupings: 1 to 11 months married (n = 121), 12 to 23 months married (n = 120), 24 to 35 months

married ($n = 142$), and 36 or more months married ($n = 430$).[3] Although neither of the enduring effect mechanisms speaks directly to the length of time that must pass before bonds strengthen or identities change, some attachment literature has indicated that bonds are strengthened within the first 2 years of marriage (Weiss, 1975). In an effort to gain a slightly more nuanced look, we chose an annual specification in the early years of marriage looking at the 2-year mark ± 1 year. Each group includes those whose marriages end in separation or divorce within that time frame as well as those who are censored. For instance, this final group of longest marriages includes those whose marriage dissolves ($n = 137$, 30 percent legally separated and/or divorced) as well as those who remain married at least up to the final wave of data collection in 2009 ($n = 315$, 70 percent). Similarly, roughly one third of each of the shorter marital duration subsamples experiences divorce and/or separation (31 percent of marriages lasting less than 1 year, 32 percent of marriages lasting 12 to 23 months, and 41 percent of marriages lasting 24 to 35 months).

Time-Stable Controls

Recognizing that both relationship transitions and offending behavior are influenced by sociodemographic background factors, we control for several family of origin and individual characteristics measured in the first wave of the study. Descriptive statistics for all variables are listed in table 2 disaggregated by ever-married and/or ever-arrested subsamples. *Household size* is a continuous measure of the number of individuals living in the household 18 years of age or younger. *Family structure* is coded 1 = intact, 0 = other; slightly less than half of all respondents reported living in an intact family. Notably, this form of family structure is much less prevalent among those with an arrest history who marry (41 percent) and even more lacking among offenders, many of whom have yet to marry (37 percent) (see table 2, columns C and B, respectively). Because there are high rates of missing data on traditional socioeconomic status measures (e.g., income and welfare receipt) in these data, we created a measure of *disadvantage* combining information from three questions asking about the lack of heat and/or electricity in the month before the survey, whether youth have ever lived in hard times such as living in a shelter, and the presence of dilapidated buildings on the street of residence (coded by the interviewer). Youth with an affirmative response to any of these items were coded 1 = disadvantaged. *Parental education* is a continuous measure of the greatest number of years of education obtained by either parent.

3. We focus on the length of first marriages to create the marital duration groupings. Fewer than 5 percent of the married respondents in these data report being married more than once.

With the understanding that criminal propensity may affect the likelihood of marriage/divorce and the opportunity to offend, we include two measures that tap into one's propensity for crime. The first is labeled *at-risk* and is a continuous measure combining affirmative responses to three indicators of early onset risky behavior: 1) sexual intercourse, 2) drug use, and 3) arrest, with early defined as at or before 13 years of age.[4] The at-risk variable ranges from 0 to 3 with a mean of .25, suggesting that the vast majority of youth abstain from these behaviors at least until their 14th birthday. The second measure of criminal propensity is *incarceration history*. Those reporting at least one episode of incarceration over the course of the study were coded 1 (others = 0). Nearly 800 respondents report at least one stay in a correctional facility (n = 790).[5] Of those incarcerated from 1997 to 2009, the average length of incarceration was short (less than 7 months) with 1 month or less incarcerated as the modal response.

The models also control for a number of important demographic characteristics including age (mean = 14 years in 1997), gender, and race. Men have a slight majority in the data (51 percent), and African Americans comprise roughly a quarter (27 percent) of the sample. Not surprisingly, among the ever married with an arrest history men comprise an even greater portion of the sample (62 percent) and the proportion of African Americans is smaller when we restrict the sample to those who have been married (19 percent).

METHODS

Generalized Hierarchical Non-Linear Modeling (HLM) version 6.08 (Raudenbush, Bryk, and Congdon, 2007) was used for the analysis for two reasons. First, the use of longitudinal panel data results in the violation of the independence assumption of ordinary least-squares regression resulting in incorrect estimates of the standard errors—smaller standard errors and an increase in the likelihood of a type 1 error (Osgood, 2009;

4. Criminological evidence has shown that the age of offending onset is a critical (if not causal) predictor of future offending (Bacon, Paternoster, and Brame, 2009; Moffitt, 1993) and that the early onset of other risk behaviors, such as sexual intercourse and substance use, also has been found to be detrimental to one's life outcomes (Warren et al., 1997). Although no equivocal marker exists denoting "early" involvement in these behaviors, 13 years of age or younger was selected as the cutoff as this age distinguishes those in the top 10 percent of the distribution of these behavioral risk factors.

5. We also control for the frequency of months incarcerated in all models and find substantively similar results to those reported. Because monthly level incarceration frequency information was only available for a subset of all those reporting a history of incarceration, we report the findings using the dichotomous variable.

Raudenbush and Bryk, 2002). This result occurs because of two issues inherent in longitudinal analyses: 1) observations of behavioral stability over time and 2) serial correlation that originates because observations occurring closer in time are more similar to each other than those occurring further apart (Osgood, 2009). Second, the number and spacing of observations are not invariant across respondents resulting in an unbalanced model. That is, some individuals have missing data in certain waves (i.e., variation in the number of observations), and time intervals sometimes vary between observations (i.e., variation in the spacing of observations). HLM is flexible and can accommodate both of these data characteristics (Raudenbush and Bryk, 2002; Snijders and Bosker, 1999).

Raudenbush and Bryk (2002: 183; see also Horney, Osgood, and Marshall, 1995) suggested that an effective method of modeling change over time is to decompose the time-varying covariates (i.e., single, marriage, legal separation, and divorce) into two parts. First, the difference from the individual-specific mean in each time period (group-mean centering) models the *within-individual* change. By group-mean centering these variables, we control for the correlation between the time-varying covariates and the mean level of offending (Raudenbush and Bryk, 2002). Second, we control for individual differences in the overall proportion of time single, married, legally separated, and divorced by including an aggregate measure of these time-varying covariates in our equation. This procedure allows us to model the *between-individual* differences in the overall level of these characteristics on offending. By including these aggregates at level 2, we reduce the possibility of obtaining biased estimates originating from the likelihood that individuals vary by their mean time spent in each relationship state (Osgood, 2009; Raudenbush and Bryk, 2002). Recall that the relationship change indicators examined in this study—single, married, legally separated, and divorced—are a series of mutually exclusive time-varying measures, and therefore, each respondent can only be in one of these statuses in each month of the study. The level 1, within-individual equation is as follows:

$$\text{Logit} = \ln(p_{it}/(1 - p_{it}) = \eta_{it}$$

$$\eta_{\text{it}} = \pi_{0i} + \pi_{1i}(\text{age})_{it} + \pi_{2i}(\text{age}^2)_{it} + \pi_{3i\ldots ki}(\text{relationship state})_{it}$$

where $\ln(p_{it}/(1 - p_{it})$ is the natural logarithm of the odds (i.e., log-odds) of an arrest for individual i at age t. The equation is specified to follow a quadratic function of age (age_{it}, age_{it}^2). The age terms were grand-mean centered to allow for more stable estimation because of their collinearity. Grand-mean centering yielded an interpretation of π_{1i} as the average rate of growth across the entire observation period. The level 2,

between-individual equations are as follows:

$$\pi_{0i} = \beta_{00} + \beta_{01}(\text{controls})_i + \beta_{02\ldots k}\overline{(\text{relationship state})}_i + r_{0i}$$

$$\pi_{1i} = \beta_{10} + r_{1i}$$

$$\pi_{2i} = \beta_{20}$$

$$\pi_{3i\ldots ki} = \beta_{30\ldots k0}$$

where variation in the log-odds of an arrest at the age coded as zero (π_{0i}) is explained by aggregate forms of relationship change (i.e., single, marriage, legal separation, or divorce) and by the time-stable background characteristics. We allow for variation between individuals in the probability of an arrest (π_{0i}) and age (π_{1i}) parameters as indicated by the error terms r_{0i} and r_{1i}. We assume fixed effects (i.e., constant across all individuals) for the age-squared parameter (π_{2i}) and for the relationship change ($\pi_{3i\ldots ki}$) estimates.

In sum, the decomposition of our time-varying covariates results in two types of effects for each relationship transition: within individual and between individual. The bulk of our attention is aimed at the within-individual effect findings (level 1) where we examine the likelihood of offending for an individual when divorced compared with when that same individual was married. These results offer an important advantage over traditional between-individual-only strategies as individuals act as their own statistical control. As Osgood stated, "analysis of within individual change totally eliminates the possibility that any *stable* individual characteristic can account for the estimated effect of the time-varying explanatory variable, without measuring that characteristic and including it in the analysis" (2009: 380; emphasis added). These advantages come with the assumption that, in these models, the within-individual effect occurs instantly (i.e., at the month of divorce) and remains constant over time (i.e., for all months divorced).

Thus, for our question regarding the enduring or temporary effect of marriage, we are most interested in the within-individual effect of divorce. Should the effect of marriage function to change an individual's propensity to offend, then we would expect to find no significant effect of divorce particularly among those married longer (given the greater ability for attachments and identity change to occur with longer marital durations). Conversely, should marriage function as a source of supervision by restricting opportunities to offend, changing routine activities, and/or knifing off individuals from criminogenic influences, we would expect to find that divorce results in an increase in offending, regardless of marital length. In the marital dissolution models, we control for the influence of legal separation as well as for time single. Although we expect legal separation to function similarly to divorce, we test for the statistical difference between the effects of these two forms of marital dissolution. Therefore, when divorce, legal

separation, and single all equal 0, the intercept reflects the likelihood of arrest when in the state of marriage.

As mentioned, we focus our analysis on the subsample of respondents with an arrest history who also married. Because the models capture change over time, individuals with no arrest history add no information to the computation of the within-individual estimates; however, as a robustness check, we also discuss the findings using the full ever-married sample as well as the ever-incarcerated subsample (results available upon request).

RESULTS

MARRIAGE EFFECT

Although we are most interested in what happens to offending trajectories when the marriage "drug" is stopped, to situate these data and findings within the broader empirical base, we begin by estimating the effect of marriage on arrest trajectories among those ever arrested (see table 3, model 1). Recall that the within-individual analysis reports the effect of a transition (e.g., single to married) on the likelihood of arrest. Consistent with the general literature documenting a marriage effect, marriage reduces the likelihood of arrest in these data; in the months when married, individuals are 26 percent less likely to be arrested compared with the months when they are not married.[6] Notably, the effect sizes for marriage found among the ever-arrested respondents in these data are of similar magnitude to those found in previous research using offender-based and high-risk samples (Bersani, Laub, and Nieuwbeerta, 2009; Doherty and Ensminger, 2013; Laub and Sampson, 2003). Moreover, the between-individual effect of marriage suggests that married individuals have a significantly lower likelihood of arrest (41 percent) compared with those who do not marry. We examined the robustness of the marriage effect by testing this model using the full sample (including those with no arrest history) as well as on what is arguably the highest risk sample in these data, namely, those who have ever been incarcerated. Regardless of subsample, the substantive findings remain the same. Thus, in these data, getting married and being married are associated with a decrease in the likelihood of arrest.

DIVORCE EFFECT

Next, we model the effect of divorce on arrest trajectories among those respondents who had ever been married and who had ever been arrested. By limiting the sample only to those who were married, we hold exposure

6. Percent reduction in the odds of an arrest computed using: (1 – exponentiation (coefficient)) × 100.

Table 3. Hierarchical Nonlinear Models of the Effect of Marriage and Marital Dissolution on the Probability of Arrest, NLSY97 (1997–2009)

Variables	Marriage			Divorce/Legal Separation								
	Ever-Arrested Sample (n = 2,838) Model 1			Ever-Married and Ever-Arrested Sample (n = 813) Model 2			Ever-Married and Ever-Arrested Males (n = 505) Model 3			Ever-Married and Ever-Arrested Females (n = 308) Model 4		
	Coeff.	Sig.	SE	Coeff.	Sig.	SE	Coeff.	Sig.	SE	Coeff.	Sig.	SE
Intercept	−4.274	***	.020	−4.432	***	.032	−4.243	***	.039	−4.382	***	.041
Within Individual												
Marriage	−.299	***	.045		—			—			—	
Divorce		—		.418	***	.093	.438	***	.123	.392	**	.141
Legal separation		—		.464	***	.135	.161		.192	.814	***	.161
Single		—		.260	***	.057	.160	*	.071	.362	***	.099
Age	−.127	***	.021	−.330	***	.039	−.140	**	.050	−.619	***	.062
Age squared	.003	*	.001	.007	***	.001	.002		.001	.015	***	.002
Between Individual												
Marriage	−.534	***	.064		—			—			—	
Divorce		—		.737	***	.170	.910	***	.219	.633	*	.323
Legal separation		—		1.153	***	.242	1.390	***	.295	.443		.261
Single		—		.271	**	.098	.308	*	.133	.160		.151
Male	.214	***	.020	.233	***	.035		—			—	
Black	−.058	**	.021	.015		.043	.051		.054	−.077		.075
Household size	−.006		.007	.002		.014	.041	*	.016	−.032		.025
Family structure	−.080	***	.019	−.103	**	.034	−.119	**	.043	−.058		.054
Disadvantage	.078	*	.037	.119		.071	.011		.107	.320	***	.091
Parental education	.002		.003	−.013	*	.006	−.016	*	.007	−.006		.010
At risk	.077	***	.013	.031		.023	.042		.033	−.010		.032
Incarcerated	.812	***	.022	.847	***	.042	.879	***	.053	.707	***	.075

NOTES: The models presented used PQL estimation. We report the population-average with robust standard error results.
ABBREVIATIONS: Coeff. = coefficient; SE = standard error; Sig. = significance.
*$p < .05$; **$p < .01$; ***$p < .001$.

to marriage constant. We begin by assessing the extent to which the marital dissolution transitions included in the models have the same effect on the likelihood of arrest by performing a multiple coefficients test in HLM comparing divorce and legal separation. The results of the comparison of coefficients indicate that these two states are not significantly different; however, we opt to retain these as separate relationship states as the disaggregation of the sample by gender and marital duration reveal important differences of both a statistical and a substantive nature.

Divorce has a significant detrimental effect on offending and increases the likelihood of arrest by 52 percent (table 3, model 2). Stated simply, an individual is more criminally active when divorced compared with when

he or she is married, taking into account periods of legal separation and time single. The between-individual coefficients for mean months divorced provide further support for the consequences of divorce, demonstrating that divorced individuals are more likely to be arrested compared with those who have not divorced by the final wave of data. As expected, the results show that the effect of legal separation functions similarly to divorce. We assess the robustness of the findings by conducting analyses on the subsample of ever-incarcerated individuals and find that divorce maintains a strong detrimental effect on offending among these individuals.

Similar to the arguments found in the marriage literature regarding the differential benefits of marriage across gender, the detrimental effects of divorce may not be distributed equally across the population (Amato, 2000). We conduct models of divorce on offending parallel to model 2 described earlier on male and female subsamples and compare the results (see table 3, models 3 and 4, respectively). The findings suggest that divorce is detrimental for both men and women, evidencing a strong and significant positive association with the likelihood of arrest. Although the increase in the likelihood of arrest is slightly greater for men (55 percent for males and 48 percent for females), the difference is not statistically significant.[7] Whereas divorce and legal separation seem to function similarly when looking at the combined sample results, the breakdown by gender reveals an important gender effect. Legal separation seems to have no significant association with offending for men, but it is associated with an increase in the likelihood of arrest for women. Moreover, computation of the equality of regression coefficients test indicates that the effect of legal separation is significantly different for men and women.

STABILITY OF THE DIVORCE EFFECT

In sum, the results demonstrate a detrimental effect of divorce, controlling for a host of background characteristics and criminal propensity. Note that the models presented in table 3 make a strong assumption about the impact of an event, namely divorce, such that the effect of the event is assumed to be immediate and constant over time (Osgood, 2009). These results cannot speak to whether the increased risk of offending as a result of marital dissolution is merely a temporary, short-lived lapse back into offending resulting from the stress and strain associated with getting divorced or whether divorce is associated with a more stable return to offending. To investigate the validity of this assumption, we augment the model by including a new time-varying covariate capturing the time elapsed since the

7. Calculation of the equality of regression coefficient used the following equation (Paternoster et al., 1998): $z = \frac{b_1 - b_2}{\sqrt{seb_1^2 + seb_2^2}}$

divorce occurred. This new variable is coded 0 in the months prior to divorce as well as the first month of divorce. Beginning in the first month following divorce, this variable takes on the value of 1, and in subsequent months, it is coded $t + 1$ (i.e., 1, 2, 3 ... k). The new level 1 equation takes the following form:

$$\eta_{it} = \pi_{0i} + \pi_{1i}(\text{age})_{it} + \pi_{2i}(\text{age}^2)_{it} + \pi_{3i}(\text{divorce})_{it} + \pi_{4i}(\text{time since divorce})_{it} + \pi_{5i}(\text{separation})_{it} + \pi_{6i}(\text{single})_{it}$$

where the effect of divorce (π_{3i}) captures the instantaneous change in the likelihood of arrest at the month of divorce and the effect of time since divorce (π_{4i}) captures the change in slope or growth over time of the divorce effect. If the time since divorce variable is significant, then it would indicate that the detrimental effect of divorce is not constant over time but gradually increases (positive effect) or gradually decreases (negative effect) in the months following divorce.

The findings from the discontinuous change models are shown in table 4. Model 1 presents the findings for the sample of ever-married, ever-arrested respondents. Similar to the pattern noted earlier, divorce is associated with an immediate increase in the risk of arrest as indicated by the within-individual effect of divorce on the likelihood of arrest. We do not find a significant relationship for the time since divorce variable, indicating that the detrimental effect of divorce is constant across all months divorced. Models 2 and 3 show the findings for men and women separately; the substantive story remains the same. In these data, divorce is associated with an immediate and sustained increase in arrest, indicating a stable return to offending.

DIVORCE EFFECT BY MARITAL DURATION

Next, we explicitly model the effect of divorce on offending by the duration of marriage. As we have argued, marital duration matters, particularly for examining the gradual and potentially enduring change process implied by the attachment and identity transformation arguments. Specifically, short marriages may only provide opportunity for situational processes of change to occur, thereby resulting in a return to offending upon divorce. Conversely, longer marriages allow for people to build attachments or experience identity change. Recall that the change processes inferred by these mechanisms are posited to be relatively enduring in nature and potentially impervious to divorce. We account for possible differences caused by the duration of marriage by disaggregating our sample by the length of marriage.

The results of these analyses are presented in table 5. For short marriages, those lasting 23 months or less (models 1 and 2), neither getting divorced

Table 4. Hierarchical Nonlinear Models of the Discontinuous Effect of Divorce Duration on the Probability of Arrest, NLSY97 (1997–2009)

Variables	Ever-Married and Ever-Arrested Sample ($n = 813$) Model 1			Ever-Married and Ever-Arrested Male Sample ($n = 505$) Model 2			Ever-Married and Ever-Arrested Female Sample ($n = 308$) Model 3		
	Coeff.	Sig.	SE	Coeff.	Sig.	SE	Coeff.	Sig.	SE
Intercept	−4.432	***	.033	−4.262	***	.039	−4.403	***	.041
Within Individual									
Divorce	.493	***	.099	.554	***	.133	.439	**	.144
Time since divorce	−.005		.003	−.006		.004	−.005		.004
Legal separation	.463	***	.135	.163		.193	.804	***	.160
Single	.267	***	.057	.170	*	.073	.357	***	.098
Age	−.336	***	.040	−.136	**	.052	−.631	***	.063
Age squared	.008	***	.001	.002		.001	.016	***	.002
Between Individual									
Divorce	.731		.431	2.288	***	.624	−1.567	***	.408
Time since divorce	−.001		.013	−.044	*	.018	.059	***	.011
Legal separation	1.157	***	.243	1.372	***	.312	.512		.276
Single	.277	**	.095	.362	**	.127	.085		.149
Male	.233	***	.035		—			—	
Black	.014		.043	.056		.054	−.032		.074
Household size	.023		.014	.041	*	.016	−.034		.026
Family structure	−.102	**	.034	−.113	**	.042	−.040		.055
Disadvantage	.121		.072	.013		.109	.328	***	.092
Parental education	−.013	*	.006	−.014		.008	−.001		.010
At risk	.033		.023	.047		.033	−.017		.030
Incarcerated	.846	***	.042	.887	***	.052	.732	***	.073

NOTES: The models presented used PQL estimation. We report the population-average with robust standard error results.
ABBREVIATIONS: Coeff. = coefficient; SE = standard error; Sig. = significance.
*$p < .05$; **$p < .01$; ***$p < .001$.

nor legally separating statistically alters one's risk of arrest compared with when they were married. Although it is not the focus of this research, we note an interesting finding within the model examining very short marriages (those lasting less than 1 year in duration). The coefficient for the within-individual single status is negative and significant. Recall that the reference category in these models is married. Therefore, this finding suggests that individuals in very short marriages have a lower likelihood of arrest when single compared with when married.[8]

8. The increasingly small sample sizes limit us from drawing strong conclusions from the analyses of marriage length disaggregated by gender (results not shown); however, the pattern of results from gender-specific models indicates that the negative effect of single status in the short marriage model is found only among the males in these data.

Table 5. Hierarchical Nonlinear Model of the Effect of Marital Dissolution on the Probability of Arrest by Marriage Length, NLSY97 (1997–2009)

Variables	Ever Arrested—Married 1 to 11 Months ($n = 121$) Model 1			Ever Arrested—Married 12 to 23 Months ($n = 120$) Model 2			Ever Arrested—Married 24 to 35 Months ($n = 142$) Model 3			Ever Arrested—Married 36 or More Months ($n = 430$) Model 4		
	Coeff.	Sig.	SE	Coeff.	Sig.	SE	Coeff.	Sig.	SE	Coeff.	Sig.	SE
Intercept	−4.344	***	.111	−4.439	***	.095	−4.585	***	.063	−4.409	***	.038
Within Individual												
Divorce	.113		.228	−.442		.396	.465	**	.151	.522	***	.107
Legal separation	.144		.307	.240		.492	.090		.291	.573	***	.140
Single	−.696	***	.141	.146		.194	.291	**	.113	.299	***	.074
Age	.122		.104	−.068		.097	−.076		.092	−.622	***	.051
Age squared	−.005		.003	.001		.003	.002		.002	.015	***	.001
Between Individual												
Divorce	−.262		.684	.301		.654	.537		.571	1.069	***	.263
Legal separation	−1.247		1.091	1.656	**	.553	1.427	**	.528	.917	*	.401
Single	−.433		.612	−.225		.475	.166		.465	.356	*	.160
Male	.190		.098	.098		.102	.646	***	.062	.142	**	.045
Black	−.027		.105	−.040		.102	.021		.079	.067		.065
Household size	.089	*	.034	.074	*	.035	−.054		.028	.038		.020
Family structure	−.257	**	.089	−.147		.091	−.145	*	.071	−.008		.045
Disadvantage	−.389	**	.140	.028		.192	−.191	*	.079	.297	**	.095
Parental education	−.006		.014	−.037	*	.016	−.012		.013	−.003		.008
At risk	−.185	**	.066	.010		.065	.157	***	.042	.028		.034
Incarcerated	.997	***	.108	.840	***	.117	.625	***	.089	.801	***	.060

NOTES: The models presented used PQL estimation. We report the population average with robust standard error results.
ABBREVIATIONS: Coeff. = coefficient; SE = standard error; Sig. = significance.
$^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

Conversely, for those in marriages lasting 24 months or longer, divorce is associated with a significant increase in the likelihood of arrest. The influence of divorce seems to be most potent for those with longer marriages, increasing somewhat (although not significantly) in strength between the 24 to 35 months and the 36 months or longer marriages.[9] Specifically, divorce increases the likelihood of arrest by 59 percent for individuals who are married 24 to 35 months, and 69 percent for individuals married more than 3 years.

Because there is no standard length of time that must pass before marital bonds are formed or identities have changed as well as the increasingly small sample sizes with each disaggregation, we examine the robustness of

9. This measure was evaluated using an equality of regression coefficient test (see footnote 7).

these findings by splitting the marriage length subsamples into 2-year increments: married 23 months or fewer and married 24 months or longer (results not shown). The findings remain the same; we find no significant effect of divorce or separation among those in relatively short marriages, whereas marital dissolution is detrimental for those in relatively longer marriages.[10] Counter to enduring change arguments, for individuals in relatively lengthy marriages, divorce is associated with an increase in offending, which lends greater support to situational change arguments than to enduring change.

DISCUSSION/CONCLUSION

The introduction of life-course criminology, and in particular the emphasis on desistance from crime, served as a catalyst for a substantial body of empirical research for decades to follow. A key finding of this research is that marriage matters, and often it matters in a good way. Yet, advances in desistance research have slowed as researchers, including ourselves, have continued to test *if* marriage matters for everyone, everywhere. With the current research, we aim to pry open the mechanism "black box" and reinvigorate desistance research by focusing on *how* marriage affects offending. We do so by asking what happens when the ties that bind unwind; does the effect of marriage endure when marriage dissolves, or does the good marriage effect disappear with divorce?

The current research is couched in an enduring-versus-treatment model framework typically employed by medical researchers. We argue and present evidence that the proposed marriage mechanisms infer specific change processes with attachment and identity transformation mechanisms suggesting enduring effects of marriage and supervision/monitoring, knifing off of criminogenic networks, and routine activities mechanisms suggesting treatment or situational effects of marriage. We want to be clear that we do not consider this analysis a test of which mechanism is the most salient over any other, especially given our lack of direct measures of each mechanism. We also acknowledge that desistance may be a result of the interplay of multiple mechanisms. Thus, we have broadly conceptualized the processes of change as falling on a continuum as opposed to an either/or dichotomy.

10. We also account for the fact that some individuals fall into the marriage duration categories because they are censored from the survey. The censoring could occur because of attrition or because a respondent gets married in later waves and therefore can be married only for a restricted number of months. Whereas these individuals have no information on divorce or legal separation and therefore do not impact the coefficients measuring the effect of marital dissolution, we analyze parallel models selecting out only those respondents whose marriages dissolved. The substantive results remain unchanged.

Rather, the aim of this research is to parcel out and test a particular facet of the change process, namely, its enduring or situational nature.

We find that divorce has a significantly strong effect on offending such that individuals have a greater likelihood of arrest when divorced (or legally separated) compared with when they were married, a finding that generalizes across gender. Moreover, we find that the detrimental effect of divorce is likely not a temporary outcome of the immediate turmoil associated with getting divorced, but instead it seems to maintain over time, evidencing a continued and constant effect on the risk of arrest with successive months divorced. Recognizing that the strengthening of bonds or changes in identity are gradual in nature and occur over time, we disaggregated our sample by length of marriage with the expectation that focusing on longer marriages would provide a more accurate test of the enduring effects mechanisms. Although change may take time, we would expect that bonds would have formed and identities would have changed among those in our longest marital duration group whose first marriage lasts 3 or more years. Yet, we find that the detrimental effects of divorce seem to be most pronounced for longer marriages, prompting an immediate increase in offending. Thus, the evidence here suggests a process of change that is not equally distributed to each mechanism but one that "tips" toward the situational end of the continuum.

The results also reveal that the dissolution of marriage does not always increase offending. There seems to be something unique about short marriages, in particular, marriages that dissolve prior to the first anniversary. Among those married less than 1 year, offending rates are statistically similar when married and when divorced; however, we also find that offending rates are significantly higher when married compared with when single. We can only speculate about the reasons behind this pattern, but one scenario is that these results are reflective of the detrimental effects of "bad" marriages (Laub, Nagin, and Sampson, 1998). Short marriages may be low in quality and perhaps even criminogenic or at a minimum lacking change potential.[11] Additionally, the relatively rapid entry and exit from marriage may be emblematic of the general delinquent tendencies of the individual (Hirschi and Gottfredson, 1995).

Much of the motivation for this study design stemmed from a statement made by Gottfredson (2005) emphasizing that understanding the meaning behind the marriage effect matters when examining its relationship to offending. Yet, to date, research testing for a marriage effect on offending has been limited in its capacity to decipher between different explanations of the decline in offending with marriage. With this research, we follow

11. Previous research has used time in marriage as a statistical proxy for marital quality, but we could find no research aimed at disentangling relationship dynamics in short marriages.

Gottfredson's lead and veer from the typical analytic path taken in studies of the marriage effect by examining what happens when marriage dissolves. By outlining two theorized dimensions of how people change and by testing whether the effect is absent (decreased offending) when the cause is absent (marital dissolution), we begin to come closer to testing the theoretical mechanisms underlying the desistant effect of marriage. If, as is found from this study, the dissolution of marriage marks a return to offending, it is hard to argue that propensities have been altered by the event of marriage. Rather, it seems more likely that situational elements have (temporarily) restricted involvement in crime.

Although a greater understanding of the desistance process has clear theoretical implications, understanding the mechanisms that promote desistance also has import for criminal justice policies aimed at offender reentry by providing increased precision in how to encourage and/or maintain desistance from crime. In the United States, with more than a half-million individuals released from prison each year and more than half of these individuals reoffending shortly after release (National Research Council, 2008), the efforts aimed at disentangling the nuances of the desistance process allow for greater specificity in the focus of sparse funds aimed at reentry programs. This research suggests that situational processes of change are more salient in the desistance process. It follows, then, that programs promoting a restructuring of offenders' daily lives toward more conventional outlets and persons, and restricting opportunities to offend, will be most effective in inhibiting criminal involvement. However, direct evaluations of specific high-quality programs that change situations and restrict opportunities will provide more concrete evidence to their success.

LIMITATIONS

We note the limitations of this study as well as extensions of this research that would advance the understanding of the processes of change associated with entry and exit from salient life events. First, although we control for gender and race in the models and disaggregate by gender, future research should continue to examine the potential variations in effects by race/ethnicity and gender as well as gender and race intersectionality. Marriage and divorce—and their associated benefits and detriments—may be distributed differentially across the population (Amato, 2000, 2010; Barrett, 2003; Brown, Orbuch, and Bauermeister, 2008), which may influence the mechanisms underlying the process of change across racial/ethnic and gender groups. Our unexpected finding that legal separation did not function similarly for males and females is suggestive of differing effects of relationship transitions or states across groups.

Second, research examining the effects of marriage and/or divorce on behavioral outcomes also must attend to the issue of selection. That is, "healthy" people are more likely to marry and less likely to separate or divorce (Goldman, 1993; Stutzer and Frey, 2006; Umberson, 1992), although empirical research demonstrates that high-risk offenders do marry sometimes and that the benefits of marriage may be most salient for these individuals (Doherty and Ensminger, 2013; King, Massoglia, and Macmillan, 2007; Laub and Sampson, 2003). Although we control for criminal propensity and an array of sociodemographic background characteristics, more complex longitudinal models that incorporate selection more directly, particularly the potential for time-varying confounders related to one's propensity to marry or divorce and offend, are needed.

Finally, whereas the NLSY97 data allowed us to examine relationship transitions during the period of the life course when offending rates are greatest, because young adulthood marks a volatile period for many, divorce may be an "effect" of increased offending rather than a "cause." Again, drawing on the findings from models that disaggregate by marriage length, some in the sample experience transiency in relationship states and make early (young) entries into marriage (and divorce), hinting that these transitions may reflect deviant tendencies. However, this causal order limitation is somewhat offset by the richness of the data, the inclusion of controls, and the fact that we use a within-individual modeling strategy with monthly level data that allows for the investigation of instantaneous and gradual change in offending over time. Although individuals may be offending during periods of marriage, these results indicate that their likelihood of offending is still greater in periods of divorce.

FUTURE RESEARCH

The findings of this study provide an initial investigation into thinking about how change happens and in turn which way the continuum of mechanisms tips. Drawing on the framework laid out, we see several fruitful avenues for future research to explore. Whereas research has begun to uncover contingencies in the marriage effect based on characteristics of the offender (see, e.g., King, Massoglia, and Macmillan, 2007; Sampson, Laub, and Wimer, 2006) and on characteristics of the spouse (see, e.g., van Schellen, Apel, and Nieuwbeerta, 2012), limited work has been performed that examines the influence of characteristics of the marriage, beyond quality. This gap is notable given the history of research on the influence of relationship characteristics on entry and exit from marriage (Amato, 2010). The integration of detailed offending and relationship data is needed to advance our understanding of the likely complex nature of this association. Additionally, whereas much empirical effort has been levied at the

marriage effect, relatively less is known about the effect of other salient life events (i.e., parenthood, religion/spirituality, employment, and military service), and even less is known about the combined effects of these roles. Divorce is often not an isolated event but one aspect of large fluctuations in one's life. Future research should examine the removal of other important life events such as the loss of full-time employment and/or parental rights as well as the cumulative impact of these life events.

Finally, desistance research should broaden its behavioral lens to investigate involvement in opportunistic crimes that occur alongside certain life transitions especially those that tap into the "hidden" forms of behavior that often occur outside the purview of the criminal justice system (e.g., domestic violence and drug use). Even though we find detrimental effects of divorce, the question remains concerning what this effect represents—a return to offending, an increase in the frequency of offending, or a change in the type of offending behavior? Preliminary evidence hints that relationship transitions may initiate a change in offending type with a broadening to more serious offending among those whose marriages end (McGloin et al., 2011: 371). However, these types of inquiry are rare with much of the extant literature in this area neglecting the extent to which offending changes form or substance with marriage (or divorce).

CONCLUSION

In sum, the findings from this research add to the growing mosaic of knowledge regarding desistance from crime by moving beyond the question of if marriage matters to how marriage matters. An impressive body of work demonstrates that marriage has an important effect on offending that maintains across gender, race, time and/or place; across crime types and patterns of specialization/versatility; and when subjected to differing analytic strategies and sources of data (official and self-report). This research attempts to take the field to the next level in beginning to understand why people desist from crime. We contend that insight into *how* marriage matters is methodologically possible without qualitative data, and we present an enduring-versus-treatment effect approach as one such possibility. Although it is premature to make definitive statements, as we are only beginning to test the processes of change underlying desistance, our hope is that this research instigates a new generation of questions and methodologies by redirecting attention to understanding the mechanisms behind the desistance effect. The answers to these questions will have both theoretical and policy importance that hold the potential to translate into a reduction in crime and guide future research.

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