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Bad Romance: Sex Differences in the Longitudinal Association Between Romantic Relationships and Deviant Behavior

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Abstract

The current study investigates how romantic relationships are related to antisocial behavior longitudinally among delinquent males and females (n=354; ages 14-25). While being in a relationship or not is unrelated to antisocial behavior, romantic partner characteristics (antisocial behavior and antisocial influence) are associated with greater antisocial behavior. As males age, they become increasingly resistant to romantic partner characteristics. In contrast, females become increasingly vulnerable to the effects of romantic partner characteristics on antisocial behavior as they age, particularly when these relationships are relatively shorter. Females in shorter romantic relationships with partners who are antisocial or exert antisocial influence are at risk of persisting in antisocial behavior.

The development of romantic intimacy is a key developmental task of adolescence (Sullivan, 1953). On average, youth begin to date around 13 to 14 years of age and these relationships quickly become an important source of influence, with 35% of 15–16-year-olds and nearly 60% of 17–18-year-olds reporting to be in a romantic relationship that has lasted for at least 11 months (Feingold, 1993). Whereas the effects of peer relationships on antisocial behavior have been studied quite extensively (Brown & Larson, 2009), the effects of romantic relationships on antisocial behavior have only recently begun to be investigated. Extant research in that area has attempted to answer two essential questions – (1) do romantic relationships in general, regardless of their quality and partner characteristics, have a protective effect on antisocial behavior and (2) does romantic partner deviance affect initiation and maintenance of antisocial behavior? To date, most research has focused on early adulthood, and very few studies have investigated the effects of romantic relationships on antisocial behavior during adolescence. Moreover, little research has examined the effects of romantic relationships on antisocial behavior *across* these two developmental periods. Given that the transition between adolescence and early adulthood is typically a time when youth desist from antisocial behavior (Farrington, 1986), it is important to investigate if the associations between romantic relationships and antisocial behavior vary as a function of age.

The seminal work on the association between romantic relationships and antisocial behavior was conducted by Sampson and Laub (Laub & Sampson, 2003; Sampson & Laub, 1993). Specifically, they hypothesized that marriage may be key to desistance from antisocial behavior during adulthood through partner supervision of antisocial behavior, as well as general strengthening of ties to society and ensuing socialization of self-control and prosocial behavior. Indeed, in their analysis of data from Glueck and Glueck (1950, 1968), Sampson and Laub find that the mere presence of a committed romantic relationship (i.e., marriage) is a turning point for antisocial behavior among young adult males, with those who married showing subsequent sharp declines in antisocial behavior. Although this decline in antisocial behavior is especially strong for marriages characterized by strong attachment to spouse, marriage itself is associated with a 35% reduction in odds of being involved in criminal behavior among 17- to 32-year-old males (Sampson, Laub, & Wimer, 2006).

A considerable number of subsequent studies have further extended the study of marriage and desistance from crime. Marriage predicts lower offending in both criminal justice (e.g., Bersani, Laub, & Nieuwbeerta, 2009) and community samples (e.g., Beaver & Barnes, 2012). The fact that individuals who choose to become married may also be more likely to desist from crime cannot explain the effects of marriage on desistance, as Beaver and Barnes (2012) report that marriage continues to predict desistance after controlling for genetic influence on these two variables. Furthermore, marriage appears to enhance the effects of genetic factors on desistance among males (Beaver, Wright, DeLisi, & Vaughn, 2008). While the lion's share of research has focused on males, there appear to be sex differences in the effectiveness of marriage as a deterrent. Indeed, when investigators examine the influence of marriage on desistance for females, as compared to males, evidence suggests that the dampening effect of marriage on antisocial behavior is weaker among females (Bersani, Laub, & Nieuwbeerta, 2009; King, Massoglia, & MacMillan, 2007).

While marriage may be protective against antisocial behavior during early adulthood, it is less clear whether more informal romantic relationships, such as dating, have an impact that is beneficial or harmful with respect to antisocial behavior. There is evidence to suggest that romantic relationships may have very different effects in adolescence as compared to early adulthood. Specifically, having a serious romantic attachment may be more beneficial at an older age, when one is developmentally ready for such commitment (Collins, Welsh, & Furman, 2009). In contrast, early committed relationships may signify premature identity foreclosure and be harmful inasmuch as adolescents may not yet be equipped to make a well thought-out choice of mate or to handle the psychological demands of a serious romantic relationship (Furman & Shafer, 2003; Montgomery, 2005). Several studies of *adolescent* romantic relationships find that this is the case. For example, Eklund, Kerr, & Stattin (2010) conducted a longitudinal study of 686 7th and 8th graders which found that romantic relationships amplify youths' existing engagement in antisocial behavior, especially among adolescent girls. Indeed, having a romantic partner earlier in adolescence is associated with greater conduct problems (Neemann, Hubbard, & Masten, 1995) and aggressive behavior (Miller et al., 2009). Combined with research that romantic relationships – at least marriage – is linked to lower antisocial behavior during young adulthood, there is reason to suspect

that romantic relationships may have very different effects on antisocial behavior depending on developmental stage.

Finally, some have argued that the association between romantic relationships and delinquency may have very different patterns based on sex. Feminist theorists have argued that romantic relationships may have very different effects on females compared to males. Specifically, feminist theories claim that females' lack of power contributes to their susceptibility to antisocial influence from a romantic partner, which is in turn a key factor in explaining adolescent girls' involvement in antisocial behavior (Giordano & Mohler-Rockwell, 2001). Compared to males, females tend to be more responsive to their partners' behavior (Stattin and Magnusson, 1996; Uggen and Kruttschnitt, 1998; Zahn-Waxler and Polanichka, 2004) and their antisocial behavior may be more strongly influenced by their romantic relationships (Moffitt et al., 2001; Moretti et al., 2004; Underwood, 2004). Yet, in adulthood, there is evidence that marriage is not as strong a deterrent from antisocial behavior for females as it is for males (Bersani et al., 2009; King et al., 2007).

Seemingly then, the state of the literature is in paradox, with some evidence suggesting that females are more vulnerable to their interpersonal relationships with respect to antisocial behavior, and other suggesting that they are less impacted by the protective effects of marriage on antisocial behavior. One potential reason for this seemingly contradictory set of results is that, beyond being in a relationship or not, it is highly likely that the characteristics of a romantic partner are important for understanding the influence of a relationship on antisocial behavior. Consistent with this account, there is a well-replicated association between romantic partners' levels of antisocial behavior and an individual's antisocial behavior (e.g., Simmons, et al., 2002; Haynie et al., 2005).

Yet, there are notable challenges to understanding how partner characteristics – such as partner deviant behavior or partner influence to engage in deviant behavior – are linked to antisocial behavior during adolescence and early adulthood. Specifically, it is very difficult to parse out what may be the effects of assortative mating (i.e., an individual selecting a romantic partner who exhibits similar patterns of antisocial behavior) and what might be the effects of partner socialization (i.e., an individual becoming involved in more antisocial behavior or maintaining involvement antisocial behavior as a result of a partner's negative influence). For example, Taylor et al. (2000) found that shared social and cultural background partially accounts for couples' similarity in delinquency, and Sakai et al. (2004) found evidence for partners' similarities in social context and phenotypic preferences – evidence that individuals select romantic partners with similar characteristics. Alternatively, deviant partners may exert powerful socialization effects (Dishion et al., 1996, 1999), that contribute to youths' initiation and increased involvement in antisocial behavior. Moffitt et al. (2001) reported that having a non-delinquent partner set female participants on a path toward desistance from antisocial behavior during adulthood, whereas having a delinquent male partner elevated their chances of remaining on a trajectory of persisting antisocial behavior. Furthermore, antisocial partners may serve as network bridges that connect youth to new peer contexts that may facilitate or impede their involvement in antisocial behavior (Kreager & Haynie, 2011).

Despite this emerging evidence that romantic partners may have important implications for antisocial behavior, few studies have been able to confirm the presence of socialization or social contagion effects (Rhule & McMahon, 2007). This lack of findings may be due to the researchers' assumptions regarding the mechanisms of contagion effect and, consequently, the analytical strategies used to test for its presence. In general, researchers have assumed that social contagion – the similarity between partners – increases over time. This assumption has led researchers to assume that a test of contagion effects must reveal increasing levels of partner similarity over time. However, contrary to what is often assumed, social contagion may not increase in a linear fashion with relationship length. In fact, the opposite may be true: youth may experience a stronger pressure to become similar to their romantic partners early in the relationship. Tambs and Moum's (1992) study of 15,925 Norwegian couples revealed that romantic partners had the strongest convergence on alcohol consumption during the initial stages of marriage. Thus, evidence for the contagion effect does not need to hinge on partner concordance increasing over time, but could also be evidenced by romantic partner contagion effects serving to maintain involvement in antisocial behavior. Therefore, having a delinquent romantic partner could be associated with greater continuity in antisocial behavior, but not necessarily increases in the behavior – particularly during developmental periods such as the transition to adulthood when antisocial behavior is typically decreasing. Indeed, Sakai et al. (2004) suggest that partner similarity in conduct disorder is stronger for individuals with life-course persistent involvement in antisocial behavior than those with adolescent-limited antisocial behavior.

Finally, extant studies of contagion effects have investigated how partner antisocial behavior is associated with youth antisocial behavior, but not how partner *encouragement* of antisocial behavior may impact antisocial behavior. Indeed, given that partner antisocial behavior and partner antisocial encouragement are distinct, but related, constructs, a more comprehensive test of social contagion would require an investigation of whether romantic partners' antisocial behavior and antisocial encouragement incur differential risk for offending.

The present study aims to test whether being in a romantic relationship, in itself, serves as a risk or protective factor for antisocial behavior and whether partner deviance and antisocial influence contribute to youths' continued involvement in antisocial behavior. We examine these associations from adolescence to young adulthood and test specifically for sex differences. Because we are interested in studying how romantic affiliations may lead to decreases, continuity, or increases in antisocial behavior over time, it is important to study these associations in a sample of known delinquent youth. Consequently, we test these associations in a longitudinal, prospective study of serious felony offending males and females. We test how four covariates are related to antisocial behavior: (1) current romantic relationships status (relationship or not), (2) length of romantic relationship, (3) romantic partner deviance, and (4) romantic partner antisocial influence. In each model, we test for developmental differences in these associations from adolescence to young adulthood and test for sex differences. Finally, we examine if the effects of partner antisocial behavior and antisocial influence are stronger in longer romantic relationships compared to shorter romantic relationships.

Method

Participants

Data for the present analyses were obtained from a sample of 1,354 adolescents (1,170 males and 184 females) participating in a prospective study of serious juvenile offenders in two major metropolitan areas (see Schubert et al., 2004 for complete details of study methodology). The enrolled adolescents were between 14 and 17 years of age at the time of committing a serious felony offense for which they were adjudicated. Because we are interested in comparing females with males, we selected a matched group of males to compare with the smaller number of females enrolled in the study. Matching was done on the basis of nearest-neighbor matching without replacement. That is, the closest match on race, age, and committing offense for each female was found and each case could only be used as a match once. The resulting sample consisted of 171 males matched with the 171 females, and 13 females who did not have a matched male counterpart. We kept the 13 unmatched females in the sample because female offenders are an understudied population and they are the focus of this paper. There were no significant differences between the matched and unmatched females in age ($t(182) = 1.60$, $p = 0.12$), number of arrests ($t(182) = -0.65$, $p = 0.52$), or study site ($\chi^2(1) = 0.23$; $p = 0.63$). Compared to females who were matched, females who were not matched were more likely to be "other" race orethnicity ($\chi^2(3) = 8.63$; $p = 0.04$)– this is unsurprising given that there are few individuals in the overall sample who identified as "other," and thus a relatively small pool of males from which to draw for matches. Comparing matched and unmatched males, there were no differences in age ($t(1168) = 1.16$, $p = 0.25$), number of arrests ($t(1166) = -1.24$, $p = 0.22$), or study site ($\chi^2(1) = 0.32$; $p = 0.57$). Unmatched males were more likely to be White and less likely to be Black ($\chi^2(3) = 7.80$; $p = 0.05$). After matching, one of the males was found to have lied about his age and was subsequently dropped from all analyses, leaving a total sample of 170 males, 170 matched females, and 14 unmatched females.

The total sample was 354 youth. The subsample of matched individuals was similar to the overall sample. There were no differences in the subsample and full sample with respect to age ($t(1352) = 1.49$, $p = 0.14$), number of arrests ($t(1350) = 1.04$, $p = 0.30$), or study site ($\chi^2(1) = 0.66$; $p = 0.35$). Compared to the full sample, individuals in the present study were more likely to be White, and less likely to be Black ($\chi^2(3) = 13.74$; $p < 0.01$).

Participants in this study were predominantly of lower SES, with fewer than 5% of the participants from households headed by a 4-year college graduate and 51% of the households headed by a parent with less than a high-school education. Thirty-seven percent of the participants were African American, 31% Hispanic American, 27% non-Hispanic Caucasian, and 5% other. At the 6 month follow-up interview (the first assessment utilized in the present study), 3% (n=10) of participants were 14, 17% (n = 61) were 15, 30% (n=105) were 16, 32% (n=114) were 17, and 18% (n = 63) were 18 years of age. The present study uses data from 10 different assessments that span 7 years of development. As individuals between the ages of 14 and 18 at the baseline assessment, the total age range for the current study is 14 to 25.

Procedures

The juvenile court in each site provided the names of eligible adolescents based on age and adjudicated offenses. Interviewers attempted to contact each eligible juvenile and his or her parent or guardian to obtain juvenile assent and parental consent. Once consents had been obtained, interviews were conducted in a facility (if the participant was confined), in the home, or in an agreed-upon location in the community. Once an adolescent turned 18, he or she was reconsented to continue to participate in the study.

After the baseline interview, each subsequent follow-up interview was completed in a 2-hour session. Interviewers and participants sat side-by-side facing a computer, and questions were read aloud to avoid comprehension or reading difficulties. Participants were informed that we had an obligation to maintain confidentiality from the federal government, which prohibited our disclosing any information obtained during the study to anyone outside the project staff. Youths were informed that the only exceptions to this promise of confidentiality were (a) if child abuse was suspected or if the participant (b) expressed plans to hurt himself or someone else, (c) had a specific plan to commit a crime in the future, or (d) disclosed that someone was in jail for a crime that the participant had committed. Interviews were conducted out of earshot of other individuals whenever possible. All recruitment and assessment procedures were approved by the institutional review boards of the participating universities.

Participants were re-interviewed every 6 months for 3 years following the baseline interview and were then interviewed annually for the remaining 4 years of the study. Follow-up interviews were conducted only if they could be completed within 6 weeks prior or 8 weeks after the target interview date corresponding to the desired 6 or 12 month interval. Participant compensation for interviews increased gradually over time to a maximum of $150 in order to minimize attrition. From the 6-month interview to the 84-month follow up, 249 individuals (70%) included in the present analyses completed all 10 interviews; 55 individuals (15.5%) completed 9 interviews; 18 individuals (5.1%) completed 8 interviews; 12 individuals (3.4%) completed 7 interviews, and 21 individuals (5.46%) completed 6 or fewer interviews.

Measures

Of interest to the present study are measures of antisocial behavior, current romantic relationship status, the stability of the romantic relationship, romantic partner deviant behavior, romantic partner antisocial influence, and the amount of time a youth spent in the community during each time interval (as opposed to being in an institutional setting) because this affects opportunity to engage in antisocial behavior (see Table 1 for descriptive information on key variables across time).

Antisocial behavior—Involvement in antisocial behavior was assessed with a modified version of the Self-Report of Offending (Huizinga, Esbensen, & Weiher, 1991). Participants reported if they had been involved in any of 22 different aggressive or income-generating antisocial acts (e.g., "Taken something from another person by force, using a weapon," "Carried a weapon," "Stolen a car or motorcycle to keep or sell," "Used checks or credit

cards illegally"). At the 6- through 36- month bi-annual interviews, these questions were asked with the qualifying phrase, "In the past 6 months, have you…" At 48- through 84-month annual interviews, these questions were asked with the qualifying phrase, "in the past 12 months have you…"

Proportional variety scores, a count of the number of different types of antisocial acts that an individual endorsed out of how many items a youth answered, were calculated at each time point. Variety scores are widely used in criminological research because they are highly correlated with measures of seriousness of antisocial behavior, yet are less prone to recall errors than self-reported frequency scores, especially when the antisocial act is committed in a frequent or ongoing manner, such as when selling drugs. Some have argued that variety scores and frequency scores represent the same propensity to engage in antisocial behavior, and given the problems associated with frequency scores, variety scores represent a preferred method of measuring antisocial behavior, particularly in a sample with high rates of antisocial behavior (Hindelang, Hirschi & Weis, 1981; Thornberry & Krohn, 2000).

Current romantic relationship—At each time point, participants were asked, "in the last "X" months, have you been in a serious romantic relationship?" Individuals responded yes or no. For those who answered "yes", a calendar was completed to indicate relationship status during each month. Relationship status was used as a time varying covariate.

Length of relationship was assessed by life calendar recall of when an individual had been involved with their primary romantic partner for greater than 2 weeks of the month (i.e., the majority of the month had been spent in a serious romantic relationship). At every follow-up interview, a "life calendar" was completed to gather relevant information for each month since the previous interview. Interviewers began by asking the youth to identify major life events, such as birth of a child, that had occurred since the prior interview. Participants were then asked if they had been involved in various activities since the last interview (e.g., "Were you in a serious romantic relationship at all?"). If the respondent's answer was positive, the interviewer went through the recall period month by month to determine in what month(s) the activity occurred. If a youth had a problem remembering the exact month of an occurrence, the interviewer would use major life events or information from other activity domains to help narrow the date (e.g., "Did this happen around your birthday? Or was it closer to when you moved?"). Based on the life calendar, participants reported on whether or not they were in a romantic relationship in each month and this data was used to calculate the length of time of the relationship. Relationships that lasted less than two weeks are considered transient; thus, they were not coded for their length or romantic partner characteristics. This variable was used as a time-varying covariate.

Romantic partner characteristics—If participants endorsed having had a "serious romantic relationship" since the previous interview, they were asked to report on two characteristics of their relationships: *partner deviance* and *partner antisocial influence*. These values were used as time-varying covariates in all statistical models.

Partner deviance was assessed by the participant's report on their romantic partner's engagement in 10 different deviant behaviors during the recall period (e.g., "Has [Name]

purposely damaged or destroyed property that did not belong to him or her?"; "Has [Name] hit or threatened to hit someone?"; "Has [Name] stolen something worth more than $100?"; "Has [Name] taken a motor vehicle or stolen a car?"). The measure was dichotomized to indicate any or no deviant partner behavior in the recall period.

Partner antisocial influence was assessed by self-report on seven questions about overt pressure by a romantic partner to engage in delinquent acts (e.g., "Has [Name] suggested that you should steal something?"; "Has [Name] suggested that you should sell drugs?"). Items were averaged, with higher scores indicting more antisocial encouragement.

Exposure time—Because incarceration can limit opportunity to engage in antisocial acts, failure to account for the time spent in the community, as opposed to a secure setting, can affect the identification of trajectories of antisocial behavior (Piquero et al., 2001). Youths reported on a calendar the number of days during the recall period that they had been in a detox or drug-treatment program, psychiatric hospital, residential treatment program, or secure institution. The proportion of time that an individual spent in an institutional setting during the recall period was calculated and used as a covariate in models.

Plan of Analyses

Analyses were conducted using SAS PROC MIXED (Singer, 1998). Analyses were based on age and were conducted in five steps. First, patterns of change (e.g., growth curves from multilevel modeling perspective) in antisocial behavior were estimated as a function of age. Age was assessed continuously based on the participants birthdate and the date of the interview, meaning that individuals could be any age between the ages of 14 and 25 (i.e., 14.0, 14.1, 14.2, 14.3, etc.). The advantage to this approach is that it allows for continuous analysis of developmental trends. For analytic purposes, we centered our analyses at age 15, so the intercept of our growth models can be interpreted as the level of antisocial behavior at age 15. Age 15 was selected because less than 53 individuals provided data prior to age 15. Second, we investigated how current relationship status (in a relationship or not) is associated with antisocial behavior across adolescence and early adulthood. Third, we tested how the length of a romantic relationship is associated with the trajectory of antisocial behavior by age. Fourth, we tested how romantic partner characteristics (partner deviance and partner antisocial influence) are related to antisocial behavior by age. Finally, we tested whether the magnitude of associations of partner deviance and partner antisocial influence with antisocial behavior are moderated by the length of the romantic relationship. All significant interactions were graphed using one SD above the mean and one SD below the mean as high and low values of the predictor variables. Given that the focus on this paper is on the sex differences in the impact of romantic relationships on antisocial behavior, in each step of the analyses we tested for an interaction between sex and the covariate in question, both with respect to the intercept of antisocial behavior as well as the rate of change in antisocial behavior with age.

For all analyses, the entire matched sample of individuals was used. In analyses investigating romantic relationship characteristics (i.e., length of relationship, partner antisocial deviance, antisocial influence), participants who were not in a relationship at a

given time-point had their relationship characteristic variables entered as missing. Thus, at any given time-point, regression estimates were based on observations for youth who were in a relationship at that time (92% of the sample reported a romantic relationship for at least one time point). However, using the Full Information Maximum Likelihood (FIML) estimation, all individuals were retained in the model. The advantage of FIML is that it allows for estimation with missing data, providing a powerful alternative to listwise deletion. Consequently, it protects against bias in analyses and is equivalent to multiple imputations (Graham, Olchowski, & Gilreath, 2007).

Notably, we conducted the analyses using the matched sample and repeated them using the matched sample but excluding individuals who were married. Over the course of the 7 years of the study, 14 males and 31 females were married at some point. The pattern of results was the same. Consequently, we present the findings using the entire matched sample.

Results

Descriptive Characteristics and Qualities of Romantic Relationships

Table 1 presents information about how variables in our sample changed across time. Note that each variable in our analyses is a time–varying covariate meaning that individuals may endorse a variable at some time points and not others. For example, a participant could report having a delinquent partner at the 6 month interview, but not at later time points. As can be seen in Table 1, a considerable proportion of youths (44-65% of males and 23-44% of females) were engaged in antisocial behavior at various times during the course of the study. Across assessments, between 37% and 52% of males, and 45% and 66% of females indicated having a current romantic partner. Participants reported a fair amount of negative partner characteristics, with 2-22% of males and 10-27% of females experiencing romantic partner antisocial influence at any given interview. Males and females did not differ in the likelihood of having a current romantic partner, the length of time in their current relationship, or in their reports of antisocial encouragement exerted by their partner.

Patterns of antisocial behavior across adolescence and early adulthood

Unconditional growth models indicated that antisocial behavior decreased linearly across adolescence (see Table 2, Model 1). Importantly, there was significant variance in the (a) intercept and (b) linear slope, indicating that there were significant individual differences in both the age 15 level of antisocial behavior and the rate of decline in antisocial behavior as individuals aged.

Next, we tested how males and females differed in patterns of antisocial behavior over age (see Table 2, Model 2; see Figure 1). Males reported significantly higher levels of antisocial behavior at age 15. There were no differences in the rate at which males and females declined in antisocial behavior over age. That is, males overall report greater antisocial behavior, but males and females decline in antisocial behavior at the same rate across adolescence and into early adulthood.

Impact of having a current romantic relationship

First we examined if being currently involved in a relationship was associated with the level of antisocial behavior at age 15 (i.e., intercept) or the rate of change in antisocial behavior across adolescence and early adulthood (i.e., slope). There was no evidence that being in a relationship was associated with the level or rate of change of antisocial behavior across development (see Table 3, Model 1).

Impact of relationship length

In the second conditional model (see Table 3, Model 2), we tested how romantic relationship length was related to the level of antisocial behavior at age 15 and the rate of change in antisocial behavior from adolescence to early adulthood (see Figure 2). The association between relationship length and antisocial behavior at age 15 was moderated by sex, such that for males being in a longer relationship was associated with higher age 15 delinquency, while for females the opposite was true: shorter relationships were linked with greater age 15 antisocial behavior. There was also a trend towards an interaction between the length of the relationship and sex on the rate of change in antisocial behavior over age, with the association of relationship length appearing to wane across development. Among females, those in shorter relationships declined in antisocial behavior more rapidly than those in longer relationships; among males, those in longer relationships declined in antisocial behavior more rapidly as they aged compared to those in shorter relationships.

Impact of romantic partner antisocial behavior on antisocial behavior

Next we tested how romantic partner deviance was related to patterns of antisocial behavior and if these associations varied based on sex. There was a significant effect of having a deviant romantic partner on the level of antisocial behavior at age 15, but not on the rate of decline in antisocial behavior from adolescence into early adulthood. Importantly, this effect varied based on sex (see Table 4, Model 1; see Figure 3). Having a romantic partner who is involved in delinquent behavior is associated with higher levels of antisocial behavior, and this relation is especially pronounced among males. Over time, however, males who have a deviant romantic partner decline in antisocial behavior, while females who are involved with deviant romantic partners exhibit no decline in antisocial behavior across adolescence and early adulthood. That is, across adolescence and young adulthood, the association between having a delinquent partner and engaging in delinquent behavior grows weaker for males, but having a delinquent partner remains a significant predictor of female delinquency across the same developmental period.

Subsequently we tested if the length of a romantic relationship moderated the link between romantic partner deviance and antisocial behavior, testing if this effect differed for males and females. Results indicated that length of romantic relationship did not moderate the effects of romantic partner deviance and sex on antisocial behavior (see Table 4, Model 2). That is, the impact of romantic partner deviance on male and female antisocial behavior is not affected by the length of time that an individual has been involved with that specific romantic partner.

Impact of romantic partner antisocial influence on antisocial behavior

A similar pattern emerged when examining the effects of romantic partner antisocial influence on antisocial behavior (Table 5, Model 1; Figure 4). At age 15, individuals with a romantic partner who was high in antisocial influence had significantly higher levels of antisocial behavior, and this was especially true among males. However, as males age, they become less influenced by romantic partner encouragement of deviant behavior, whereas females become remain vulnerable to romantic partner encouragement of antisocial behavior, demonstrating maintenance of antisocial behavior when exposed to high levels of romantic partner antisocial influence.

Finally, we tested if the length of time in a romantic relationship moderated the association between romantic partner antisocial influence and sex on antisocial behavior (see Table 5, Model 2). We found evidence that length of the romantic relationship moderated the association between romantic partner antisocial influence on antisocial behavior, but this effect varied for males and females. We present these findings in Figure 5; although analyses were conducted with males and females in the same model, we have presented the results of the model separately for males and females so that the effects are more easily interpreted (see Figure 5a for males; Figure 5b for females).

Among males, reporting longer romantic relationships or partner's high in antisocial influence is associated with higher antisocial behavior, those with long relationships *with* partners high in antisocial influence report the greatest antisocial behavior. As males age, however, both of these groups demonstrate declines in antisocial behavior, suggesting that length of one's romantic relationship and the antisocial behavior of one's romantic partner are more important for antisocial behavior during mid-adolescence than in late adolescence or early adulthood among males (see the solid lines and dashed black line in Figure 5a relative to the dashed gray line).

Among females, shorter romantic relatoinships or having a partner with antisocial influence is linked to greater antisocial behavior at age 15. Across development, females with partners high in antisocial influence report elevated levels of antisocial behavior. However, females who have short relationships with partner high in antisocial influence actually show increases in antisocial behavior as they age, while those who have long relationships with partners high in antisocial behavior have stable levels of antisocial behavior across the transitoin to adulthood (see the solid gray line in Figure 5b compared to the solid black line). Conversely, females with partner's with low antisocial influence report declines in antisocial behavior and, for these females, differences between short and long relationship dissapear by age 22 (see the dashed lines in Figure 5b).

Discussion

Characteristics of one's romantic partner are linked to developmental differences in antisocial behavior across age, and there are important sex differences in this association. Some aspects of our results are not surprising and reinforce previously reported findings. We find that boys exhibit more antisocial behavior than girls, even in a matched sample of serious offenders. Overall, we see that levels of antisocial behavior decrease with time.

Though this is well-documented among boys (Monahan, Steinberg, Cauffman, & Mulvey, 2009; Monahan, Steinberg, Cauffman, & Mulvey, 2012; Mulvey et al., 2010), the similar rate of decline in offending observed among girls is noteworthy because patterns of serious female offending have received significantly less attention in long-term prospective studies. Our study also indicates, unsurprisingly, that having a romantic partner who is antisocial or who encourages antisocial behavior does, in fact, lead to higher levels of such antisocial behavior, regardless of age or sex. It is noteworthy, however, that the effect of outright encouragement of antisocial behavior was generally found to be as great as, or stronger than, the effect of merely setting a bad example.

When we examine how antisocial behavior varies with age, sex, and relationship characteristics (such as partner behavior, antisocial encouragement, and relationship length), several significant sex differences emerge. Among males, romantic partners who are high in antisocial behavior or antisocial influence are linked to greater antisocial behavior during early adolescence, but as males age, their antisocial behavior becomes less susceptible to these characteristics of their romantic partners. During adolescence, females are also vulnerable to the characteristics of their romantic relationships. Females with deviant partners are more likely to offend than those with non-deviant partners, regardless of age. However, in contrast to males, females *remain* vulnerable to romantic partner deviant behavior across the transition to adulthood and become *increasingly* vulnerable to their partners' antisocial influence as they progress from adolescence into early adulthood. That is, romantic partner characteristics matter most for males during early adolescence, but they matter most for females later in development.

Sex differences are also evident in the effect of relationship length on antisocial behavior. Among males, relationship length has little effect on antisocial behavior over time. For females, however, relationship length interacts significantly with the antisocial influence of one's partner. Females with partners who encourage antisocial behavior exhibit increasing levels of offending with age, while those with partners who do not encourage such behavior exhibit decreasing levels of offending with age. But in each case, the magnitude of this effect is largest for females in shorter romantic relationships. Given that females may be especially oriented towards romantic relationships (Moretti, DaSilva, & Holland, 2004), failure to develop long-lasting intimate romantic relationships, and engaging in failed relationships with "bad influences," may be especially salient predictors of persistent antisocial behavior among females. Alternatively, if the effects of partner socialization are strongest in the beginning of a relationship (Tamb & Moum, 1992), repeated short relationships will maximize socialization by romantic partner.

The most intriguing result of the present study is that, during adolescence, males appear to be more strongly influenced by their romantic partners than females, at least with respect to antisocial behavior at age 15, but that this pattern reverses in early adulthood. We suspect that this may be due to sex differences in the development of autonomy. Specifically, much research has documented that females tend to have greater psychosocial maturity during adolescence compared to males (Cauffman & Steinberg, 2000), including a greater resistance to the negative influences of peers (Steinberg & Monahan, 2007). Given this, we might expect that during adolescence, females should be less influenced by their social

relationships. On the other hand, other research suggests that romantic relationships are particularly salient for the maintenance and escalation of antisocial behavior for females (Moffitt et al., 2001) and it has been theorized that females should be especially sensitive to romantic partner characteristics (Moretti, DaSilva, & Holland, 2004). Our results appear to suggest that the influence of romantic relationships grows as females enter young adulthood, while males tend to "catch up" in their development of autonomy, and become less susceptible to partner influence.

Our study also found that, among females, but not males, relatively shorter romantic relationships amplify the effect of a partner's antisocial encouragement (or lack thereof) on offending during young adulthood. This may be yet another manifestation of the increased salience of romantic relationships during late adolescence and young adulthood for female offending, since shorter romantic relationships may either cause (or be caused by) an increase in the perceived importance of such relationships, and a correspondingly increased sensitivity to the suggestions of a romantic partner. While the exact mechanism is unclear, it seems most likely that romantic relationship length is not a root cause itself, but rather a correlate of personal characteristics that increase the susceptibility of female offenders to influence of their partners.

In contrast to the findings of Sampson and Laub's (1993) analyses of Gluek and Gluek's data, we find no evidence that simply being in a romantic relationship, as compared to not, is positively or negatively associated with antisocial behavior. There are a few reasons that this may be the case. First, we examine the effects of romantic relationships, not marriage. Second, the present study focuses on seriously delinquent youth, a much more at-risk sample than that considered by Gluek and Gluek. A sample of more serious offenders may, due to partner selection effects, imply a more deviant or antisocially encouraging group of romantic partners, the influence of which could negate any putative benefit of "being in a relationship" more generally. Moreover, our data examine youth of multiple race and ethnicities, while Sampson and Laub's analyses focused solely on White males. Finally, our measure of antisocial behavior includes much more serious delinquent acts than the measures utilized in the Sampson and Laub study. Nevertheless, our results indicate that, as hypothesized, the characteristics of a partnership matter more than whether or not one simply happens to be in a relationship. Furthermore, given that the associations between romantic partner characteristics (deviance and antisocial influence) and antisocial behavior vary both developmentally and by sex, future research attempting to understand the association of romantic relationships with developmental patterns of antisocial behavior should take such interactions into account.

The present study has a number of strengths. We have a prospective sample of seriously delinquent females from adolescence to young adulthood, a population and developmental period that is rarely studied. Given the nature of our data set, we are able to create a matched sample of males and to make comparisons between males and females. From a measurement perspective, we also have very specific life calendar data about offending, partner deviance, and length of romantic relationships, which allows us greater confidence in our findings. It is also the case that the longitudinal nature of our data set allows us to untangle how romantic relationships may incur differential risk in different developmental periods.

Nevertheless, there remain a few limitations of this study. First, although the present study examines these relations among high-risk, low socioeconomic status youth, the sample comprises only juvenile offenders, and it is important to examine whether this pattern of results extends to high-risk youth in general, the majority of whom are not antisocial. Indeed, the findings of this study stand in contrast to other studies of less at-risk youth (Glueck & Glueck, 1950, 1968). Whether this difference is due to sample or measurement methods remains an important point of clarification for future research. Second, our analyses are based on a limited number of seriously delinquent youth, and generalizability to less delinquent samples is unclear. However, for theoretical investigations of processes of criminal desistance, it is difficult to imagine a more ideal sample than one of seriously delinquent individuals. Third, the types of antisocial behavior studied here are generally serious indicators of antisociality, and examining less serious antisocial behaviors may yield different findings. Fourth, our measure of romantic partner deviant behavior is based on life calendar data. The advantage of this is that it allows a specific measure of whether or not individuals had a romantic partner involved in deviant behavior. Nevertheless, the life calendar method is subject to recall biases, as is any retrospective method. However, because interviewers carefully anchored recollections around a youth's other major life events, and because subjects were interviewed often, we are confident that issues with memory recall have been minimized. Finally, our measures are based on self-reported data, and the variety of antisocial behavior is correlated with official arrest data (Brame, Fagan, Piquero, Schubert, & Steinberg, 2004). We have no similar validation for our measures of romantic relationships, such as corroboration by romantic partners. While it could be that these variables are biased, we have no reason to believe that the variables are unreliable, especially in a manner that would lead to the pattern of results observed here.

In summary, this study highlights the importance of romantic relationships as potential sources of antisocial influence among juvenile delinquents. Our finding that romantic partner's antisocial influence contributes to females' antisocial behavior is in line with current understandings. However, the fact that this is also true for males sheds light on the particular importance of romantic relationships for youth regardless of sex and calls for further work on this unique contextual influence. Indeed, appreciating the bidirectional influence of romantic partners is much more in line with progressive views of development, moving past the simplistic assumption that males negatively influence females while females positively influence males. Finally, the age-dependent effects of partner delinquency and antisocial influence call for theories of delinquency that take into account the developmentally-changing landscape of romantic relationships in adolescence and young adulthood.

Acknowledgments

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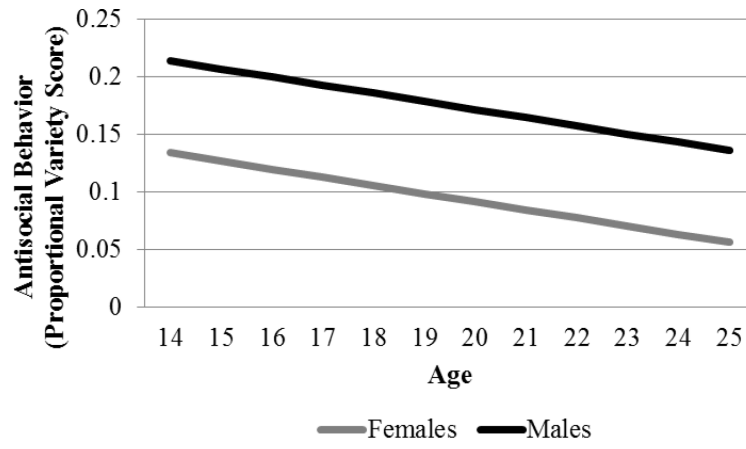
Figure 1.
Developmental Changes in Antisocial Behavior over Age as a Function of Sex

Figure 2.
Developmental Changes in Antisocial Behavior as a Function of Relationship Length and Sex
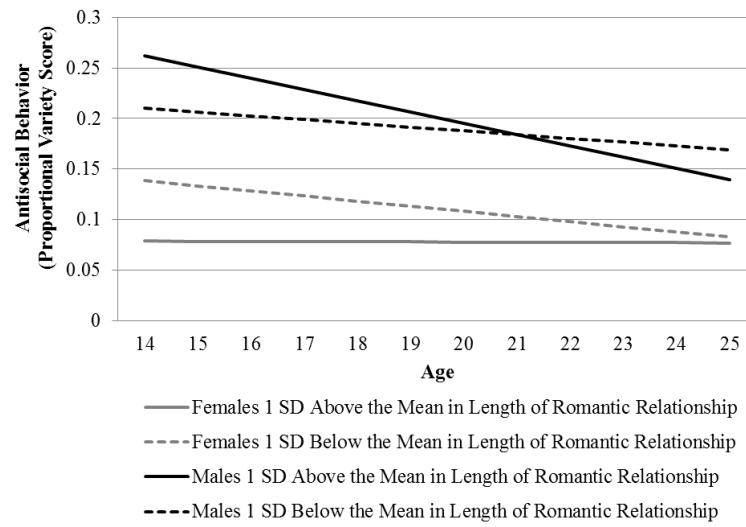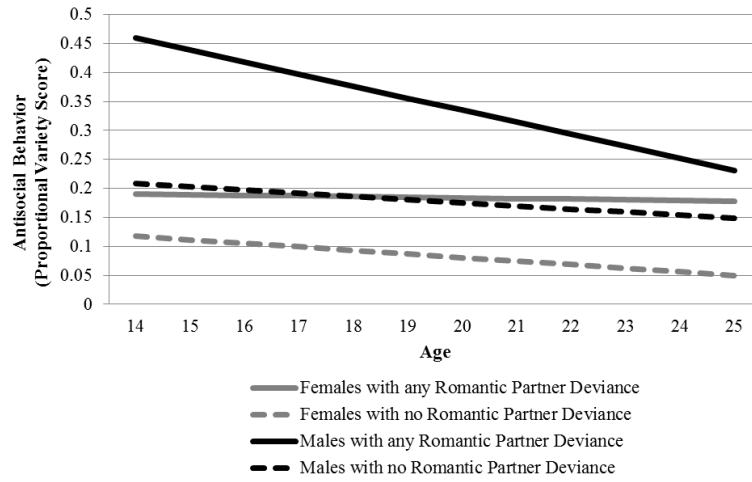
Figure 3.
Developmental Changes in Antisocial Behavior as a Function of Romantic Partner Deviance
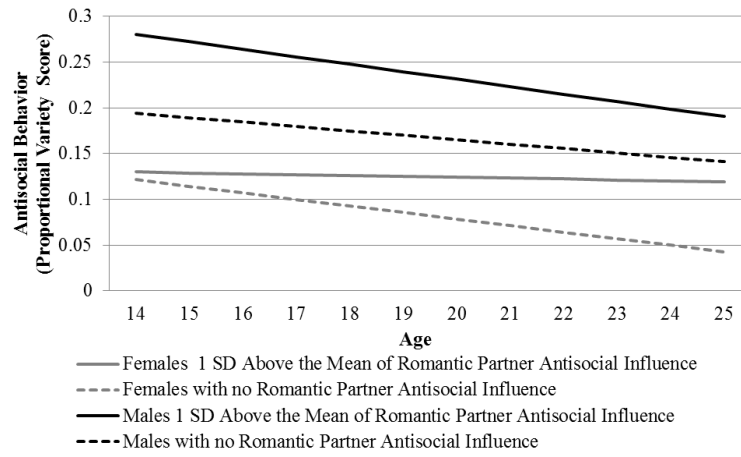and Sex

Figure 4.
Developmental Changes in Antisocial Behavior as a Function of Romantic Partner
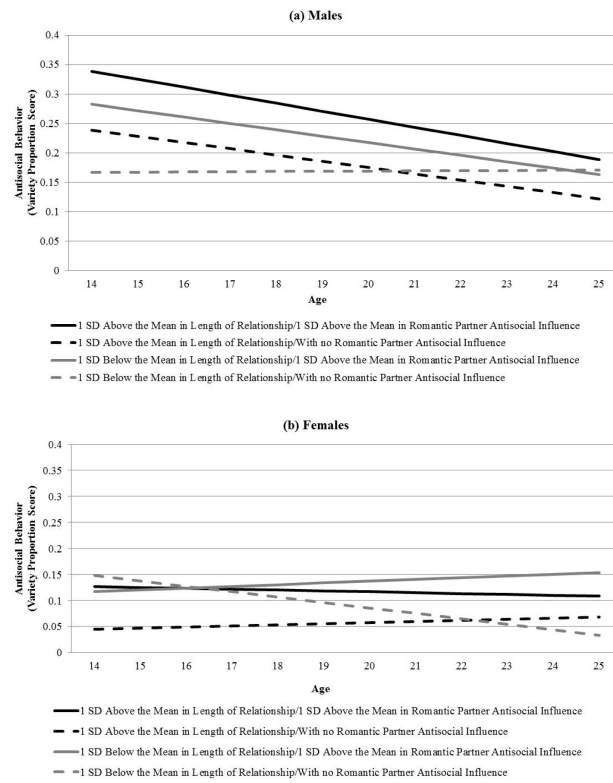Antisocial Influence and Sex

Figure 5.
Developmental Changes in Antisocial Behavior as a Function of Relationship Length, Romantic Partner Antisocial Influence, and Sex

Table 1

Descriptive Statistics of Key Variables

					Follow-up interview time from baseline					
	6 m	12 m	18 m	24 m	30 m	36 m	48 m	60 m	72 m	84 m
Males										
Percent reporting any antisocial behavior	65%	58%	51%	49%	44%	45%	50%	47%	50%	46%
Percent with current romantic partner	37%	38%	41%	41%	40%	40%	49%	46%	52%	51%
Percent with a romantic partner with any deviance	11%	4%	10%	2%	5%	7%	9%	9%	6%	7%
Percent reporting any romantic partner antisocial influence	26%	11%	23%	18%	19%	21%	12%	22%	15%	19%
Mean percent recall period in relationship	75%	81%	82%	78%	79%	82%	77%	79%	80%	87%
Females										
Percent reporting any antisocial behavior	44%	32%	32%	29%	28%	28%	30%	28%	23%	25%
Percent with current romantic partner	45%	47%	56%	59%	61%	66%	64%	65%	58%	55%
Percent with a romantic partner with any deviance	22%	14%	19%	15%	13%	17%	14%	13%	10%	13%
Percent reporting any romantic partner antisocial influence	27%	19%	19%	26%	22%	21%	21%	19%	22%	22%
Mean percentage recall period in relationship	84%	85%	86%	86%	86%	85%	78%	82%	83%	82%

Table 2

Unconditional and Conditional Growth Models of Antisocial Behavior

Effect	Model 1 unconditional model		Model 2 conditional model	
	B	*SE*	*B*	*SE*
Fixed effects				
Intercept	.164**	.009	.121**	.014
Proportion of street time	–		.005	.010
Sex	–		.080**	.018
Linear slope	−.007**	.001	−.007**	.002
Sex	–		<.001	.003
Random effects				
Intercept	.015**	.002	.014**	.002
Linear slope	<.001**	<.001	<.001**	<.001
Level 1 error	.020**	.001	.020**	.001
Model fit				
−2 log likelihood	−2726.8		−2767.3	
Akaike's information criterion	−2714.8		−2749.3	
Bayesian information criterion	−2691.6		−2714.6	

Note. Dashes indicate the parameter was not estimated.

**
p<.01.

Table 3

Romantic Relationship Status and Length of Relationship Conditional Growth Models of Antisocial Behavior

Effect	Model 1 romantic relationship status		Model 2 relationship length	
	B	**SE**	**B**	**SE**
Fixed effects				
Intercept	.124**	.017	.199**	.031
Proportion of street time	.002	.010	−.039**	.014
Sex	.064**	.021	.024	.043
Current romantic relationship	−.001	.018	−	
Current romantic relationship x sex	.043	.026	−	
Relationship length	−		−.008*	.004
Relationship length x sex	−		.014**	.007
Linear slope	−.005**	.003	−.007**	.005
Sex	.001	.004	.007	.008
Current romantic relationship	−.003	.003	−	
Current romantic relationship x sex	−.002	.005	−	
Relationship length	−	.001		.001
Relationship length x sex	−		−.002+	.001
Random effects				
Intercept	.013**	.002	.015**	.003
Linear slope	<.001**	<.001	<.001**	<.001
Level 1 error	.020**	.001	.020**	.001
Model fit				
−2 log likelihood	−2776.0		−1738.4	
Akaike's information criterion	−2750.0		−1712.4	
Bayesian information criterion	−2699.9		−1662.8	

Note. Dashes indicate the parameter was not estimated.

**
  p<0.01.

*
 p<0.05.

+
 p=0.06.

Table 4

Conditional Growth Models of Romantic Partner Deviance and Relationship Length and Antisocial Behavior

Effect	Model 1 partner deviance		Model 2 partner deviance x rel. length	
	B	*SE*	*B*	*SE*
Fixed effects				
Intercept	.147**	.018	.214**	.032
Proportion of street time	−.036**	.014	−.036	.014
Sex	.092**	.022	−.011	.043
Romantic partner deviance	.078**	.030	−.146*	.077
Relationship length	−		−.012**	.005
Romantic partner deviance x sex	.158**	.058	.257+	.138
Relationship length x sex	−		.018**	.007
Romantic partner deviance x relationship length	−		.035**	.013
Romantic partner deviance x relationship length x sex	−		<−.001	.025
Linear slope	−.006**	.002	−.015**	.007
Sex	<.001	.003	.019*	.008
Romantic partner deviance	.005	.006	.058**	.015
Relationship length	−		.002**	.001
Romantic partner deviance x sex	−.020+	.011	−.073**	.027
Relationship length x sex	−		−.003**	.001
Romantic partner deviance x relationship length	−		−.008**	.002
Romantic partner deviance x relationship length x sex	−		.005	.004
Random effects				
Intercept	.012**	.003	.011**	.003
Linear slope	<.001	<.001	<.001	<.001
Level 1 error	.019**	.001	.019**	.001
Model fit				
−2 log likelihood	−1837.7		−1868.5	
Akaike's information criterion	−1811.7		-1826.5	
Bayesian information criterion	−1762.1		−1746.4	

Note. Dashes indicate the parameter was not estimated.

**
p<0.01.

*
p<0.05.

+
p=0.06.

Table 5

Conditional Growth Models of Romantic Partner Antisocial Influence and Relationship Length and Antisocial Behavior

Effect	Model 1 antisocial influence		Model 2 ant. influence x rel. length	
	B	*SE*	*B*	*SE*
Fixed effects				
Intercept	.161**	.018	.231**	.031
Proportion of street time	−.046**	.014	−.048**	.013
Sex	.075**	.022	−.046	.043
Romantic partner antisocial influence	.105	.073	−.461**	.162
Relationship length	−		−.013**	.005
Romantic partner antisocial influence x sex	.487**	.138	.234**	.325
Relationship length x sex	−		.021**	.007
Romantic partner antisocial influence x relationship length	−		.096**	.027
Romantic partner antisocial influence x relationship length x sex	−		−.104+	.057
Linear slope	−.007**	.002	−.017**	.006
Sex	.002	.003	.022**	.008
Romantic partner antisocial influence	.044**	.015	.161**	.034
Relationship length	−		.002**	.001
Romantic partner antisocial influence x sex	−.068**	.027	−.270**	.064
Relationship length x sex	−		−.003**	.001
Romantic partner antisocial influence x relationship length	−		−.018**	.005
Romantic partner antisocial influence x relationship length x sex	−		.026**	.009
Random effects				
Intercept	.012**	.003	.012**	.003
Linear slope	<.001	<.001	<.001	<.001
Level 1 error	.018**	.001	.018**	.001
Model fit				
−2 log likelihood	−1903.2		−1930.9	
Akaike's information criterion	−1877.2		−1888.9	
Bayesian information criterion	−1827.7		−1808.8	

Note. Dashes indicate the parameter was not estimated.

** $p<0.01$.

* $p<0.05$.

+ $p = 0.06$.