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# “If I Get Locked Up, I Get Locked Up”: Secondary Control and Adjustment Among Juvenile Offenders

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*This study examined relations between two types of control (primary and secondary) and the psychological and community adjustment of adolescent offenders. Prior to release from confinement, 279 male adolescent offenders were interviewed about their control beliefs and a number of adjustment variables, including emotional/behavior problems, feelings of despair, expectations to avoid recontact with the law, and recognition of costs for reoffending. In addition, probation officers were interviewed regarding the participants' adjustment to the community 8 weeks following their release and official records were searched for a 6-month period to determine the nature and timing of any reincarcerations. Secondary control was significantly associated with maladjustment for all psychological and behavioral outcomes. When predicting reincarceration, this relationship was qualified by a significant interaction with primary control, such that those who recidivated the soonest had high levels of both primary and secondary control. These data suggest that secondary control beliefs may be maladaptive among adolescent offenders, particularly when perceived primary control is high.*

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**P**eople who feel that they have control over stressful events experience better adjustment. This relationship has been demonstrated in numerous contexts, including coping with chronic illness (e.g., Taylor, Helgeson, Reed, & Skokan, 1991), recovering from traumatic experiences such as rape (e.g., Janoff-Bulman, 1979), managing academic challenge (e.g., Findley & Cooper, 1983), and establishing new friendships in unfamiliar settings (e.g., Lopez & Little, 1996). Indeed, a common theme underlying most theories of control is that when people believe that they have control over outcomes, they initiate activity, exert effort, and persist in the face of failure or other setbacks. In contrast, individuals who appraise their outcomes as largely uncontrollable tend to withdraw or otherwise become passive, depressed, and pessimistic.

Because stressful events differ in the degree to which they are modifiable by instrumental activity, refinements to theories of control have attempted to explain how individuals successfully adapt in circumstances where their opportunities to influence outcomes are limited. Relevant to this analysis is a distinction between primary and secondary control introduced by Rothbaum, Weisz, and Snyder (1982). Primary control refers to attempts to change one's outcomes (e.g., "I can control how much danger I will face in my neighborhood"). It focuses on attempts to alter the environment to fit with the self. The control literature has traditionally emphasized this form of efficacious behavior. Secondary control is the sense of control derived from accepting or adjusting to existing realities (e.g., "Living with danger is just the way it is in my neighborhood"). It is concerned with attempts to change the self or one's views to fit in with the environment. It can entail adjusting one's expectations to avoid disappointment, aligning oneself with luck or powerful others, or finding meaning in uncontrollable experiences. Although secondary control may at times be accompanied by what appears to be passivity or withdrawal, it is different from relinquishing control, which would involve no attempts to change the self or the environment (Rothbaum et al., 1982).

Much of the literature employing this distinction between changing reality (primary control) and accept-

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ing reality (secondary control) has focused on secondary control as an adaptive process in adjustment to chronic illness. For example, secondary control has been associated with lower levels of distress among children with leukemia (Weisz, McCabe, & Dennig, 1994), HIV-positive men (Thompson, Nanni, & Levine, 1994), and women with breast cancer (Carver et al., 1993). It has been proposed that secondary control acts largely as a buffer in the absence of high primary control and thus is beneficial when primary control is low (e.g., Heckhausen & Schulz, 1995). Accepting one's situation as determined by powerful outside forces might protect the individual from the negative affect and helplessness that often accompany perceptions of diminishing control. But in situations where primary control is high, secondary control would be relatively unimportant. In support of this interaction hypothesis, Thompson et al.'s (1994) study of HIV-positive men found that high secondary control was associated with decreased depression among those with low primary control but only weakly related to adjustment when primary control was high. The buffering effect of secondary control has not consistently been documented and may depend on other factors, such as the objective controllability of the situation. In a subsequent study of HIV-positive men who were also prison inmates (a situation of extreme low control), Thompson, Collins, Newcomb, and Hunt (1996) reported that secondary control was related to more rather than less psychological distress when perceived primary control was low, suggesting that acceptance of reality when opportunities for control are greatly compromised may precipitate feelings of helplessness.

Other analyses have further specified conditions under which secondary control may be maladaptive. Heckhausen and Schulz (1995) proposed that secondary control would be dysfunctional if it undermined primary control efforts, and there is empirical research in support of this hypothesis. For example, Band and Weisz (1990) found that secondary control was negatively related to medical adjustment among adolescents suffering from diabetes, an illness largely controllable by the youth's behaviors. In addition, findings from a study of cardiac patients indicate that perceptions of vicarious secondary control (i.e., accepting that other people control the course of the illness) were positively related to medical adjustment among patients receiving invasive treatments regulated by physicians but negatively related to adjustment among those who controlled their own treatment (Helgeson, 1992). In both of these studies, accepting and adjusting to the circumstances may reduce attempts to modify factors within the patient's control. Such findings bear some resemblance to the goodness-of-fit hypothesis that has been proposed in the stress and coping literature (e.g., Forsythe & Compas,

1987; Terry & Hynes, 1998; Vitaliano, DeWolfe, Maurio, Russo, & Katon, 1990). Successful adjustment in the face of stress occurs when individuals attempt to change those stressors over which they have some control but adapt to (accept) those stressors over which they have little control.

Because the focus in the secondary control literature has been on adjustment to chronic medical conditions, less is known about the impact of secondary control processes in a wider array of stressful circumstances encountered by more diverse populations. In the research reported here, we draw on the primary-secondary control distinction to examine adjustment among ethnic minority adolescent offenders, a population that has largely been neglected in the psychological literature on control. Juvenile offenders experience enormous stress associated with the loss of freedom and autonomy that incarceration brings. Following release, moreover, probation can place further restrictions on their freedom and choices, including whether they live with their parents, where they attend school, what they may wear, where they may go and when, and with whom they may associate. Thus, the unique experiences of coping with incarceration and subsequent probation provide a compelling context for studying the effects of control beliefs on adaptive functioning.

There is some evidence that primary control is associated with better adjustment among adolescent offenders. Studies predicting delinquency among general student groups (e.g., Lau & Leung, 1992; Peiser & Heaven, 1996; Young, 1992) and comparisons of control beliefs in offender and nonoffender groups (e.g., Parrott & Stongman, 1984; Valliant, Asu, & Howitt, 1983) suggest that delinquent behavior is elevated among those with low perceived control when control is operationalized as the more traditional primary type. One study that was confined to an offender population reported that delinquents with high primary control had fewer prior police contacts than did other offenders (Kumchy & Sayer, 1980). Offenders with high levels of primary control apparently made efforts to minimize repeated encounters with the law.

On the other hand, consistent with evidence that secondary control can be maladaptive in controllable situations, it is possible that secondary control is associated with negative outcomes for adolescent offenders. Inner-city juvenile offenders often come from neighborhoods characterized by widespread poverty, unemployment, and high crime rates. Some youth may accept confronting danger and being involved in criminal activity as features of living in such environments (see Quay, 1987). Accordingly, selling illicit substances or stolen goods may be seen as the only way to earn money, and becoming involved in violent activity may be seen as the only

way to protect oneself. In this manner, secondary control may undermine attempts to take control over the situation. Much anecdotal commentary and some evidence from ethnographic research underscore how adolescent delinquents rationalize their choices as part of accepting the vagaries of their life circumstances (e.g., Humes, 1996). As one of our own research participants, a 14-year-old repeat offender, so poignantly disclosed, "That's just the way it is out there. You do what you have to do. If I get locked up, I get locked up."

#### *The Present Research*

Our study explored how primary and secondary control were related to the adjustment of inner-city, minority, male adolescents who were incarcerated in a juvenile detention camp. The adjustment outcomes examined were both psychological (e.g., negative emotionality, expectations for success) and behavioral (e.g., rate of recidivism). The study is noteworthy in two respects. First, we examined psychosocial variables that predict recidivism among adolescent offenders. Although there has been a recent move toward examining psychological factors, much of the recidivism research has focused on age of first arrest, offense history, and other legal variables (Hoge, Andrews, & Leschied, 1996).

The second noteworthy feature is that we recruited a predominantly minority sample. Most of the research in both the control and the juvenile delinquency literatures has been conducted on primarily Caucasian samples. Yet there is evidence that the factors that predict juvenile offender outcomes differ between minority and majority groups (Wierson & Forehand, 1995). Furthermore, the manner in which control is related to adjustment among ethnic minority populations is poorly understood, in part because many of the linkages predicted by the control literature have not been supported in ethnic minority populations. For example, in a review of empirical research that examined the relations between perceived control and outcomes in the achievement domain, Graham (1994) documented that internal control (closely akin to the primary type) was largely unrelated to achievement strivings in African American children and young adults, as compared to the expected control-high achievement relations documented for White respondents. Similarly, in their study of HIV-positive prison inmates, Thompson et al. (1996) reported that neither primary nor secondary control was correlated with adjustment among their subsample of African American respondents. There also is evidence from cross-national research comparing Asian and Western samples that cultural factors undermine control-adjustment linkages. For example, it has been argued that the more collectivist cultures in Asian society attach less importance to individual freedom and autonomy,

which are the hallmarks of primary control (see Markus & Kitayama, 1991; Weisz, Rothbaum, & Blackburn, 1984). Thus, levels of primary control have been found to be both lower among Asian samples and less predictive of psychological adjustment (Sastry & Ross, 1998). Such findings raise the question of whether beliefs about personal efficacy and changing reality are meaningful predictors of adjustment among American ethnic groups, such as African Americans, who historically have had fewer opportunities to influence events in their lives and among non-Western groups, such as Asians, whose cultural system downplays the importance of individual efficacy. Because most of these literatures have not been concerned with the role of secondary control processes, the present study might shed light on the broader issue of the cross-cultural generality of perceived control—adjustment relations.

We explored the role of primary and secondary control in the context of family functioning and criminal history, two known predictors of adolescent offender adjustment (Bourdin, Pruitt, & Henggeler, 1986; Lattimore, Visher, & Linster, 1995; Loeber & Dishion, 1984; Tolan, 1988). Our adjustment variables included self-reports of psychological distress, expectancy about the likelihood of future contact with the law, recognition of the costs of offending, and two postincarceration behavioral adjustment measures. Participants' probation officers rated their community adjustment during the first 2 months following their release from confinement, and participants were followed for a period of 6 months after their release to determine if they recidivated.

Consistent with prior research, we expected that low family functioning and chronic offending would be predictive of poor psychological and behavioral adjustment. We also predicted that high primary control would be linked to better adjustment; however, in light of prior research with ethnic minority populations, we anticipated that these relations would be relatively weak. Our approach to secondary control was more exploratory. Because the adaptiveness of this type of control is less clear even in research with nonminority populations, no directional hypotheses were proposed. Thus, one of the important goals of the study was to document the role of secondary control in the adjustment of adolescent offenders.

#### METHOD

##### *Participants*

Participants were 300 13- to 19-year-old ethnic minority males with imminent release dates (less than 1 month) from two detention camps operated by the Los Angeles County Probation Department. These camps house adolescents who have been found guilty by the

Juvenile Court of a variety of offenses, including misdemeanors (e.g., vandalism) and serious felonies (e.g., robbery, assault). Very chronic offenders and those found guilty of the most serious offenses (e.g., rape, murder) typically fall under the jurisdiction of the California Youth Authority and are not housed in these camps. All camp residents with upcoming release dates were invited to participate. The refusal rate was low (4%), with only 13 of 313 recruits declining participation.

The majority of participants were Latino (48%) and African American (30%), with the remainder being other ethnic minorities (15%) and Caucasian (7%). They were on average 17 years of age ( $M = 16.82$ ,  $SD = 1.13$ ) and had been convicted of their first offense at a mean age of 14 ( $M = 13.87$ ,  $SD = 1.78$ ). They had been incarcerated an average of three times ( $M = 3.21$ ,  $SD = 1.84$ ) and had served a mean of 8 months ( $M = 7.72$ ,  $SD = 2.80$ ) prior to being interviewed. All participants were fluent English speakers, and all interviews were conducted in English by one of four interviewers.

#### *Procedures*

The interview protocol was administered in two sessions held 1 week apart. (Data on other variables pertaining to beliefs about aggression, neighborhood characteristics, and peer affiliations are not reported in this study.) There was a small amount of attrition between interview sessions due to release dates being changed to earlier dates ( $n = 8$ ), participants being held in solitary confinement until release ( $n = 5$ ), participants' work placements interfering with interview dates ( $n = 6$ ), and other reasons ( $n = 4$ ). Data analysis was conducted on the 279 participants who completed both interviews. There were no differences between included and excluded participants in ethnicity, age, or criminal history.

All interviewers were African American females, including the authors and two graduate students. Participants were interviewed in groups of four to six during the school day. Consent for all participants was granted by the presiding juvenile court judge of the County of Los Angeles, who serves as the legal guardian for all wards of the court. Participants were fully informed about the study and provided their assent. Each participant was given a binder with a copy of the questionnaire. Each question was read aloud by one of the interviewers while respondents read along and wrote their responses in their booklets. No teachers or probation officers were present during interviews.

#### *Predictor Variables*

*Chronicity of offending.* A chronic offending index was created based on information gathered from official records held by the Los Angeles County Probation

Department. The total number of prior incarcerations, prior arrests, and the age of first arrest (reverse scored) were standardized and summed. Higher numbers on this index are indicative of more frequent and earlier onset of contact with the law.

*Family functioning.* Two nine-item subscales from the Family Environment Scale (FES) (Moos & Moos, 1981) were used to assess family functioning. The cohesiveness scale assesses the amount of commitment, help, and support that family members provide for each other (e.g., "There is a feeling of togetherness in our family"). The conflict subscale measures the degree to which anger is openly expressed and there is conflict among family members (e.g., "We fight a lot in our family"). Participants responded using a true-false format. Responses were summed so that higher numbers indicated higher levels of cohesion and lower levels of conflict. Internal consistency was moderately high ( $\alpha = .76$ ).

*Control beliefs.* There is no universally agreed upon way to operationalize primary and secondary control. Hence, these constructs have been measured in disparate ways across different studies, ranging from single-item assessments of each control type separately (e.g., Helgeson, 1992) to multiple-item ratings of a combined primary-relative-to-secondary control scale (e.g., Band & Weisz, 1990) and ranging from studying the two types of control as appraisals (e.g., Thompson et al., 1994) to conceptualizing them as coping strategies (e.g., Thurber & Weisz, 1997). We chose to focus on the general meaning of primary control as influencing reality and of secondary control as accepting reality. Control beliefs of incarcerated adolescents in this study were measured with instruments adapted from those used by Thompson et al. (1996) with incarcerated adults. Primary and secondary control were each measured with three items. To assess perceptions of primary control, respondents were asked the following: "How much control do you have over how much danger you will face?" "How much control do you have over how much trouble you will get into?" and "How much control do you have over what kind of life you will have?" Answers were reported on 5-point scales ranging from 1 (*none*) to 5 (*a lot*).

Secondary control was measured by asking respondents to indicate the degree to which they merely accepted each of the same three outcomes (i.e., "How much do you accept and how much do you try to change how much danger you will face?" "How much do you accept and how much do you try to change how much trouble you will get into?" and "How much do you accept and how much do you try to change what kind of life you will have?"). These questions were answered on 5-point rating scales anchored at 1 (*I try to change it*) and 5 (*I accept the way things are*) and at the midpoint with 3 (*I don't*

*accept it and don't try to change it*). Our anchors for the secondary control scales deviated from those used by Thompson et al. (1996) because during pilot testing our adolescent respondents had difficulty responding to items that more closely paralleled Thompson et al. After much piloting, we opted for the present anchors as those that best captured the meaning of secondary control in a manner that was understandable to our research participants. We acknowledge, however, that the numerically low end of the scale is more akin to primary control and thus the instrument is actually a measure of relative secondary control.

Reliability estimates were moderate for primary ( $\alpha = .56$ ) and secondary control ( $\alpha = .69$ ). The average inter-item correlations were  $r = .29$  for primary control and  $r = .46$  for secondary control. Briggs and Cheek (1986) suggest that item intercorrelations between .2 and .4 indicate adequate interitem consistency. Thus, the modest alpha coefficients for primary and secondary control are more indicative of the few items employed than of poor internal consistency.

#### *Psychological Adjustment Outcomes*

*Emotional/behavioral problems.* Internalizing and externalizing problems were measured using a shortened version of Achenbach and Edelbrock's (1979) Youth Self-Report (YSR-shortened) designed by factor analytic techniques for delinquency research (Lizotte, Chard-Wierschem, Loeber, & Stern, 1992). The trimmed version of the internalizing and externalizing subscales correlate highly with their corresponding full subscales (mean  $r = .94$  and  $.96$ , respectively). The current study used the corresponding YSR items (e.g., "I feel worthless or inferior," "I have a hot temper"). Responses were scored on a 3-point scale ranging from 0 (*not true*), to 1 (*somewhat or sometimes true*), to 2 (*very true or often true*). There was a total of 43 items, all of which were summed to form a measure of problem behavior. Internal consistency was very high ( $\alpha = .94$ ).

*Despair.* A 5-item measure of despair (Kaplan, Robbins, & Martin, 1984) was employed as the second measure of distress. This instrument assessed the degree to which the respondent feels hopeless about achieving conventional forms of success (e.g., "There isn't much chance that a kid from my neighborhood will ever get ahead"). Half of the items from the complete 10-item scale were selected. The participants responded on 5-point scales ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Reliability was moderate ( $\alpha = .62$ ).

*Expectations for avoiding rearrest.* Participants were also asked about their expectations for avoiding rearrest and reincarceration following release from confinement. On two 7-point scales, they rated the likelihood that they

would get arrested again and the likelihood that they would go to jail again (1 = *very likely* and 7 = *very unlikely*). On two 6-point scales, respondents rated how soon they thought they would be rearrested and how soon they thought they would be reincarcerated (1 = *within a couple of weeks* and 6 = *never*). The intervening points on the scales depicted time increments from 3 months to 2 years. All four items were standardized and summed to create an index of expectations for avoiding recontact with the law, in which higher scores indicated higher expectations for avoiding recontact ( $\alpha = .70$ ).

*Perceived costs of rearrest.* Participants were asked 10 questions adapted from Nagin and Paternoster (1991) to assess the degree to which they believed that their opportunities and relationships would be jeopardized by a reinvolvement with the justice system. Weak recognition of the costs of continued delinquent activity has been linked to poor adjustment among adolescent offenders (Nagin & Paternoster, 1991). On 5-point scales, participants rated how upset they would be if family members and close friends expressed disappointment if they were rearrested (1 = *would not bother me at all* and 5 = *would bother me very much*). They also rated the likelihood that their opportunities would be jeopardized by rearrest (e.g., "If you got arrested again, how likely would it be to hurt your chances of getting the kind of job you want?" in which 1 = *very unlikely* and 5 = *very likely*). Reliability of this 10-item scale was moderately high ( $\alpha = .79$ ).

#### *Behavioral Adjustment Outcomes*

*Probation officer ratings.* The Los Angeles County Probation Officer assigned to each participant to monitor his postincarceration adjustment was interviewed approximately 8 weeks following the participant's release. Probation officers were asked five questions about the participant's adjustment in specific areas: general attitude, behavior at school, performance on schoolwork, getting along with people at home, and being in the community. For each area, the probation officer was asked to rate the participant's behavior relative to other juveniles on probation, responding on a 5-point scale ranging from 1 (*much worse than other juveniles*) to 5 (*much better than other juveniles*). Probation officers were also asked to rate the participant's overall adjustment on a 5-point scale anchored at 1 (*very poor*) and 5 (*excellent*). The six items were summed to create an overall rating of adjustment. Reliability was very high ( $\alpha = .95$ ).

*Recidivism.* Los Angeles County Probation records were searched for the presence and timing of reincarceration during the first 6 months following each participant's release from confinement. The outcome measure

TABLE 1: Intercorrelations Among Variables

	Family Functioning	Chronic Offending	Primary Control	Secondary Control	Emotional/ Behavioral Problems	Despair	Expectations	Costs of Rearrest
Family functioning	—							
Chronic offending	-.04	—						
Primary control	.08	.02	—					
Secondary control	-.11	-.01	-.26***	—				
Emotional/ behavioral problems	-.07	-.08	-.11	.21***	—			
Despair	-.11	.01	-.23***	.30***	.06	—		
Expectations to avoid recontact	.20**	-.09	.26***	-.37***	-.27***	-.29***	—	
Perceived costs of rearrest	.16**	-.03	.23***	-.40***	-.02	-.30***	.26***	—

\*\* $p < .01$ . \*\*\* $p < .001$ .

was the amount of time that elapsed between the participant's release date and the first reincarceration (if any) within the 6-month period.

## RESULTS

### *Predicting Psychological Adjustment*

Table 1 shows the correlations between the hypothesized predictors of adjustment (family functioning, chronicity of offending, primary control, secondary control) and the psychological adjustment variables (emotional/behavioral problems, despair, expectations, and perceived costs of offending). Although the magnitude of the significant correlations was relatively modest in most cases, the pattern to the findings was consistent. Of the two background variables (family functioning and offending history), only the family variable was significantly related to expectations for avoiding rearrest and the perceived costs of rearrest. Respondents who reported more cohesiveness and less conflict in their families were more likely to expect to avoid rearrest in the future and to recognize that rearrest might jeopardize relationships and opportunities. Neither chronicity of offending nor family functioning was associated with self-reported emotional/behavioral problems or feelings of despair. On the other hand, primary and secondary control beliefs were related to all four adjustment indexes in a manner suggesting that primary control is adaptive and secondary control is maladaptive. Belief in the possibility of influencing reality (primary control) was significantly associated with less despair and with stronger expectations for success and greater recognition of the costs of offending. In contrast, accepting reality (secondary control) was linked to more emotional/behavioral problems and despair and to lower expectations and weaker perceived costs. Primary and secondary control were modestly but negatively correlated ( $r = -.26$ ), suggesting that offenders who believed

that they had control over their outcomes were less likely to report that they accepted their present dangers without trying to change them.

Next, we examined how the predictor variables influenced psychological adjustment using hierarchical multiple regression. Before undertaking the main analysis, we examined whether the relationship between predictors and outcomes varied as a function of respondent ethnicity. For each psychological adjustment outcome, hierarchical regression analyses were conducted in which all predictor variables were entered as a block, followed by terms that represented the interactions between ethnicity (dummy variables for Latino and African American) and each independent variable. Results indicated that for all outcomes except perceived costs ( $\Delta R^2 = .09$ ,  $p < .01$ ), the ethnicity interaction terms did not significantly add to the prediction ( $\Delta R^2$  varies from .04 to .08, *ns*), suggesting that the relationships between the predictor and adjustment variables do not differ as a function of respondent ethnicity.<sup>1</sup> Thus, the main analyses were conducted while controlling for ethnicity.

Four separate hierarchical regression analyses were then conducted, with emotional/behavior problems, despair, expectations to avoid recontact with the law, and perceived costs as dependent variables. At Step 1, the background factors of age and dummy variables for ethnicity were entered. Family functioning and chronicity of offending, as the known predictors of adjustment among adolescent offenders, were entered on the second and third steps, respectively. Primary and secondary control were simultaneously entered on the fourth step. A cross-product was entered on the final step, which represents the interaction between primary and secondary control. Before calculating the interaction term, each variable was centered by subtracting the mean to control for multicollinearity between the main effect and interaction terms (Jaccard, Turrissi, & Wan, 1990). The results of these analyses are displayed in Table 2.

TABLE 2: Hierarchical Regressions Predicting the Psychological Adjustment Variables ( $n = 279$ )

	<i>Emotional/ Behavior Problems</i>		<i>Despair</i>		<i>Expectations to Avoid Recontact</i>		<i>Perceived Costs</i>	
	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$
Step 1	.01		.08***		.05**		.08***	
Black		-.01		.12		-.08		-.04
Latino		.06		.23**		-.16*		-.15*
Age		.08		-.10		-.06		.14*
Step 2	.00		.01*		.04***		.03**	
Family functioning		-.05		-.08		.15*		.11*
Step 3	.01		.00		.01***		.00	
Chronicity of offending		-.11		.03		-.10***		-.06
Step 4	.04*		.07***		.11***		.12***	
Primary control		-.05		-.12*		.14**		.10
Secondary control		.17**		.22***		-.31***		-.34***
Step 5	.01		.00		.02*		.01	
Primary Control $\times$ Secondary Control		-.07		.00		-.12*		-.09
Total $R^2$	.07*		.16***		.23***		.24***	

NOTE:  $\beta$  = standardized regression coefficient at the final step of analysis.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

For each adjustment outcome, Table 2 shows the increase in variance explained by the variables entered at each step of analysis ( $\Delta R^2$ ), as well as the standardized coefficients ( $\beta$ ) for the regression equation after all variables have been entered into the analyses. Our main interest was in the effects of the two control variables on psychological adjustment. As revealed in Table 2, these predictors yielded significant increments in variance explained for all adjustment indexes. Once again, primary control was either unrelated to adjustment (emotional/behavior problems and perceived costs) or related to good adjustment (low despair and high expectations). Secondary control was related to poor adjustment for all outcomes. Furthermore, the magnitudes of the path coefficients suggest greater importance of secondary over primary control in predicting adjustment. As an estimate of relative importance, we calculated the squared semipartial correlation ( $s^2$ ) between each control variable and each adjustment index. This correlation expresses the amount of variance in the adjustment variable that each control variable uniquely adds at the point it enters the regression equation (Pedhazur, 1982). For primary control,  $s^2 = .00, .01, .02,$  and  $.01$ , respectively, for emotional/behavioral problems, despair, expectation, and perceived costs. For secondary control,  $s^2 = .03, .04, .08,$  and  $.10$ , respectively, for the same adjustment variables. Thus, for each adjustment index, the inclusion of secondary control accounted for greater increments in  $R^2$  than did the inclusion of primary control.<sup>2</sup>

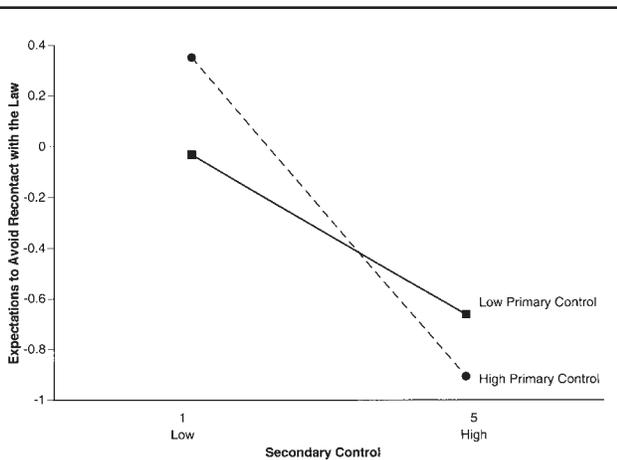
Table 2 also shows an interaction between primary and secondary control in the regression analysis for expectations to avoid rearrest. Following procedures recommended by Aiken and West (1991) for analyzing

interaction effects in multiple regression, we examined differences in the simple slopes of the regression of secondary control on expectations at high and low levels of primary control (i.e., 1 *SD* above the mean and 1 *SD* below the mean). These regression slopes are depicted in Figure 1. The regression lines indicate that the negative relationship between secondary control and expectations was stronger for those who had high primary control ( $\beta = -.38, p < .001$ ) than for those who had low primary control ( $\beta = -.16, p < .01$ ). Thus, secondary control is especially associated with lower expectation for avoiding rearrest among those with high primary control.

In sum, results indicate that for all outcomes, primary control was either associated with higher levels of adjustment or unrelated to adjustment and secondary control was related to lower adjustment. Second, the relations between control and adjustment were stronger for secondary than for primary control. And third, the significant interaction between primary and secondary control on the expectancy variable is consistent with a goodness-of-fit hypothesis in that endorsement of secondary control was particularly maladaptive for future expectancy in situations perceived as controllable.

#### *Predicting Probation Officer Ratings of Postincarceration Adjustment*

A hierarchical multiple regression analysis was conducted to examine how primary and secondary control and the other predictors were associated with probation officer ratings of adjustment. These adjustment data were unavailable for almost half of participants either because (a) they were assigned to probation officers outside of Los Angeles County due to suspected high



**Figure 1** Expectations to avoid recontact with the law as a function of primary and secondary control.

involvement in gang activity ( $n = 66$ ), (b) they were assigned to probation officers who claimed not to know them ( $n = 54$ ), or (c) they were released without being put on probation ( $n = 9$ ). The current analysis was therefore conducted on the 150 participants for whom we could obtain probation officer ratings. A MANOVA revealed that the participants included in this analysis did not significantly differ from the other participants on any of the predictor variables used in these analyses (age, ethnicity, chronicity of offending, family functioning, and the two types of control).

The regression analysis revealed that secondary control was negatively related to probation officer ratings ( $\beta = -.18, p < .05$ ). The higher an offender's secondary control, the less adjusted his probation officer perceived him to be. None of the other predictor main effects or the interaction between primary and secondary control was significant.

#### *Predicting Postincarceration Behavioral Adjustment*

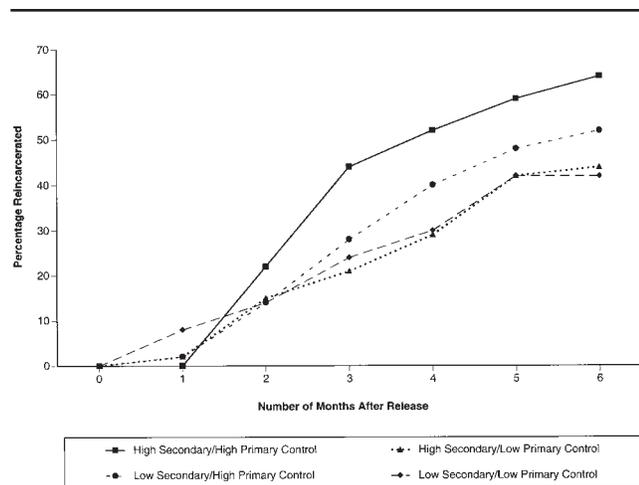
Descriptive analysis of Probation Department data indicated that more than half of the participants (56%) were reincarcerated during the first 6 months following release. The next set of analyses examined the degree to which primary and secondary control were related to whether the participants were reincarcerated as well as amount of time that elapsed until the first such reincarceration. There are a number of issues involved in recidivism data that preclude the use of traditional regression techniques. Most significant, our dependent variable is the amount of time that has elapsed until an event has occurred (i.e., recontact with the law), but the event has not occurred for all participants. Such data is called survival data and is commonly found in epidemiological studies of mortality (Schmidt & Witte, 1988). To examine the extent to which our predictor variables were associated with recidivism, we employed an approach to the

analysis of survival data called Cox proportional hazards regression analysis. (For a detailed discussion of analysis of survival data, see Parmar and Machin [1995].) Similar to traditional regression, Cox regression produces equations in which the coefficient for each independent variable ( $\beta$ ) indicates the nature of the relationship to the dependent variable. Positive coefficients obtained in Cox regressions are indicative of decreased survival times (i.e., earlier reincarceration), whereas negative coefficients are indicative of increased survival times (i.e., later reincarceration) (Norusis & SPSS, 1994). Because reincarceration data were obtained from juvenile records, complete data were only available for those who were minors during the follow-up period. Thus, the subsequent analyses were conducted on the 191 participants who had not turned 18 by the end of the follow-up period. A MANOVA revealed that included and excluded participants did not significantly differ from each other on any of the predictors except age.

The Cox regression analysis was conducted to determine the degree to which the predictor variables used in the prior analyses were associated with the amount of time elapsed before reincarceration (i.e., survival time), after controlling for age, ethnicity, chronicity of offending, and family functioning. Predictor variables were entered in the same order as in the multiple regression analyses. As would be expected, chronic offending was associated with shorter survival times ( $\beta = .85, p < .001$ ). Thus, the more extensive an offender's history of contact with the law, the earlier he recidivated. There were no significant main effects of any of the other predictors, including primary and secondary control. However, the interaction between the two control variables was significant ( $\beta = .26, p < .05$ ).

To more closely examine this interaction, participants were classified into one of four groups based on whether they had high or low levels of primary and secondary control, determined by median splits on the two variables. Separate survival probabilities were calculated for each group. These probabilities are expressed in Figure 2, which displays the cumulative percentage of participants reincarcerated over time for each group. As Figure 2 shows, participants with high levels of both primary and secondary control were reincarcerated at disproportionately higher rates than were other participants. By the end of the 6-month period, almost two thirds of the high-high group (64%) had been reincarcerated, as opposed to about half of those in the low secondary-high primary group (52%), and less than half of those in the high secondary-low primary (52%) and low-low groups (42%).

Further examination of Figure 2 suggests that much of the survival time difference between groups is accounted for by events occurring between the 2nd and



**Figure 2** Percentage of participants reincarcerated over time as a function of primary and secondary control.

3rd months. This difference is best illustrated by the hazard probability, that is, the probability that an individual will be reincarcerated during a particular month, given that he survived up to the beginning of that month (Schmidt & Witte, 1988). For those with high levels of both primary and secondary control, the hazard probability during the 3rd month, or chances of reincarceration if individuals have survived into that month, is .28. For the other three groups, the hazard probabilities are .16 (low secondary–high primary), .11 (low-low), and .07 (high secondary–low primary). Thus, between 60 and 90 days following release, a participant with high levels of both types of control who has not yet been reconfinement has a 28% chance of being reincarcerated during that period, whereas probabilities range from 16% to 7% for the other three groups. After the 3rd month, the hazard probabilities are relatively comparable across the four groups. This suggests that the 3rd month may be a particularly critical time point in juvenile offenders at risk for reincarceration, particularly those with high levels of both types of control.

## DISCUSSION

We set out to explore how primary and secondary control are related to the psychosocial and community adjustment of a group of ethnic minority adolescent offenders. Our results suggest that the primary–secondary control distinction is relevant to the study of adjustment outcomes in this population. Primary control by itself was predictive of less despair and higher expectations to avoid future encounters with the juvenile justice system. These relations are consistent with the small literature on control beliefs and delinquency as well as with more general findings of the effects of perceived control on mental and physical health outcomes.

Yet, knowledge about primary control tells only part of the story. Had we not examined secondary control and its interaction with the primary type, we would have had an incomplete and inaccurate account of the relations between control beliefs and adjustment in this sample. Secondary control was more strongly related to both psychological and community adjustment outcomes and in a direction that was opposite to that of primary control. Respondents who agreed that they accepted their stressful experiences without trying to change them reported more despair, lower expectations for staying out of trouble, less recognition of the costs of deviant behavior, and were rated as more poorly adjusted by their probation officers. In addition, respondents who were high in primary as well as secondary control survived for a shorter time before being reincarcerated. Thus, the psychological data, the judgments of probation officers, and the actual behavioral data all suggest that secondary control was quite maladaptive for these youthful offenders.

Our support for the maladaptiveness of secondary control is not consistent with most of the literature that draws on the primary–secondary distinction. The idea of adaptive secondary control strategies emerged out of the recognition that there are realistic boundaries to the adaptiveness of perceived control, and dynamic control theorists view successful adaptation as involving a constant interplay (interaction) between primary and secondary control processes (Heckhausen & Schulz, 1995; Rothbaum et al., 1982). This interaction is most evident in the buffering hypothesis, which proposes that secondary control can be adaptive when it functions as a backup to enable the individual to maintain or minimize losses in primary control. The buffering effect of secondary control was documented in Thompson et al.'s (1994) finding that acceptance of reality was associated with better psychological adjustment among HIV-positive men with low primary control. But secondary control can interact with primary control in maladaptive ways, as suggested in the present case, when it leads someone to prematurely relinquish attempts to shape or alter the environment in ways that enhance their developmental potential. We documented a significant interaction between primary and secondary control when predicting two of the adjustment outcomes—expectations for the future and time until recidivation—and in both cases, the pattern to the findings was the same. High secondary control in conjunction with high primary control was predictive of lower expectations to avoid recontact with the law before the adolescent offenders were released from confinement and with shorter time to reincarceration after their release.

Unlike Thompson et al. (1994) and others who support the notion of secondary control as a buffer, the

interactions we documented are more consistent with the goodness-of-fit hypothesis that secondary control may be particularly damaging at high levels of primary control. As documented in the coping literature, the best psychological outcomes are thought to occur when there is a match between what stressors the individual can control and his or her coping strategies (see Roth & Cohen, 1986). Mismatches can be detrimental, such as when an individual employs proactive (e.g., problem-focused) strategies for stressors that are not controllable and avoidant (e.g., emotion-focused) strategies for stressors judged as controllable (e.g., Forsythe & Compas, 1987). Our findings are consistent with the mismatch between avoidance (accepting the status quo) and high perceived primary control. We suspect that many of the adolescent offenders in our sample believe in their own instrumentality: They can influence how much danger they will have to face or how much trouble they will get into. Yet, for reasons not yet clear to us, they have opted to accept the dangers and potential for trouble and to make choices about delinquent activity that are compatible with this acceptance. For the more general control literature, our findings suggest that discrepancies in the adaptiveness of secondary control relate partly to the differing implications for mental health of accepting a reality that cannot be changed (e.g., being HIV-positive) versus accepting a reality that can be changed (e.g., getting in trouble with the law).

#### *The Strategies of Secondary Control*

One of the challenges for control theorists has been to articulate some of the ways that people adaptively use secondary control strategies, that is, changing some aspect of oneself or one's views to fit in with their environment. Among the strategies suggested by Rothbaum et al. (1982) was reinterpreting a traumatic experience in a more positive light, such as when paralysis victims reevaluate their accident as an opportunity for a new outlook on life. This kind of reinterpretation can be adaptive because it allows the undesired outcome to be more tolerable and acceptable. Heckhausen and Schulz (1995) proposed a taxonomy of secondary control strategies that includes ingroup social comparisons. People compare themselves to similar others as a way of adjusting their expectancies and avoiding disappointment in the wake of anticipated negative outcomes.

We believe that both of these cognitive activities (reinterpreting negative events and ingroup social comparison) might comprise secondary control strategies of our adolescent offender sample but that these strategies have dysfunctional consequences. Young offenders often do not evaluate incarceration and loss of freedom as the severe sanction that the juvenile justice system intends it to be. As one of our participants observed, "It's

three hots and a cot," referring to the fact that incarceration brings a balanced diet and a place to sleep. Moreover, because incarceration has become such a common feature of life for inner-city, minority males, within-group social comparisons can reduce the stigma associated with such confinement and hence the motivation to avoid it (Goldstein, 1990; also see Crocker & Major, 1989, for a related theoretical argument). It is therefore not difficult to imagine how changing the valence of incarceration from negative to positive and perceiving that same outcome as normative rather than deviant can result in the kind of acceptance of one's reality that is the hallmark of secondary control. Whether and under what circumstances these strategies are adaptive versus dysfunctional is largely unstudied.

#### *Control Beliefs Across Time*

One of the most intriguing findings of our study was that the effects of control beliefs on recidivist behavior were strongest during the early postincarceration period. That is, the recidivism rate for offenders with high levels of the two types of control was greater during the first 3 months of probation but not thereafter. The delinquency literature is very unclear about patterns of desistance and persistence among adolescent offenders, although there are data suggesting that chronic juvenile offenders return to criminal activity very soon after release from confinement (Lattimore et al., 1995). For most of the respondents in our study, we would expect factors other than control beliefs, such as prior history, educational placement, employment opportunities, adult supervision, and exposure to community violence, to be the major determinants of recidivist activity. For others, however, the complex interplay between wanting to change one's reality versus accepting that reality the way it is may play a more central role in the decision to reembrace or disengage from deviant behavior.

It may therefore be useful to examine changes in the two control processes during critical time periods where the choices one makes have potentially important consequences. In this vein, Thompson et al. (1996) investigated changes in primary and secondary control beliefs over a 3-month period among incarcerated adult males who were HIV-positive. Although that study did not find changes in either levels of reported control or relations between control and adjustment, it may not have captured a time period where there was sufficient variability in the respondents' life experiences for changes in control beliefs to be a relevant predictor of adjustment. For adolescent offenders, the time between release from confinement and the early months of freedom seems to be a period of great variability as well as uncertainty about outcomes and thus particularly suitable for longitudinal analyses of changes in control beliefs.

*Ethnicity and Perceived Control*

Our findings revealed that the relation between secondary control and (mal)adjustment was consistently stronger than that between primary control and the same outcome variables. This is not surprising in that perceptions of control in the traditional (primary) sense have been relatively weak predictors of adjustment outcomes in ethnic minorities, particularly African Americans (Graham, 1994). Asking people whether they directly control events in their lives evokes beliefs not only about personal efficacy but also about the perceived responsiveness of powerful people and institutions. Such questions may have unknown effects on ethnic minority populations whose experiences afford fewer perceived opportunities to exercise control. More than 30 years ago, Gurin, Gurin, Lao, and Beattie (1969) called attention to such complexities with regard to studies of locus of control in African Americans, but the contemporary control literature has largely ignored these earlier admonitions. As our data suggest, measures of secondary control, which are more focused on how respondents cope with stressful events rather than (in addition to) their beliefs about personal efficacy in the more traditional sense, may ultimately prove more useful in research with groups where the construct of control has multiple meanings.

*Limitations of the Study*

Although we believe that our findings have implications for a number of topics relevant to control beliefs, we also acknowledge the study's limitations. One limitation is the rather narrow definition of secondary control that we employed. Ours was a relative measure (acceptance of reality versus trying to change it) and we did not examine the dimensions of this construct (e.g., vicarious or interpretive control) as initially proposed by Rothbaum et al. (1982). Furthermore, the data on psychosocial variables were gathered concurrently, thus limiting strong inferences about causality. It may be that poor adjustment leads to perceptions of less control or that control and psychological distress reciprocally influence each other (see Newsom, Knapp, & Schulz, 1996). On the other hand, control beliefs of our participants assessed prior to release from confinement predicted postincarceration behavioral adjustment, which is consistent with a causal relationship. It is evident that longitudinal analyses are needed to fully corroborate control-to-adjustment hypotheses.

## A FINAL NOTE

Recent changes in juvenile justice laws, policy, and practice indicate that the system has cycled back to a "get tough" era (Bernard, 1992). For example, lenient

options are being replaced with harsher sanctions, blended sentences combining juvenile and adult confinement are now more common, lowering the legal age for criminal liability has become a national debate, and more youthful felons are being waived to the adult system. Furthermore, the targets of these more punitive schemes are often ethnic minority males, who tend to be just as overrepresented in the juvenile justice system as they are in the adult system (e.g., Leonard, Pope, & Feyerherm, 1995). The tougher approaches are at least partly based on the premise that youth know (believe) that they have control over their outcomes and that they can and will exercise this control to avoid severe punishment. In light of these current realities surrounding juvenile justice and the findings presented here, the time seems particularly ripe for greater research attention to the psychosocial factors associated with the adolescent offender's successful or unsuccessful adjustment to judicial sanctions.

## NOTES

1. Additional analyses tracing the nature of the interactions revealed that ethnicity significantly interacted with three of the independent variables used to predict perceived costs: age, family functioning, and chronicity of offending. High family functioning was positively related to recognizing the costs of offending for African Americans ( $\beta = .25, p < .05$ ) but not for the other two groups, age was positively related to perceived costs for the "Other" racial group ( $\beta = .38, p < .01$ ) but not for African Americans and Latinos, and chronicity of offending was a marginally significant predictor of recognizing the costs of repeated involvement with the law for Latinos ( $\beta = .16, p = .06$ ) but not for the other two groups. The ethnicity variable did not significantly interact with either primary or secondary control.

2. Inasmuch as the magnitude of the correlation between two variables is constrained by the reliabilities of these variables, one may wonder whether the differences in squared semipartial correlation coefficients are attributable to primary control's lower reliability. To explore this issue, analyses were conducted in which the coefficients were corrected for attenuation in the control variables following Nunnally and Bernstein (1994). Each corrected coefficient reflects the squared semipartial coefficient that would be obtained if each control variable had perfect reliability. For emotional/behavior problems, despair, expectations, and perceived costs, respectively, the  $sr^2 = .00, .02, .03, \text{ and } .02$  for primary control and  $sr^2 = .04, .06, .12, \text{ and } .15$  for secondary control. Thus, once the different reliabilities of the control variables were taken into account, the addition of secondary control continued to account for a larger increase in  $R^2$  than did the addition of primary control.

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