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Fine, Adam DuPree

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Race and Justice System Attitude Formation
during the Transition to Adulthood

THESIS

submitted in partial satisfaction of the requirements
for the degree of

MASTER OF ARTS

in Social Ecology

by

Adam DuPree Fine

Thesis Committee:
Professor Elizabeth Cauffman, Chair
Professor Chuansheng Chen
Associate Professor Jacqueline Chen

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ABSTRACT OF THE THESIS

Race and Justice System Attitude Formation during the Transition to Adulthood

By

Adam DuPree Fine

Master of Arts in Social Ecology

University of California, Irvine, 2016

Professor Elizabeth Cauffman, Chair

Although attitudes towards the justice system are directly related to crime commission, few studies have examined how these attitudes develop from adolescence through early adulthood. Further, despite knowledge that minority youth experience disproportionate contact with the justice system, it is unknown how legal socialization differs by racial group. This study investigates how attitudes towards the justice system develop as youth transition into adulthood, examines how personal experiences with the justice system affect legal socialization, and determines whether developmental processes differ for Black, White, and Latino youth. Data were obtained from a 7-year longitudinal study of male offenders ($N = 1,114$). Individual growth curve models were used to examine attitude formation from adolescence into adulthood. Time-varying effects models were used to examine how experiences with the justice system affect legal socialization. Findings indicate that Black youth hold the most negative views of the system during adolescence, followed by Latino youth, and White youth. These racial differences become more pronounced as youth transition into adulthood. Further, although legitimacy and legal cynicism follow similar developmental trajectories, personal contacts with the justice system only affect legitimacy. Legal socialization from adolescence into young adulthood varies by race. The mechanisms that affect Black youth's attitudes do not affect Latino youths'

attitudes, indicating that aggregating racial groups may mask meaningful differences. Despite engaging in the same amount of offending as White and Latino youth, Black youth are disproportionately contacted by the system. These disproportionate justice system contacts erode their perceptions of its legitimacy.

INTRODUCTION

Attitudes towards the justice system are directly related to both crime commission and compliance with authorities (Augustyn, 2015; Fagan & Piquero, 2007; Kirk & Matsuda, 2011; Reisig, Wolfe, & Holtfreter, 2011; Tyler & Fagan, 2008; Tyler & Huo, 2002; Tyler, 1990). Decades of research demonstrate that personal experiences with justice system actors directly contribute to one's attitudes towards the justice system (Cohn, Trinkner, Rebellon, Van Gundy, & Cole, 2012; Cohn & White, 1990; Fagan & Tyler, 2005; Piquero, Fagan, Mulvey, Steinberg, & Osdgers, 2005; Tyler, 2006; Tyler & Huo, 2002). However, although crime peaks during the late adolescent years, only a handful of such legal socialization studies have focused on adolescence (Augustyn, 2015; Cohn, Bucolo, Rebellon, & Van Gundy, 2010; Lee, Steinberg, Piquero, & Knight, 2011; Murphy, 2015; Penner, Viljoen, Douglas, & Roesch, 2014; Piquero et al., 2005; Sampson & Bartusch, 1998). In addition, even though minority youth are arrested at far greater rates than White youth and are consistently overrepresented in the justice system (Puzzanchera & Hockenberry, 2013; Puzzanchera, 2009; Stevens & Morash, 2014), even fewer legal socialization studies have examined whether legal socialization differs by racial groups (see Brick, Taylor, & Esbenson, 2009; Piquero, Bersani, Loughran, & Fagan, 2014; Romain & Hassell, 2014; Woolard, Harvell, & Graham, 2008). Considering that juveniles often come into repeated contact with justice system officials, juvenile offenders' attitudes towards the justice system may change considerably during adolescence and the transition to adulthood. Understanding whether such attitudes remain stable or undergo significant changes through this transition is highly important because attitudes that are developed during adolescence not only affect their immediate behavior, but likely influence their behavior into adulthood (Penner, Viljoen, Douglas, & Roesch, 2014; Tyler & Huo, 2002).

CHAPTER 1: YOUTH ATTITUDES TOWARDS THE JUSTICE SYSTEM

Attitudes towards the justice system are directly related to both crime commission and compliance with authorities (Augustyn, 2015; Fagan & Piquero, 2007; Kirk & Matsuda, 2011; Reisig, Wolfe, & Holtfreter, 2011; Tyler & Fagan, 2008; Tyler & Huo, 2002; Tyler, 1990). Decades of research demonstrate that personal experiences with justice system actors directly contribute to one's attitudes towards the justice system (Cohn, Trinkner, Rebellon, Van Gundy, & Cole, 2012; Cohn & White, 1990; Fagan & Tyler, 2005; Piquero, Fagan, Mulvey, Steinberg, & Osdgers, 2005; Tyler, 2006; Tyler & Huo, 2002). However, although crime peaks during the late adolescent years, only a handful of such legal socialization studies have focused on adolescence (Augustyn, 2015; Cohn, Bucolo, Rebellon, & Van Gundy, 2010; Lee, Steinberg, Piquero, & Knight, 2011; Murphy, 2015; Penner, Viljoen, Douglas, & Roesch, 2014; Piquero et al., 2005; Sampson & Bartusch, 1998). In addition, even though minority youth are arrested at far greater rates than White youth and are consistently overrepresented in the justice system (Puzzanchera & Hockenberry, 2013; Puzzanchera, 2009; Stevens & Morash, 2014), even fewer legal socialization studies have examined whether legal socialization differs by racial groups (see Brick, Taylor, & Esbenson, 2009; Piquero, Bersani, Loughran, & Fagan, 2014; Romain & Hassell, 2014; Woolard, Harvell, & Graham, 2008). Considering that juveniles often come into repeated contact with justice system officials, juvenile offenders' attitudes towards the justice system may change considerably during adolescence and the transition to adulthood. Understanding whether such attitudes remain stable or undergo significant changes through this transition is highly important because attitudes that are developed during adolescence not only affect their immediate behavior, but likely influence their behavior into adulthood (Penner, Viljoen, Douglas, & Roesch, 2014; Tyler & Huo, 2002).

Legal socialization is how attitudes towards the justice system develop, involving both feelings of legitimacy and cynicism (Cohn et al., 2012; Fagan & Tyler, 2005; Piquero et al., 2005; Tyler, 2006). Specifically, individuals who view the justice system and its authorities as more legitimate report greater confidence in the law and express a sense of obligation to defer voluntarily to its rules, decisions, and directives (Piquero et al., 2005; Tankebe, 2013; Tyler & Huo, 2002; Tyler, 1990). Importantly, in general, these individuals more easily accept the decisions of legal officials. The legal socialization process also involves the development legal cynicism. Legal cynicism is a frame through which individuals interpret the viability of the law and its agents (Sampson & Bartusch, 1998; Srole, 1956). Legal cynicism thus refers to the degree to which individuals feel that the law does not apply to them, or the degree to which an individual feels violating the law can be reasonable (Fagan & Tyler, 2005; Kirk & Papachristos, 2011; Sampson & Bartusch, 1998). Legitimacy and legal cynicism have been the focal attitudes in legal socialization research because decades of empirical research suggest that those who perceive the justice system to be more legitimate or harbor less cynicism toward the law are more likely to cooperate with authorities, comply with directives, and engage in less delinquency (see: Augustyn, 2015; Fagan & Piquero, 2007; Kirk & Matsuda, 2011; Tyler & Fagan, 2008; Tyler & Huo, 2002; Tyler, 1990).

As detailed by Fagan and Tyler (2005), legal socialization is the product of accumulated interactions with legal authorities. In this framework, personal experiences with justice system actors play an especially important role in shaping a person's views about the system (Tyler & Huo, 2002; Peffley & Hurtwitz, 2010). For example, the way a police officer interacts with a youth affects how the youth views the justice system. If the youth feels as though he was treated unfairly, he is likely to view the system more negatively. Importantly, compared with White

youth, minority youth are more likely to come into contact with justice system officials and describe the procedures used by legal authorities as more unfair (Brandl, Frank, Worden, & Bynum, 1994; Brick et al., 2009; Geistman & Smith, 2007; Hagan, Shedd, & Payne, 2005; Leiber, Nalla, & Farnworth, 1998; Nivette, Eisner, Malti, & Ribeaud, 2014). Indeed, Black youth consistently report more negative attitudes towards the police than White youth (Peck, 2015; Hurst, Frank, & Browning, 2000). These experiences likely lead minority youth to feel bias and injustice toward the justice system (Solis, Portillos, & Brunson, 2009).

However, as there has been limited research about race/ethnicity and offending over the life-course (see Piquero, 2015), few studies have taken race/ethnicity into consideration when studying how youth perceive the justice system. In fact, the majority of legal socialization studies tend to compare White versus “Non-White” rather than analyze White, Black, and Latino youth separately (Brick et al., 2009; Hagan et al., 2005; Romain & Hassell, 2014), largely because of limited sample sizes (Weitzer, 2014). Though racial minority groups have historically viewed the justice system as less legitimate than White youth, there is likely a ‘racial hierarchy’ stratified by White, Latino, and Black youth (Weitzer & Tuch, 2006). Latinos tend to face more intense criminalization and policing than Whites, but less criminalization than Blacks (see Hagan, Shedd, & Payne, 2005). However, studies do not consistently find that Latino youth perceive the justice system more positively than Black youth (see a review by Peck, 2015). Considering Latinos constitute a large and rapidly increasing proportion of the US population, such research is clearly necessary (Weitzer, 2014).

In addition, the majority of these studies have been cross-sectional or have compared youth at different ages. Negative effects of unfair treatment by legal authorities on legal socialization are expected to become more pronounced as experiences accumulate over time

(Tyler & Huo, 2002), yet existing research using cross-sectional methodology has not been able to investigate this directly. As such, the goal of this study will be to address this issue by following youth longitudinally. Indeed, considering that minority youth are more likely to come into contact with justice system officials, even after accounting for differences in self-reported delinquency (see Stevens & Morash, 2014; Tyler & Huo, 2002), it is likely that minority youth would report less legitimacy and more cynicism particularly at older ages once they have more experiences with justice system officials. As a result, though it is likely that the legal socialization process during adolescence differs by racial group, the results of cross-sectional studies are mixed and it is unknown whether any differences become more pronounced as youth transition to adulthood.

The few studies that examine justice system attitudes through adolescence are worthy of review. Fagan and Tyler (2005) examined legitimacy and legal cynicism ratings in community youth ages 10 to 16. The results of their study indicated that older youth report both less legitimacy and more cynicism than younger youth. The researchers concluded that legitimacy likely decreases and cynicism likely increases through adolescence, yet such developmental conclusions were limited by their cross-sectional design. More recently, Nivette and colleagues (2014) conducted a longitudinal analysis of legal cynicism among a sample of community youth in Switzerland. These researchers found that cynicism was relatively stable between ages 13 and 15, and that self-reported delinquency was the strongest predictor of legal cynicism. The researchers concluded that ongoing social interactions and experiences during adolescence likely affect legal socialization. However, because they only followed their participants for two years until age 15, it is unknown whether the findings generalize to late adolescence and young adulthood. Further, similar to Fagan and Tyler (2005), analyses were not conducted by

race/ethnicity, nor did the researchers sample adolescent offenders. If legal socialization is the product of accumulated interactions with legal authorities (Fagan & Tyler, 2005; Tyler & Huo, 2002), and if the negative effects of unfair treatment by legal authorities on legal socialization become pronounced as experiences accumulate over time (Tyler & Huo, 2002), the legal socialization of adolescent offenders would likely be different than the legal socialization of community youth.

Two studies have examined legal socialization among adolescent offenders. Both studies by Piquero and colleagues used the Pathways to Desistance dataset. Youth in this study were serious adolescent offenders, ages 14 to 18 at baseline. In the first study, Piquero and colleagues (2005) examined the development of legitimacy and legal cynicism over the course of eighteen months. Using group-based trajectory analyses, they modeled changes in legitimacy and cynicism over time using the assessment wave number as their time variable. Their analyses suggested that there were four group-trajectories for cynicism, and five groups-trajectories for legitimacy. For both attitudes, the groups were primarily differentiated by baseline differences, and such differences remained relatively stable over the eighteen-month period. At the same time, they found strong age effects, such that older youths were more likely to view the law as less legitimate. However, because the authors modeled time using assessment wave rather than participant age, they were unable to test whether the older youths in this study had always viewed the law as less legitimate, or if such attitudes worsened over time.

More recently, Piquero and colleagues (Piquero, Bersano, Loughran, & Fagan, 2014) used the same dataset to examine the stability of legal socialization of first-generation immigrants, second-generation immigrants, and native US-born youth over the course of three years. Again modeling time using assessment wave, these researchers found that legal

socialization does change over a three-year period. However, because the researchers analyzed their data by wave rather than by age, it is unknown whether attitudes are formed in early adolescence or if they continue to develop through the developmental period. Further, because they only tracked youth for three years, they were unable to measure whether legal socialization remains stable through late adolescence and into early adulthood.

Together, these studies set an important foundation for examining the legal socialization of adolescent offenders. The present study advances our understanding of legal socialization of justice system legitimacy and legal cynicism in several ways. To our knowledge, this is the first study to analyze two aspects of legal socialization among youth offenders as they transition through adolescence and into young adulthood. Few prior studies have examined legal socialization among adolescent offenders, and to our knowledge, none have followed youth through early adulthood. One would expect that legal socialization would change considerably during this time period, reflecting ongoing personal interactions with the justice system.

Accordingly, we examine how personal experiences with the justice system affect developmental legal socialization. Considering the salience yet limited understanding of how race/ethnicity may affect the development of legal attitudes, we track the legal socialization of White, Black, and Latino youth offenders from adolescence through early adulthood.

CHAPTER 2: METHODOLOGY

Participants

Participants were male adolescents enrolled in the Pathways to Desistance study, a prospective study of serious juvenile offenders in Phoenix ($n = 527$) and Philadelphia ($n = 589$) (see Schubert et al., 2004, for complete details of study methodology). Adolescents were eligible for study participation if they were between the ages of 14 and 17 and had been charged with a felony or similarly serious non-felony offense (e.g., misdemeanor weapons offense). Because a large proportion of offenses committed by adolescents are drug offenses, the proportion of males whose enrollment offense was a drug offense was capped at 15% of the sample at each of the sites. All youths whose cases were being considered for trial in the adult system and had been arraigned were eligible for enrollment. Of eligible youths, 67% of those whom we located and invited to participate in the research agreed to enroll in the study ($N = 1,354$). Compared with youths who declined to participate, enrolled participants had more prior arrests leading to formal charges (2.1 vs. 1.5 for nonparticipants), were somewhat younger at first arrest (13.9 years vs. 14.2 years for nonparticipants), and were somewhat more likely to be non-Latino White (25% vs. 20% for nonparticipants). Although statistically significant, these differences are modest in magnitude.

The baseline interview was conducted an average of 36.9 days ($SD = 20.6$) after participants' adjudication in the juvenile system, or, if participants were eligible for prosecution as an adult, their decertification (i.e., waiver) hearing in Philadelphia, or their adult arraignment in Phoenix. At the time of the baseline interview, this group of participants was, on average, 16.5 years of age ($SD = 1.11$) and predominantly of lower socioeconomic status. Less than 4.4% of the participants' parents held a 4-year college degree, and less than 40% of participants' parents

had less than a high-school education. The race/ethnic backgrounds of participants were as follows: 41% Black, 34% Latino American, 20% non-Latino White, and 5% Other. Because there were so few participants in the “Other” category, they were not included in these analyses. Males comprise 86.4% of the overall study sample. Analyzing males and females separately would be ideal, particularly considering the potential sex differences in legal socialization (Piquero et al., 2014). However, only data from males ($N = 1,164$) were used for this study because time-varying effects modeling requires a large sample size.

Design

Interviews were conducted every 6 months for the first three years and then yearly for the additional four years (total of 7 years). To create uniform time measurement for purposes of the present analyses, we combined data from the 6- to 36-month semiannual follow-up interviews into yearlong intervals, by averaging variables from the 6-month and 12-month, the 18-month and 24-month, and the 30-month and 36-month interviews, respectively (Monahan, Steinberg, Cauffman, & Mulvey, 2009). The present analyses therefore include a total of 7 time points, each 1 year apart. Individuals had to provide data at both time points to have valid data for any annual period; of the 1,164 male participants originally enrolled in this study, this requirement resulted in the loss of 48 participants from the analytic sample. Because the design of the study is an accelerated cohort design, there were different numbers of participants at each age group from 14 to 26 years (14 years, $n = 137$; 15 years, $n = 323$; 16 years, $n = 630$; 17 years, $n = 937$; 18 years, $n = 962$; 19 years, $n = 937$; 20 years, $n = 920$; 21 years, $n = 919$; 22 years, $n = 809$; 23 years, $n = 610$; 24 years, $n = 336$; 25 years, $n = 69$; 26 years, $n = 2$). Because there were so few participants at age 26, analyses were limited to ages 14 to 25 for a total sample size of 1,114 participants.

Materials

Legitimacy: The measure of legitimacy follows from the measure employed by Tom Tyler (Tyler, 1997; Tyler & Huo, 2002). Using a 5-point scale ranging from Strongly Disagree to Strongly Agree, respondents indicated their agreement with 11 statements about the legitimacy of the justice system and its actors (e.g., “I have a great deal of respect for the police,” or “The basic rights of citizens are protected in the courts”). Higher values indicate higher levels of perceived legitimacy of the law (Tyler, 2009; Tyler, 2003). Psychometric analyses of the scale at baseline indicated that it was reliable ($\alpha=.80$; CFI=.92, RMSEA=.07). Means and standard deviations at each age are presented in Table 1.

Legal Cynicism: Following Sampson and Bartusch (1998), our measure of legal cynicism asked respondents to rate their agreement with five statements (e.g., “Laws are meant to be broken”). Items assess the extent to which laws or rules are not considered binding in the present lives of participants (Sampson & Bartusch, 1998). Higher values on this scale indicate more legal cynicism (range 1-4). Psychometric analyses of the scale at baseline indicated that it was reliable ($\alpha=.60$; CFI=.99, RMSEA=.03). Means and standard deviations at each age are presented in Table 1.

Personal Contact with Justice System Officials: We used two separate measures of personal contact with the justice system. First, using a life calendar approach, participants were asked at each yearly assessment whether they had been picked up by the police and been accused of committing a crime. Previous research suggests that retrospective data gathered using life calendar methods is accurate (Freedman, Thornton, Camburn, Alwin, & Young-Demarco, 1988) and that the data structure of the life calendar fits the structure of respondents’ autobiographical memories well (Belli, 1998). For example, Caspi and Amell (1994) found that life events

reported three years earlier matched retrospective life history calendar data with over 90% accuracy. As such, the life calendar data collection method can provide a more continuous and complete representation of life events than is possible with other interview or questionnaire measures. The percent of participants who had been picked up by the police at each age is presented in Table 2. As a result of small participant counts or low variability at certain ages, analyses were limited to ages 16 through 24.

Second, official court records were used to assess whether youth had been rearrested during each follow-up period. The percent of participants who had been rearrested at each age is presented in Table 2. As a result of the small participant counts at certain ages and the large sample sizes necessary for analyzing intensive longitudinal data, analyses were limited to ages 14 through 24. This construct enables us to examine the effects of two different types of justice system contact. The Pearson correlations between the types of contacts at each age were between .369 and .553, p 's < .001.

Self-reported Offending: Involvement in antisocial activities was measured with the Self-Report of Offending (Huizinga, Esbensen, & Weiher, 1991). Participants reported if they had been involved in any of 22 illegal behaviors (e.g., “Taken something from another person by force, using a weapon”) during each follow-up period. Because the variable was highly positively skewed, responses were dichotomized into either did not reoffend or did reoffend. The percentage of participants who reoffended at each age is presented in Table 2.

Street Time: Because incarceration can limit opportunity to engage in antisocial acts, failure to account for this 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/drug-treatment program, psychiatric hospital, residential treatment

program, or secure institution. All analyses controlled for street time, operationalized as the proportion of time in a year an individual was in the community. The amounts of exposure time reported for each 6-month period were averaged to derive the exposure time covariate for each annual interval (Monahan et al., 2009).

Analytic Plan

To examine whether the likelihood of reoffending, of being picked up by the police, or of being rearrested varies by race/ethnicity, we estimated random effects logit models. Each model controlled for amount of time on the streets, and the second and third models also controlled for self-reported offending. In the second set of models, we estimated individual growth curve models using linear mixed models containing both fixed and random effects (Singer & Willett, 2004; Raudenbush & Bryk, 2002). Models were estimated in three stages. First, we conducted unconditional means models for legitimacy and cynicism to examine whether there was sufficient between-persons variability to conduct multi-level modeling. Second, after establishing that there was sufficient between-persons variability, we conducted growth models to examine the average rate of change of each legal socialization measure over time. Third, we estimated conditional growth models to examine whether race/ethnicity accounts for the variability in legitimacy and legal cynicism. In all models, we treat time (i.e., age) as both a random and fixed effect, to explain specific time effects as well as change over time. Mixed models conceptualize growth curve models using two levels of analysis (Fitzmaurice, Laird, & Ware, 2012; Singer & Willett, 2004; Raudenbush & Bryk, 2002). The equations for the present analyses are as follows:

$$\text{Level 1: LegalSocialization}_{ij} = \pi_{0i} + \pi_{1i}(\text{age}_{ij}) + r_{ij}$$

$$\text{Level 2: } \pi_{0i} = \beta_{00} + \beta_{01}(\text{Race}_{ij}) + u_{0i}$$

$$\pi_{1i} = \beta_{10} + \beta_{11}(\text{Race}_{ij}) + u_{1i}$$

Combined equation:

$$\text{LegalSocialization}_{ij} = \beta_{00} + \beta_{01}(\text{Race}_{ij}) + u_{0i} + \beta_{10}(\text{age}_{ij}) + \beta_{11}(\text{age}_{ij} * \text{Race}_{ij}) + u_{1i}(\text{age}_{ij}) + \Gamma_{ij}$$

The Level 1 equation estimates within-person or intra-individual change over time, assessing individual growth rates. Here, time is treated as a random effect since we are generalizing individual effects across intervals of time. The Level 2 model estimates interindividual change in predictors that are estimated as fixed effects. Race/ethnicity is included as a Level 2 variable. Accordingly, the model assesses within-person variability in the Level 1 predictors, or growth rates, as a function of Level 2 predictors (Fitzmaurice, Laird, & Ware, 2012). To capture and estimate the effects of specific time-varying factors on the slope (or rate of change) in the dependent variable, we include an interaction of time with each predictor at each time (Fitzmaurice, Laird, & Ware, 2012; Singer & Willett, 2004). Considering self-reported offending has been related to both legal cynicism and legitimacy (Fagan & Tyler, 2005; Nivette et al., 2014), we also included self-reported offending as a dichotomous Level 1 covariate in these analyses. Since the proportion of the time spent on the streets also affects the ability to commit a variety of crimes, this variable is also used as a Level 1 covariate (Monahan et al., 2009; Piquero et al., 2001).

In the final set of models, we examine whether subsequent personal contact with the justice system (being picked up by the police and accused of a crime or being rearrested) affect legal socialization, using the same set of controls variables. Although multilevel or hierarchical models have been widely used to examine longitudinal data, they rely on a priori specifications of the functional form of how the independent variable affects change in the outcome. An extension of such methods, the time-varying effects model (TVEM), enables one to examine whether there is a time-varying relationship between the covariates and the outcomes (Hastie & Tibshirani, 1993; Li et al., 2014; Tan, Shiyko, Li, Li, & Dierker, 2012; TVEM, 2014). For

example, if we were to model the effects of system contact on the development of attitudes towards the justice system using multilevel modeling, the equations for the conditional growth models (where ‘SystemContact’ refers to each independent predictor, modeled separately) would be:

$$\text{Level 1: LegalSocialization}_{ij} = \pi_{0i} + \pi_{1i}(\text{age}_{ij}) + \pi_{2i}(\text{SystemContact}_{ij}) + r_{ij}$$

$$\text{Level 2: } \pi_{0i} = \beta_{00} + \beta_{01}(\text{Race}_{ij}) + u_{0i}$$

$$\pi_{1i} = \beta_{10} + \beta_{11}(\text{Race}_{ij}) + u_{1i}$$

$$\pi_{2i} = \beta_{20} + \beta_{21}(\text{Race}_{ij}) + u_{2i}$$

Combined equation:

$$\text{LegalSocialization}_{ij} = \beta_{00} + \beta_{01}(\text{Race}_{ij}) + \beta_{10}(\text{age}_{ij}) + \beta_{11}(\text{age}_{ij} * \text{Race}_{ij}) +$$

$$\beta_{20}(\text{SystemContact}_{ij}) + \beta_{21}(\text{Race}_{ij} * \text{SystemContact}_{ij}) + u_{0i} + u_{1i}(\text{age}_{ij}) + u_{2i}(\text{Race}_{ij}) + r_{ij}$$

The equation thus pre-specifies a particular polynomial or other parametric form to the coefficient functions. It is rare, however, to observe behavior dynamics that follow a simple developmental pattern (Walls & Schafer, 2006), because most individual trajectories are nonparametric. In contrast, in TVEM, these patterns take the form revealed directly from the data. Thus, TVEM reveals the shape of the coefficient functions over time without posing any parametric assumptions on these functions (Tan et al., 2012). TVEM thus flexibly estimates how the association between a predictor and an outcome (e.g., legitimacy and cynicism) differs over continuous time (e.g., from age 14 to 25), without assuming the association follows a parametric function of time. Both the intercept and slope are time-specific and change their values at different points in time. That is, the coefficient for the time-varying predictor depends on time. For example, a simple TVEM equation is:

$$\text{LegalSocialization}_{ij} = \beta_0(t) + \beta_1(t)(\text{SystemContact}_{ij}) + \epsilon_{ij}$$

In this model, $\text{LegalSocialization}_{ij}$ refers to the normally distributed legal socialization variable (e.g., legitimacy), β_0 is the intercept parameter, β_1 is the slope parameter, $\text{SystemContact}_{ij}$ is the particular justice system experience variable (e.g., rearrest), and ϵ_{ij} refers to the normally

distributed random errors. Importantly, the relations described by the intercept ($\beta_0(t)$) and slope ($\beta_1(t)$) are functions that summarize relations with values changing across time. Accordingly, the slope and intercept are modeled separately and are allowed to vary over time.

We fit a series of TVEM models using the recently-developed SAS macro for normally distributed outcome variables (Li et al., 2014; Yang, Tan, Li, & Wagner, 2011). The complex function is split into several equally spaced intervals (knots), and each portion of a function is estimated. With this method, any complex function can be successfully approximated if a sufficient number of knots is specified. In the process of model selection, models with a different number of knots are compared using AIC and BIC values (Shiyko, Lanza, Tan, Li, & Shiffman, 2012). Following the recommendations of Shiyko and colleagues, we started with five knots and increased until AIC and BIC values were decreased. First, we estimated how each justice system contact variable was related to legitimacy. Models were run separately by each predictor and by each race/ethnicity to allow for time-varying race/ethnicity differences. Because all predictors were assessed at all waves, we estimated time-varying coefficients of time-varying predictors. We also controlled for self-reported offending and time on the streets at each age. These models were then repeated to predict legal cynicism. Results are presented as figures because time-varying coefficients are estimated in continuous time leading to a number of coefficients too large to present in tables (Vasilenko & Lanza, 2014).

CHAPTER 3: RESULTS

To examine whether reoffending rates or justice system contacts varied by race/ethnicity, we conducted a series of random effects logit models. All models controlled for time on the streets. White youth were used as the reference group, and analyses were repeated using Latino youth as the reference group. Results indicate that the likelihood of reoffending decreased for all youth as they transitioned from adolescence (age 14) into adulthood (age 25) (White $dydx = -.393$, $p < .001$; Black $dydx = -.422$, $p < .001$; Latino $dydx = -.429$, $p < .001$). There were no differences in the likelihood of reoffending by race/ethnicity at any age (all p 's $> .10$).

Considering there were no differences in the likelihood of reoffending, we then examined whether the probability of being picked up by police varied by race/ethnicity. A series of random effects logit models were conducted, controlling for self-reported offending and proportion of time on the streets (Figure 1). Results indicate that the likelihood of being picked up by the police decreased over time for all youth (White $dydx = -.165$, $p < .001$; Black $dydx = -.073$, $p < .001$; Latino $dydx = -.158$, $p < .001$). However, there were racial differences in the probability of being picked up. Specifically, White and Latino youth were equally likely to be picked up over time ($p = .827$). Black youth were more likely to be picked up by the police over time than White youth ($OR = 1.10$, $CI = [1.03, 1.16]$, $p = .002$) and Latino youth ($OR = 1.09$, $CI = [1.04, 1.15]$, $p = .001$). Considering the racial differences in the probability of being picked up by the police, we then conducted random effects logit models to examine whether the probability of being rearrested varied by race/ethnicity. Results indicate that the probability of rearrest increased over time for all youth (White $dydx = .192$, $p < .01$; Black $dydx = .279$, $p < .001$; Latino $dydx = .174$, $p < .001$) (Figure 2). White and Latino are equally likely to be arrested over time ($p = .592$). Black

youth are significantly more likely to be rearrested over time than either White youth ($OR = 1.09$, $CI = [1.02, 1.17]$, $p = .008$) or Latino youth ($OR = 1.11$, $CI = [1.05, 1.17]$, $p = .001$).

In the second set of models, we estimated individual growth curve models using linear mixed models to examine whether subsequent personal contact with the justice system (i.e., being picked up by the police and accused of a crime or being rearrested) affect developmental changes in legitimacy. First, we conducted an unconditional means model to understand developmental changes in legitimacy. The results of the unconditional means models suggest that 53.8% of the variability in legitimacy occurred between participants. The results of the unconditional growth model suggests that there was variability in the intercept and slope of legitimacy (Table 3). Results of likelihood-ratio χ^2 tests for legitimacy suggest that the random intercept is significant ($\chi^2 = 912.91$, $p < .001$) and random slope is significant ($\chi^2 = 3861.27$, $p < .001$). Results of these unconditional means and unconditional growth models indicate that multi-level modeling is appropriate.

Once it was established that multi-level modeling was appropriate, we added race/ethnicity to the model to examine whether race/ethnicity accounts for significant variability in legitimacy (Figure 3). It is important to note that these growth models appear different than the base means by age depicted in Table 1 because of the inclusion of the control variables. The Likelihood Ratio Chi-square test between the model with and the model without race/ethnicity suggests that including race/ethnicity reduces error variability in legitimacy ($\chi^2 = 74.75$, $p < .001$). Results of this model indicate that Black youth at age 14 reported lower legitimacy ($M = 2.17$) than White youth ($M = 2.37$, $p < .001$) and Latino youth ($M = 2.34$, $p < .001$), and continued reporting lower legitimacy than either group through age 25 ($p < .001$). Latino youth did not report lower legitimacy than White youth at age 14 ($p = .587$), but did start reporting

lower legitimacy by age 17 ($p = .041$) and continued reporting lower legitimacy through age 25 ($p < .001$).

We then examine whether race/ethnicity accounts for the variability in legitimacy over time. Results of the Likelihood Ratio Chi-square test suggest that including the interaction between race/ethnicity and age improves model fit for legitimacy ($\chi^2 = 7.05, p = .029$) (Figure 3). Results of a simple slopes analysis for legitimacy suggest that only the slope for White (.016) is different from zero ($dy/dx = .016, p = .008$), and is different from Black ($dy/dx = -.002, p = .010$) and Latino ($dy/dx = -.001, p = .028$). The slopes between Black and Latino are not significantly different from each other ($p = .730$). Specifically, these findings indicate that the development of legitimacy varies by race/ethnicity and that White youth, in particular, perceive the justice system as more legitimate over time.

Once it was established that the development of legitimacy varies by race/ethnicity, we used time-varying effects modeling to examine the effects of personal contacts with the justice system on legal socialization. Figures 4-6 present the results of the analyses examining the time-varying effects of being picked up by the police on legitimacy, separately by race/ethnicity. Confidence intervals not containing zero indicate a significant effect of the predictor on the legitimacy rating at each age. For Latino youth, being picked up by the police does not affect legitimacy ratings at any age. For Black youth, being picked up by the police reduces legitimacy from ages 16 to 23. Similarly, for White youth, being picked up by the police affects legitimacy from ages 18 to 22. Figures 7-9 present the results of the analyses examining the time-varying effects of being rearrested on legitimacy ratings, separately by race/ethnicity. Results suggest that being rearrested does not affect legitimacy ratings of Latino youth at any age. However,

being rearrested decreases legitimacy for Black youth from ages 18.5 through 24. Similarly, for White youth, being rearrested reduces legitimacy ratings from ages 16 through 23.

Whereas perceptions of justice system legitimacy are related to greater confidence in the law, legal cynicism indicates whether an individual feels violating the law can be reasonable. To examine whether the developmental mechanisms underlying these attitudes vary, we repeat the same set of analyses using legal cynicism. To assess whether multilevel modeling was appropriate, unconditional means and growth models were run. The results of the unconditional means model suggest that 51.7% of the variability in legal cynicism occurred between participants. The results of the unconditional growth models suggest that there was variability in the intercept and slope of cynicism (Table 3). Results of likelihood-ratio χ^2 tests for cynicism suggest that the random intercept is significant ($\chi^2 = 788.87, p < .001$), random slope is significant ($\chi^2 = 3210.87, p < .001$), and covariance between intercepts and slopes is significant ($\chi^2 = 934.26, p < .001$). These results indicate that multi-level modeling is appropriate.

Once it was established that multi-level modeling was appropriate, we added race/ethnicity to the model to examine whether race/ethnicity accounts for significant variability in cynicism (Figure 10). It is important to note that these growth models appear different than the base means by age depicted in Table 1 because of the inclusion of the control variables. The Likelihood Ratio Chi-square test between the model with and the model without race/ethnicity suggests that including race/ethnicity reduces error variability in cynicism ($\chi^2 = 32.33, p < .001$). Results indicate that White youth report lower cynicism at age 14 ($M = 1.94$) than Black youth ($M = 2.03, p = .059$) and Latino youth ($M = 2.12, p < .001$), and these effects become more pronounced through age 25 ($p < .001$). Black youth report lower cynicism than Latino youth at age 14 ($p = .011$) through age 23 ($p = .048$). At ages 24 and 25, there were no differences

between Black and Latino youth ($p > .081$). Including the interaction between race/ethnicity and age does not improve the model fit for cynicism ($\chi^2 = 1.36, p = .506$). Results of a simple slopes analysis for cynicism that none of the slopes are significantly different from zero (White ($dy/dx = -.009, p = .083$), Black ($dy/dx = -.002, p = .661$), and Latino ($dy/dx = -.004, p = .315$) nor are any slopes significantly different from each other. These results indicate that cynicism remains relatively stable from adolescence through young adulthood. However, racial differences in cynicism appear in adolescence and remain through young adulthood.

Once it was established that the development of cynicism varies by race/ethnicity, we used time-varying effects modeling to examine the effects of personal contacts with the justice system on legal socialization. Figures 11-13 present the results of the analyses examining the time-varying effects of being rearrested on cynicism ratings, separately by race/ethnicity. Results indicate that being picked up by the police only affects Latino youths' cynicism from ages 18 to 20. Being picked up by the police does not affect the cynicism ratings of Black or White youth. Figures 14-16 present the results of the analyses examining the time-varying effects of being rearrested on cynicism ratings. Interestingly, being rearrested does not affect cynicism for any youth.

CHAPTER 4: DISCUSSION AND CONCLUSIONS

Considering that justice system attitudes have direct consequences for crime commission during both adolescence and adulthood (Augustyn, 2015; Fagan & Piquero, 2007; Kirk & Matsuda, 2011; Reisig, Wolfe, & Holtfreter, 2011; Tyler & Huo, 2002), it is essential to understand whether justice system attitudes remain stable from adolescence through early adulthood. Further, considering the salience of race/ethnicity to justice system exposure, it is likely that legal socialization experiences vary by race/ethnicity. However, race is one of the least explored constructs in life-course criminology (Piquero, 2015). Results of this study indicate that justice system attitude formation over the course of adolescence and early adulthood varies dramatically by race/ethnicity. For both measures of justice system attitudes and for all ages assessed from adolescence through early adulthood, Black youth view the justice system the most negatively. Although surveys show that Latino adults report more negative attitudes than White adults (see Weitzer, 2014), the results of this study suggest that attitude differences emerge through adolescence. Latino and White youth report similar attitudes during adolescence, yet over time, White youth begin to view the system more positively than Latino youth. As indicated by the simple slopes analyses, Latino youths' attitudes do not significantly change over time. Results indicate that increasingly positive attitudes among White youth, and not increasingly negative attitudes among Latino youth, likely account for these differences. Indeed, White youth are the only group whose attitudes about the system become more positive as they age. Findings, in short, reveal a gradient in attitudes among White youth that begins in adolescence and becomes increasingly differentiated into early adulthood.

Considering the salience of race to justice system exposure, it is likely that justice system contacts also affect the legal socialization experiences differently by race. We find that the

negative effects of personal experiences with the justice system on attitude development vary by age, race/ethnicity, the particular type of contact (i.e., being picked up by the police versus being rearrested), and the particular attitude. For Black youth, being picked up by the police affects legitimacy ratings at almost all ages, though actually being rearrested does not affect their perceptions of justice system legitimacy until early adulthood. Indeed, it may be the case that since Black youth were more likely to be picked up by the police and to be rearrested than either White or Latino youth over time, it is likely that these youths' disproportionate contact with the justice system may contribute to their more negative views of the justice system.

In contrast, neither being picked up by the police nor being rearrested significantly affects Latino youths' perceptions of justice system legitimacy. There are two possible explanations. First, although direct, personal experiences with the justice system affect attitudes towards the justice system, vicarious experiences, or what family members, neighbors, or friends communicate to the youth about their experiences with the justice system, also likely affect attitude development. It may be that vicarious experiences affect Latino youth's attitudes more than their direct, personal experiences. Second, in line with some prior research (Tyler & Huo, 2002), it may be that Black youths in this study were treated more disrespectfully during police encounters than Latino or White youths. Accordingly, the effect of such encounters on attitude formation would be disproportionately larger for Black youth (see Lurigio, Greenleaf, & Flexon, 2009). However, data on what occurred during these police encounters is unavailable, thus additional research is necessary to examine these theoretical explanations. Considering this is the first developmental study spanning adolescence through early adulthood, future research with alternative datasets is necessary to understand why personal encounters with the justice system had limited effects on Latino youths' perceptions of the justice system.

Results also indicate that the effects of personal contacts with the justice system on attitude formation largely occur during young adulthood, as compared with adolescence. Young adulthood is a key transitional phase for young men, a time during which they generally move out of the home, seek self-sufficiency, employment, or higher education. The effects of justice system contacts may be disproportionately more negative during this transitional period when the young adult relies more on the self and less on the family. During adolescence, the family may be more involved in the youth's life, such that negative effects of justice system contacts may be more mitigated by familial involvement. Future research should examine whether relationships mitigate the effects of justice system experiences during different developmental periods.

This study has several limitations. First, because data were collected beginning at age 14, it is unknown whether attitude development begins even before adolescence. Second, considering our statistical techniques require a large sample, this study focused exclusively on male offenders. Future research on the legal socialization of female offenders is necessary considering there may be baseline differences between the sexes that may contribute to differential legal socialization (Fagan & Tyler, 2005). Third, this study only examined the effects of being picked up by the police or being rearrested on legal socialization. If minority youth describe the procedures used by legal authorities as more unfair, assessing what actually *occurred* during the contact may pronounce the effects found in this study. Complementing quantitative analyses with qualitative methods would enhance our understanding of the mechanisms in the legal socialization process, providing a more complete picture of not just the quantitative number of contacts, but a deeper understanding of what is happening during each of the contacts. This is particularly important considering minority youth tend to have disproportionate contact with justice system officials. Finally, this study did not examine the

effects of vicarious justice system exposure on the development of attitudes towards the justice system. In accordance with the social developmental model (Hawkins & Weis, 1985), vicarious experiences with authorities likely shape youths' attitudes towards the justice system (Ferdik, Wolfe, & Blasco, 2013; Hurst & Frank, 2000; Rosenbaum, 2005). Although emerging research suggests that vicarious negative experiences with justice system actors affect attitudes towards the justice system (Fine et al., in press; Flexon, Lurigio, & Greenleaf, 2009), research has not examined whether these effects are limited to family members or friends, or if effects vary by developmental timing.

Despite these limitations, this study has several strengths, including the use of longitudinal statistical techniques. First, using longitudinal multilevel models enabled us to examine the trajectories of change in the legal socialization variables beginning in adolescence and continuing through early adulthood. Second, the use of the time-varying effects model enabled us to examine whether there was a time-varying relation between the covariates and the outcomes. Rather than estimating an overall effect of a time-varying covariate like rearrest, TVEM allows for the effect of each justice system contact on each legal socialization variable to be dynamic. These analytic tools give us greater confidence in our finding that not only does justice system attitude formation over the course of adolescence and early adulthood vary by race/ethnicity, but that the effects of personal experiences with justice system actors on attitude formation also varies by attitude, type of contact, age, and by race/ethnicity.

Although many of the study's hypotheses received support, we were surprised by our findings with legal cynicism. Despite a similar developmental trajectory for legal cynicism, we find that the mechanisms affecting legitimacy may not also affect legal cynicism. Results indicated that neither being picked up by the police nor being rearrested affected legal cynicism,

with the exception of Latino youth briefly from ages 18 to 20. However, these results may be due to a threshold effect. That justice system contacts may affect legitimacy but not cynicism raises the importance of distinguishing between these attitudes. Cynicism refers to the degree to which individuals feel that the law does not apply to them and the degree to which an individual feels violating the law can be reasonable. In contrast, legitimacy refers to the individual's trust or confidence in the law. Repeated or negative interactions with justice system officials would likely erode one's trust in the legal system, one's legitimacy. These interactions, however, may not cause one to feel violating the law may be reasonable, nor may they actually cause one to break the law in the future. Understanding why youth feel violating the law is reasonable and what mechanisms worsen these attitudes would be particularly informative for practitioners. As such, additional research is necessary to identify what mechanisms affect the development of legal cynicism.

This study was the first to examine how juvenile offenders' attitudes towards the justice system change during the transition to adulthood, and to demonstrate that the mechanisms of change vary based on developmental timing and race/ethnicity. The findings clearly indicate a gradient of justice system attitudes by race/ethnicity that begins in adolescence and becomes more pronounced into young adulthood. Black youth view the system as the least legitimate and most cynically, followed by Latino youth, and White youth. That mechanisms affect Black and Latino youth legal socialization differently indicates that aggregating minorities by analyzing all "non-Whites" together in future studies will mask meaningful differences. Considering that Black youth in this sample come into disproportionate contact with the justice system despite engaging in the same level of offending, it is likely that Black youth are recognizing a racial bias in the system. Their disproportionate contacts with the justice system likely erode their

perceptions of its legitimacy. Though Black youths' attitudes towards the justice system are characterized as more *negative*, their attitudes may also be more *realistic*.

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Table 1

Legal Socialization Variables at each Age

Age	Legitimacy				Legal Cynicism			
	All	White	Black	Latino	All	White	Black	Latino
14	2.50 (.59)	2.65 (.67)	2.34 (.58)	2.64 (.58)	1.98 (.63)	2.04 (.71)	1.88 (.60)	2.06 (.60)
15	2.38 (.57)	2.44 (.61)	2.30 (.55)	2.40 (.55)	2.05 (.55)	1.94 (.58)	2.02 (.55)	2.14 (.54)
16	2.32 (.54)	2.41 (.57)	2.22 (.52)	2.37 (.52)	2.08 (.58)	1.99 (.62)	2.05 (.57)	2.17 (.53)
17	2.31 (.53)	2.44 (.50)	2.19 (.53)	2.35 (.53)	2.09 (.55)	1.99 (.54)	2.09 (.57)	2.12 (.54)
18	2.31 (.54)	2.43 (.50)	2.18 (.55)	2.36 (.52)	2.09 (.55)	1.95 (.51)	2.08 (.56)	2.17 (.56)
19	2.31 (.56)	2.47 (.56)	2.18 (.52)	2.36 (.56)	2.06 (.55)	1.89 (.50)	2.07 (.54)	2.14 (.58)
20	2.31 (.59)	2.54 (.55)	2.16 (.56)	2.33 (.58)	2.02 (.59)	1.86 (.53)	2.01 (.56)	2.12 (.61)
21	2.33 (.63)	2.53 (.61)	2.20 (.59)	2.36 (.65)	2.01 (.61)	1.85 (.52)	2.03 (.58)	2.08 (.67)
22	2.32 (.63)	2.51 (.64)	2.18 (.56)	2.39 (.66)	1.97 (.61)	1.86 (.59)	1.96 (.57)	2.04 (.62)
23	2.32 (.63)	2.51 (.57)	2.16 (.56)	2.39 (.64)	2.11 (.53)	1.99 (.52)	2.09 (.57)	2.19 (.55)
24	2.28 (.61)	2.50 (.61)	2.21 (.57)	2.24 (.62)	2.10 (.52)	1.99 (.43)	2.04 (.47)	2.23 (.55)
25	2.24 (.62)	2.37 (.64)	2.12 (.56)	2.51 (.67)	2.10 (.57)	1.98 (.54)	2.01 (.45)	2.28 (.58)

Table 2

Key descriptive statistics by age.

Age	Self-Report Reoffending				Picked up by Police				Rearrested			
	All	White	Black	Latino	All	White	Black	Latino	All	White	Black	Latino
14	0.99	1.00	1.00	0.98	1.00	1.00	1.00	1.00	0.09	0.04	0.07	0.13
15	0.89	0.92	0.88	0.90	0.72	0.76	0.67	0.75	0.11	0.11	0.10	0.13
16	0.87	0.86	0.86	0.88	0.60	0.60	0.61	0.60	0.17	0.13	0.17	0.20
17	0.79	0.82	0.77	0.80	0.43	0.43	0.50	0.49	0.21	0.24	0.20	0.21
18	0.65	0.70	0.64	0.64	0.28	0.22	0.32	0.25	0.27	0.25	0.27	0.29
19	0.57	0.63	0.57	0.54	0.22	0.25	0.24	0.18	0.35	0.32	0.37	0.34
20	0.51	0.53	0.50	0.52	0.26	0.26	0.30	0.20	0.33	0.29	0.38	0.30
21	0.48	0.59	0.43	0.46	0.27	0.27	0.30	0.25	0.32	0.28	0.33	0.33
22	0.44	0.54	0.41	0.42	0.27	0.22	0.33	0.24	0.32	0.28	0.36	0.30
23	0.43	0.53	0.38	0.43	0.26	0.25	0.30	0.23	0.35	0.30	0.40	0.31
24	0.41	0.38	0.42	0.41	0.24	0.23	0.28	0.21	0.26	0.33	0.42	0.31
25	0.35	0.44	0.34	0.35	0.20	0.22	0.19	0.20	0.35	0.33	0.42	0.20

Table 3

Unconditional Growth Models of Legitimacy and Legal Cynicism

	Legitimacy		Legal Cynicism	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Fixed Effects				
Intercept	2.27***	.02	2.10***	.02
Linear Slope	.01*	<.01	-.01***	<.01
Random Effects				
Intercept	.22**	.01	.17**	.10
Linear Slope	.01**	<.01	.01**	<.001
Level 1 Error	.13**	<.01	.15**	<.01
Model Fit				
-2 log likelihood	9472.80		9460.17	

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

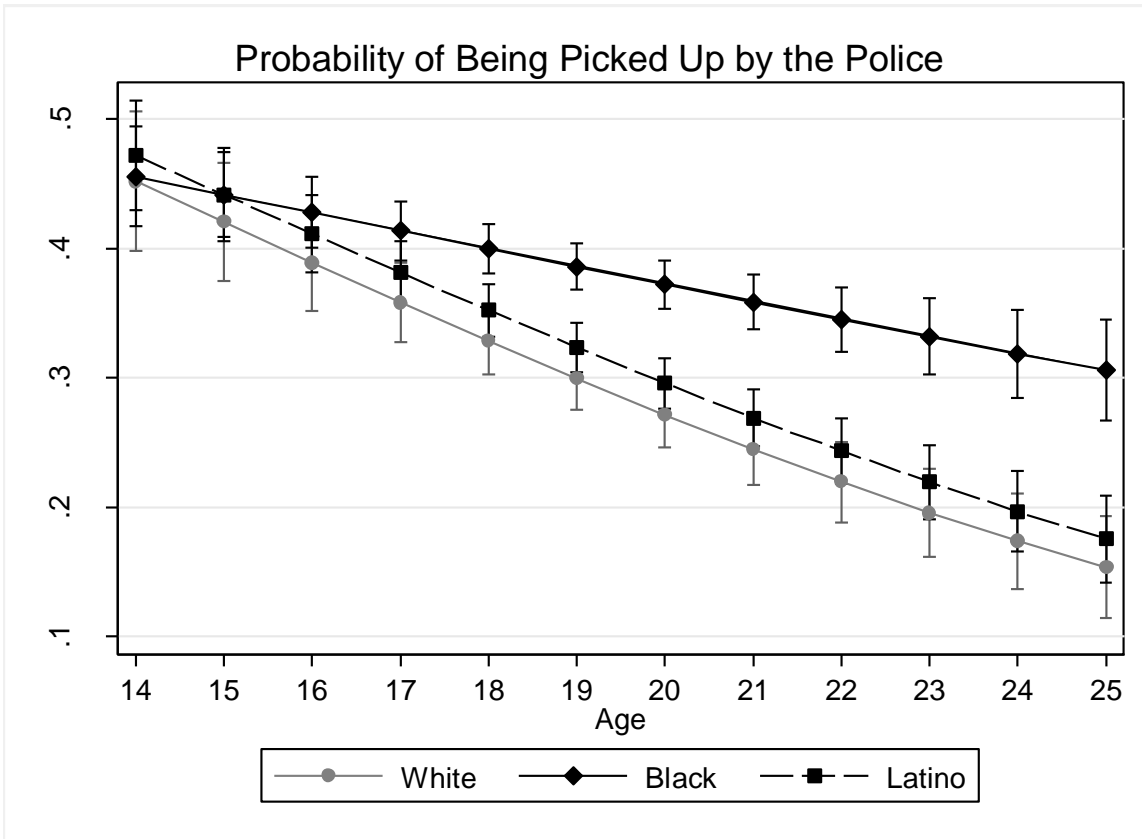


Figure 1. Predicted Probability of Being Picked Up by the Police by Race.

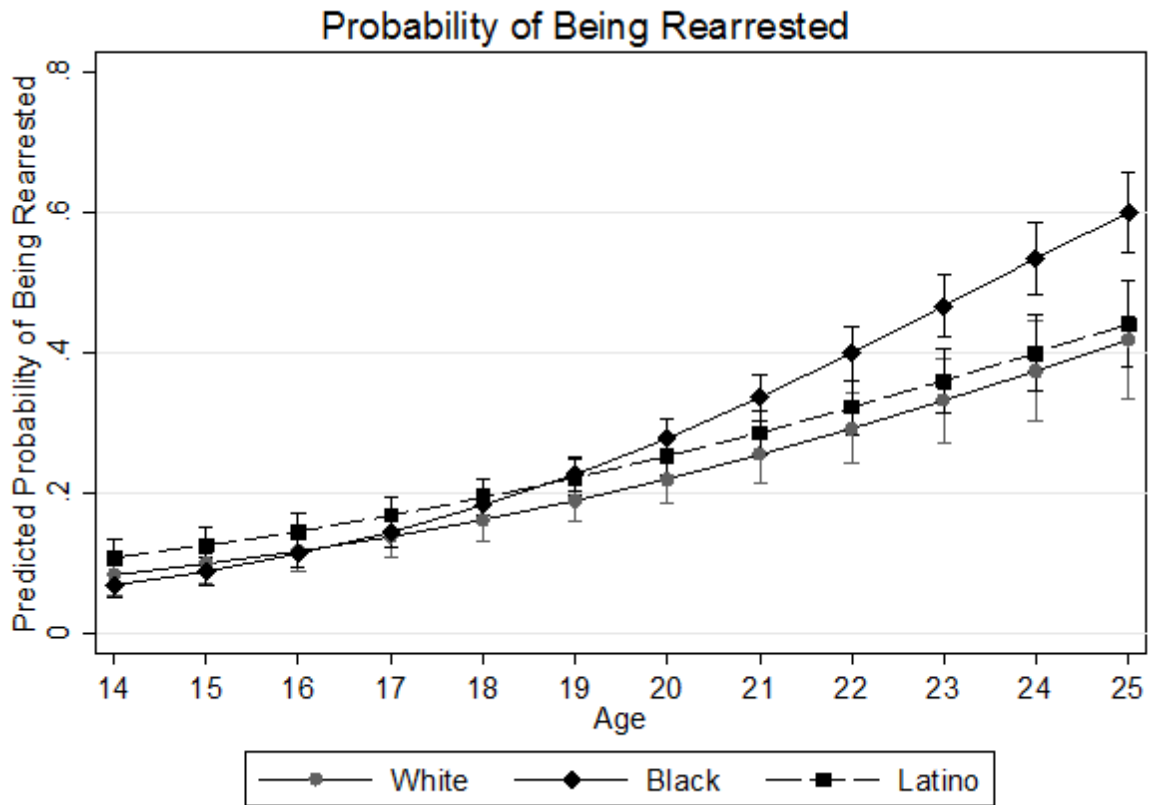


Figure 2. Predicted Probability of Being Rearrested by Race.

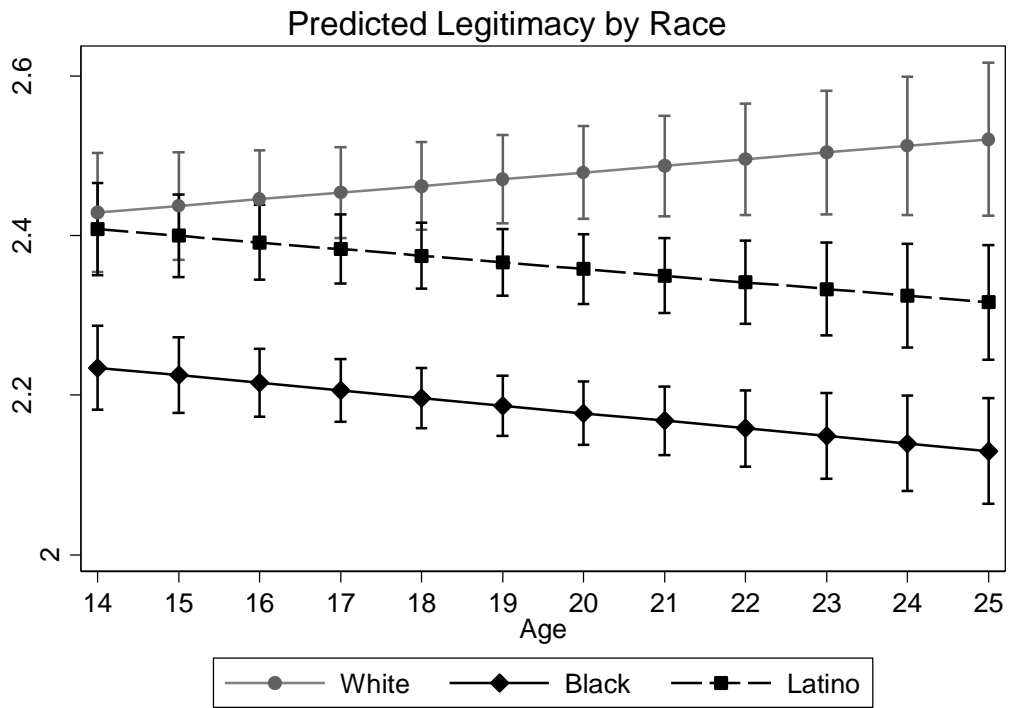


Figure 3. Conditional Growth Model of Legitimacy using Race.

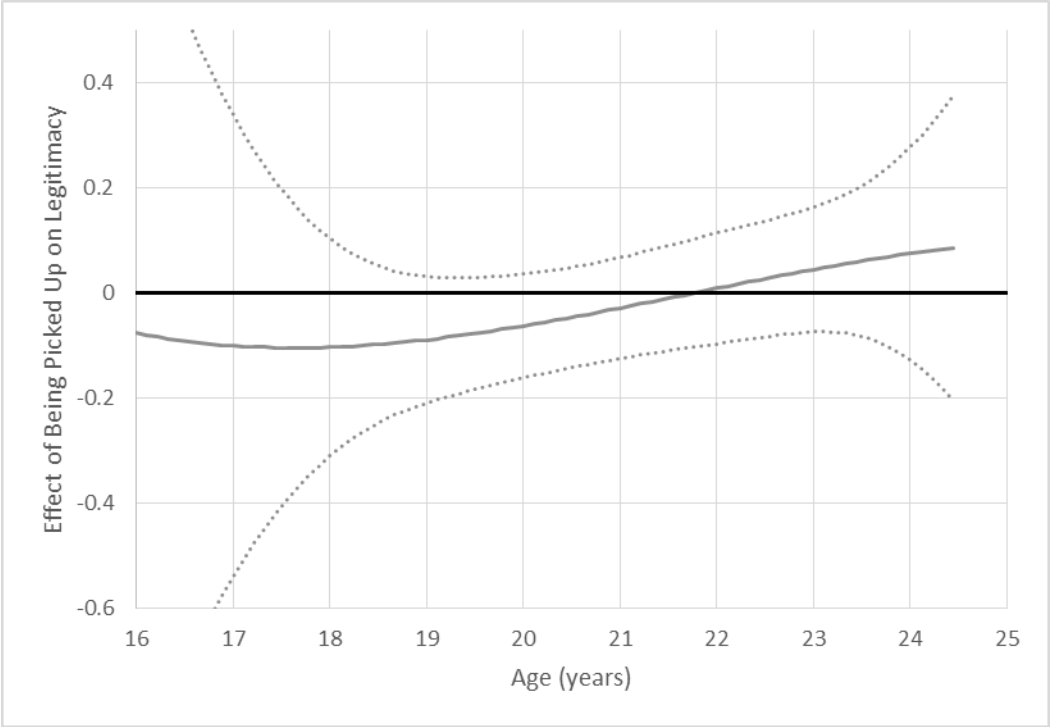


Figure 4. Time-Varying Effects Model of the Effect of Being Picked up by the Police on Legitimacy Scores for Latino Youth.

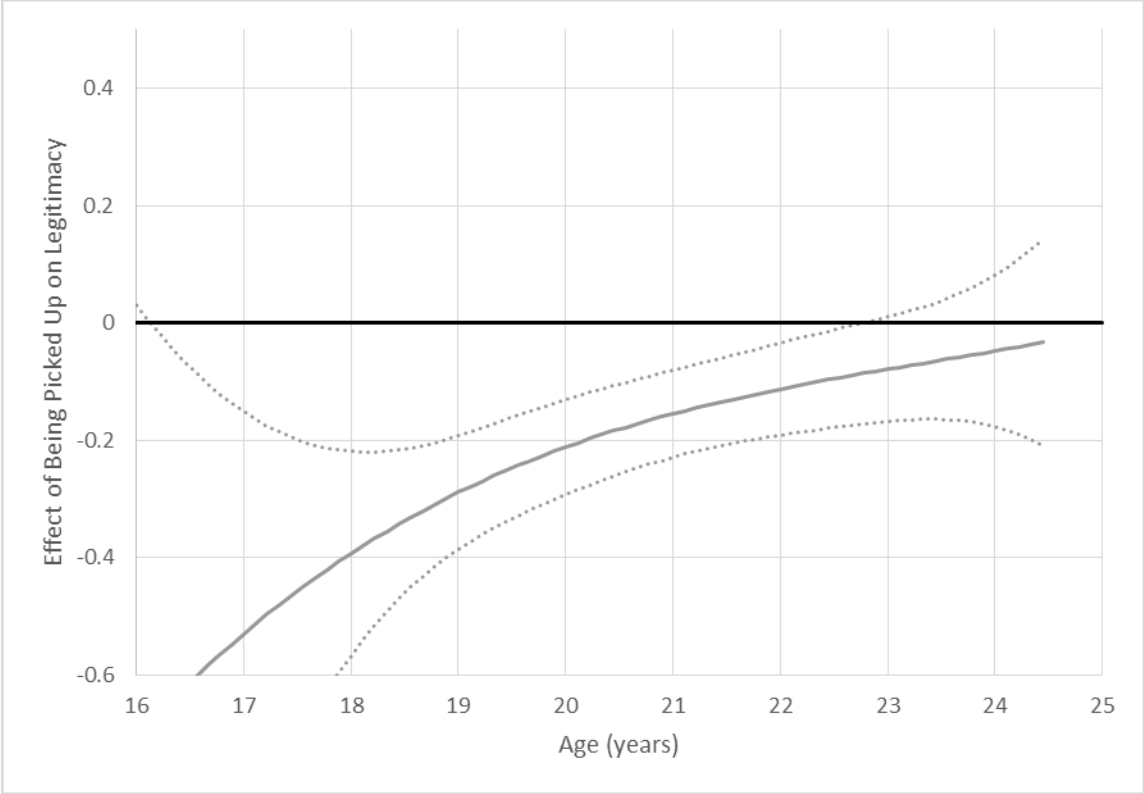


Figure 5. Time-Varying Effects Model of the Effect of Being Picked up by the Police on Legitimacy Scores for Black Youth.

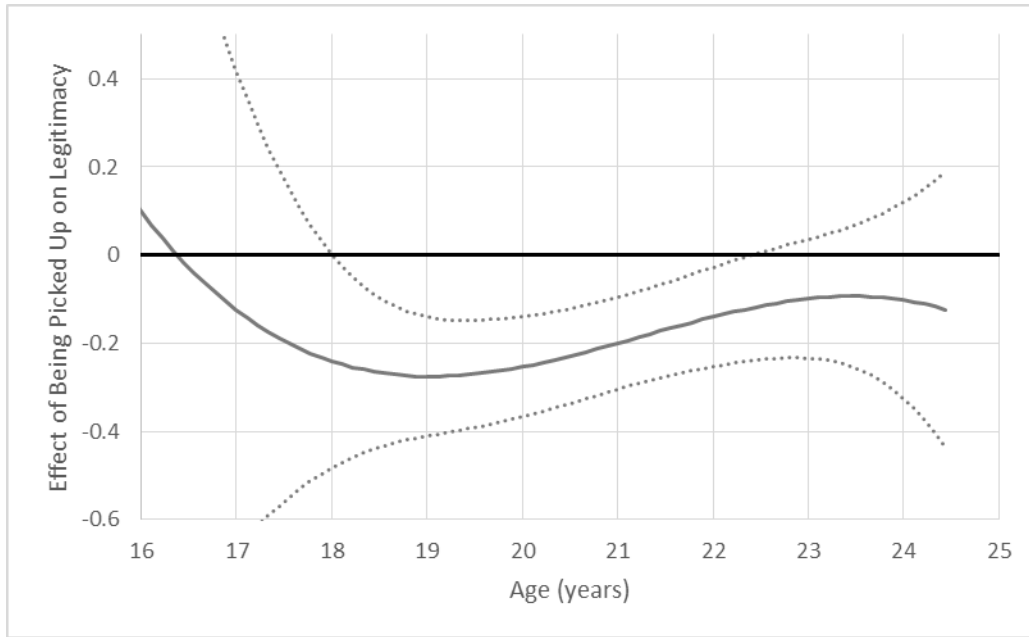


Figure 6. Time-Varying Effects Model of the Effect of Being Picked up by the Police on Legitimacy Scores for White Youth.

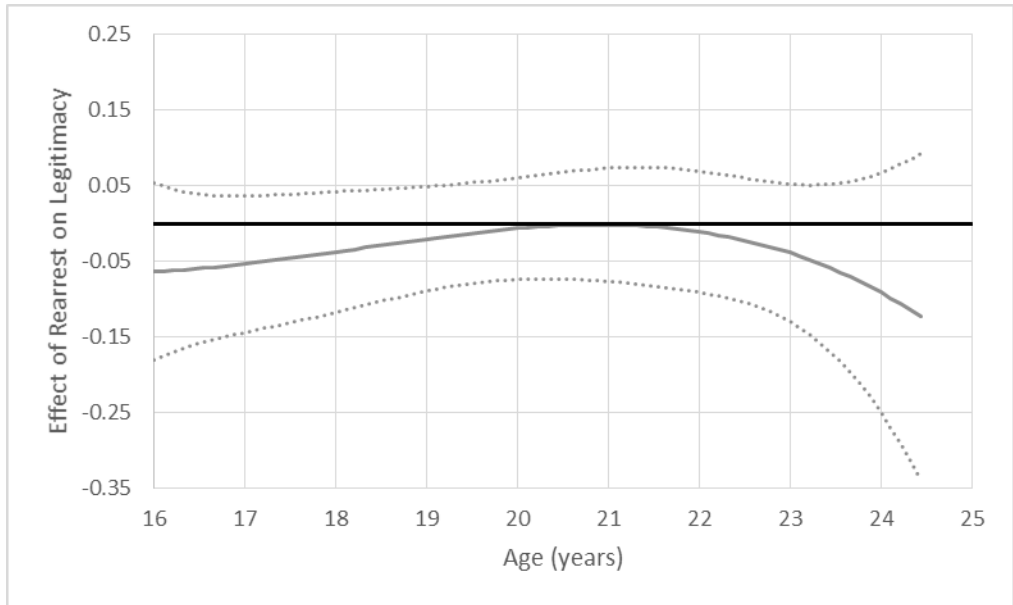


Figure 7. Time-Varying Effects Model of the Effect of Being Rearrested on Legitimacy Scores for Latino Youth.

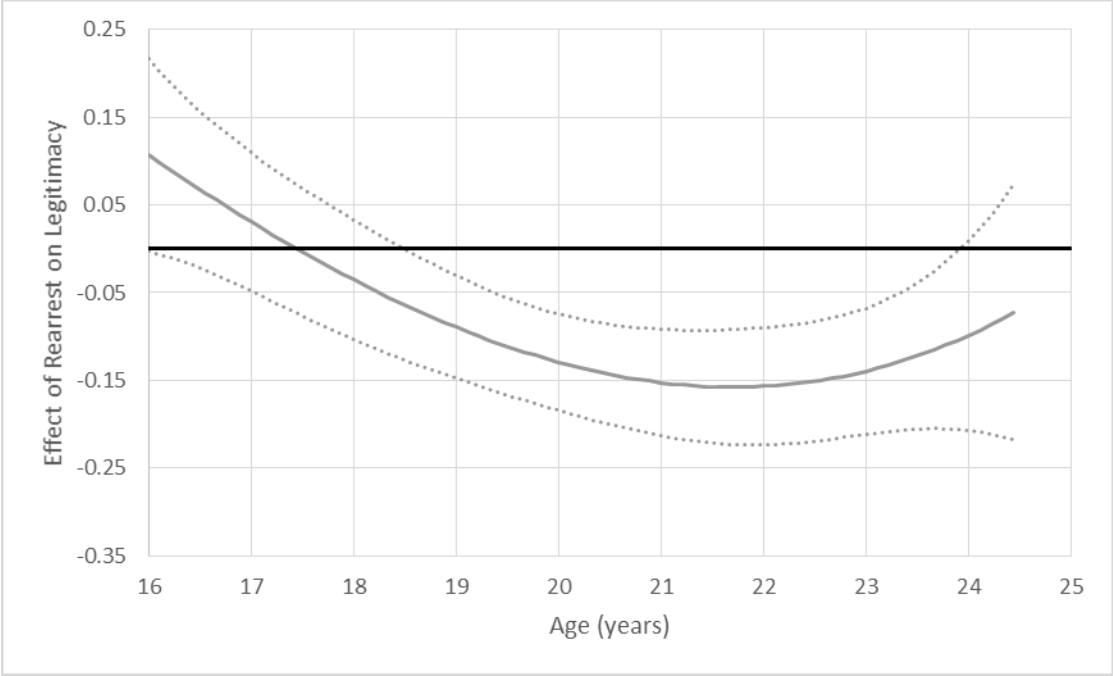


Figure 8. Time-Varying Effects Model of the Effect of Being Rearrested on Legitimacy Scores for Black Youth.

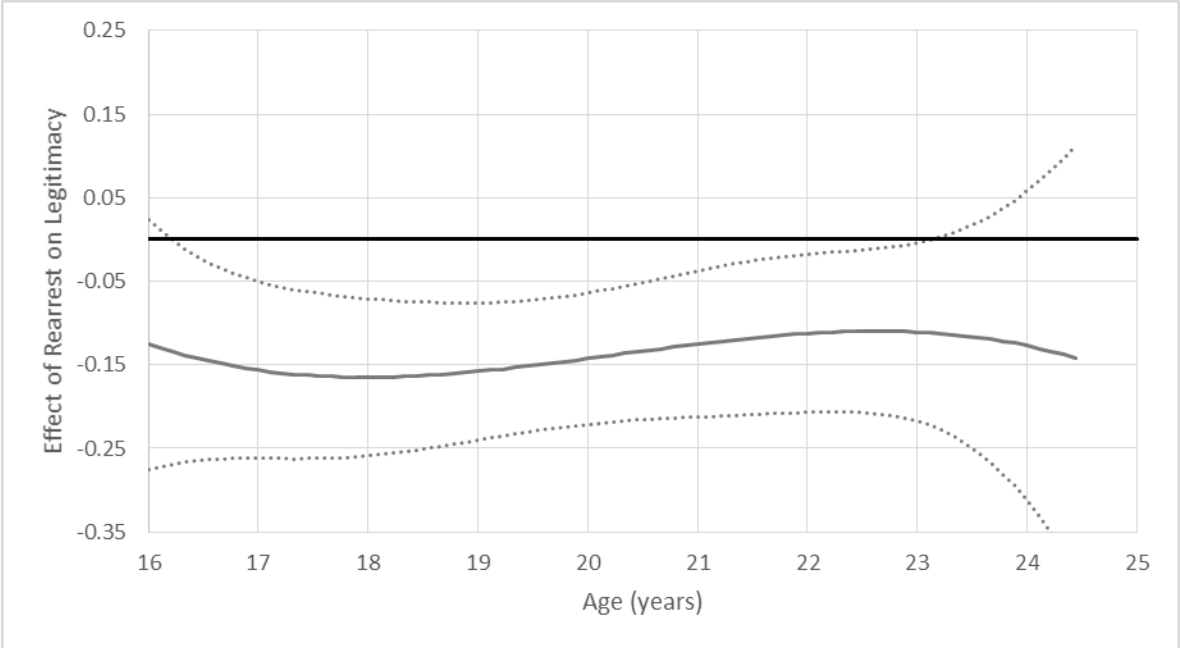


Figure 9. Time-Varying Effects Model of the Effect of Being Rearrested on Legitimacy Scores for White Youth.

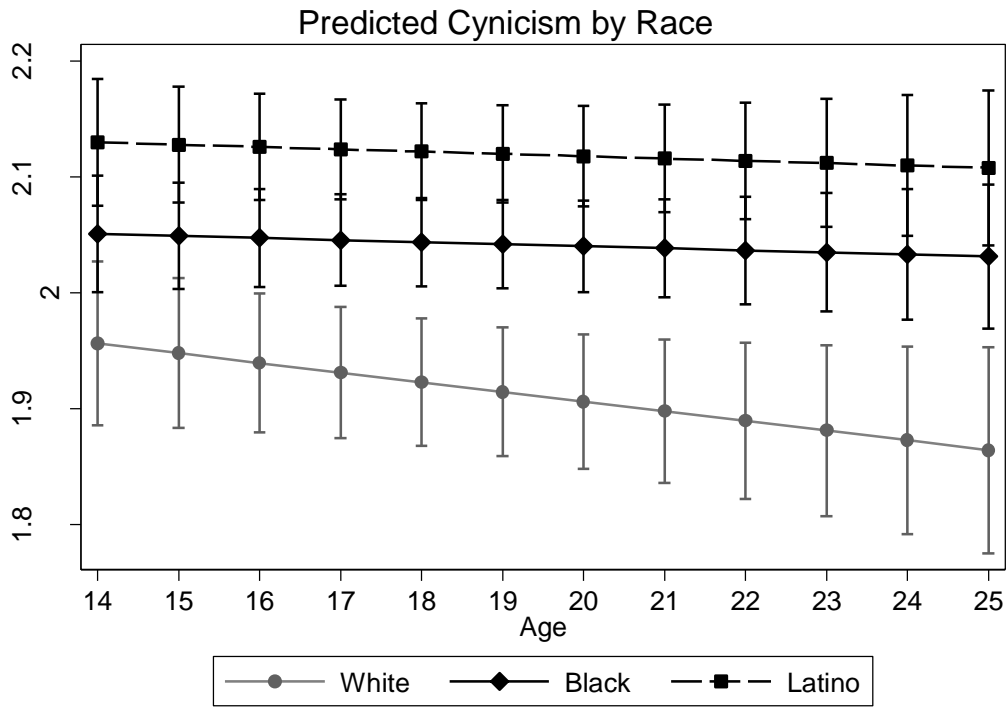


Figure 10. Conditional Growth Model of Cynicism using Race.

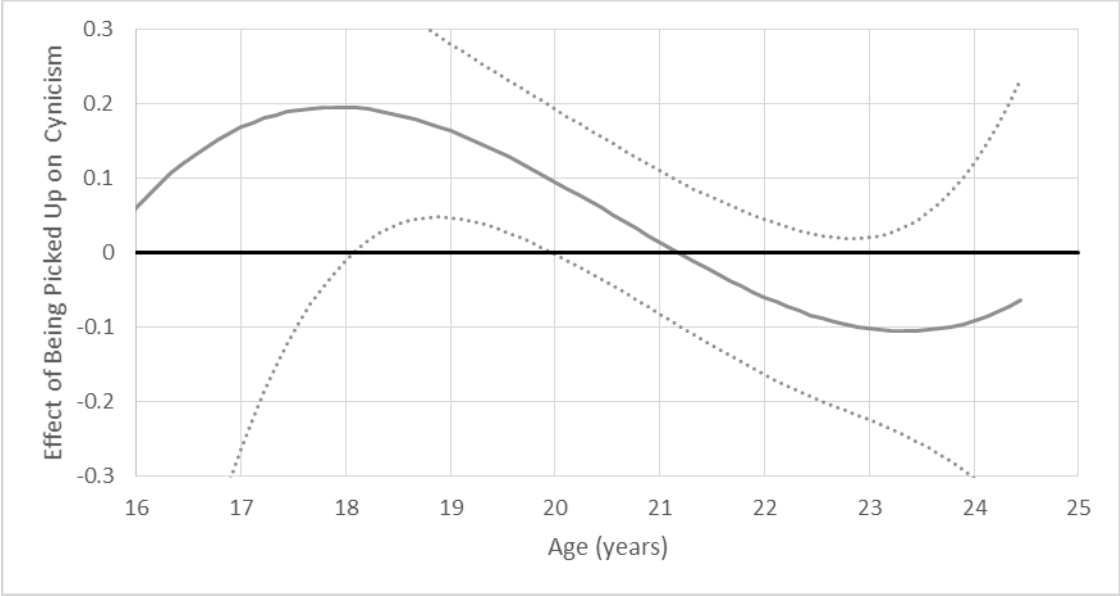


Figure 11. Time-Varying Effects Model of the Effect of Being Picked up by the Police on Cynicism Scores for Latino Youth.

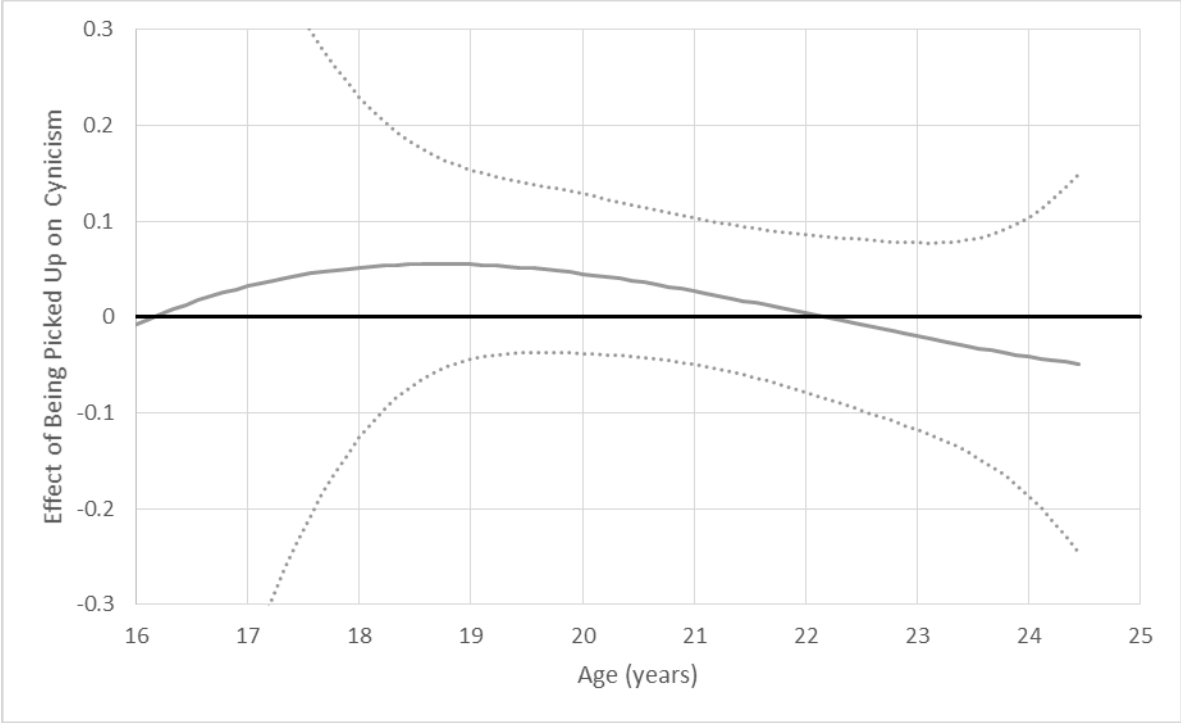


Figure 12. Time-Varying Effects Model of the Effect of Being Picked up by the Police on Cynicism Scores for Black Youth.

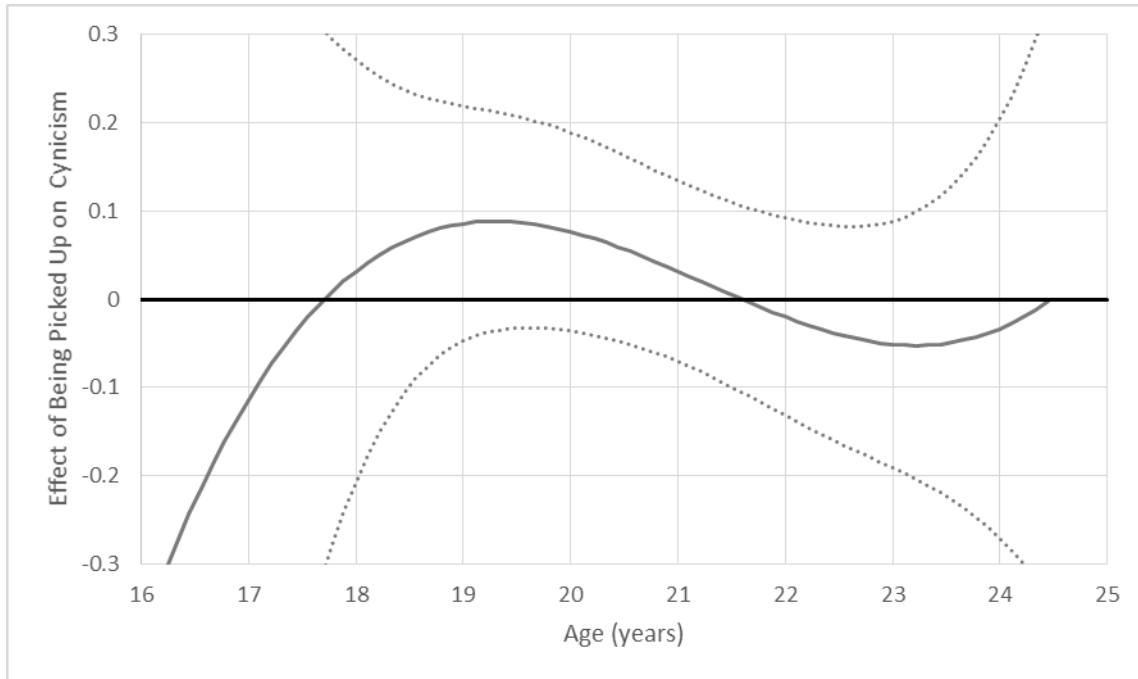


Figure 13. Time-Varying Effects Model of the Effect of Being Picked up by the Police on Cynicism Scores for White Youth.

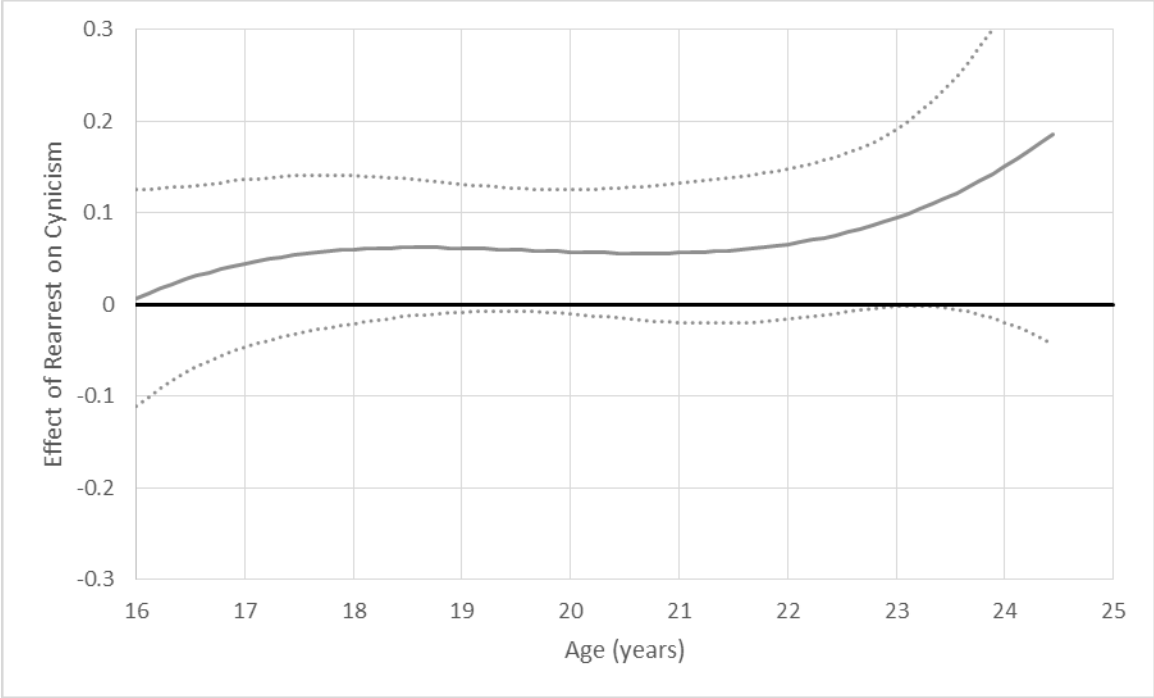


Figure 14. Time-Varying Effects Model of the Effect of Being Rearrested on Cynicism Scores for Latino Youth.

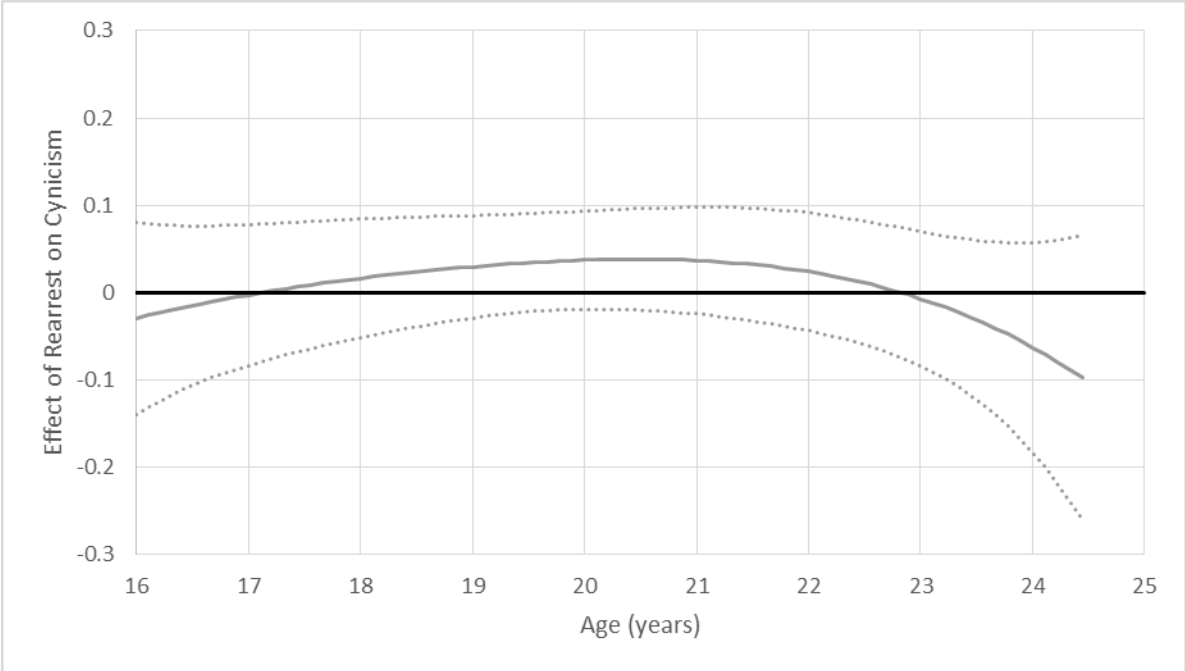


Figure 15. Time-Varying Effects Model of the Effect of Being Rearrested on Cynicism Scores for Black Youth.

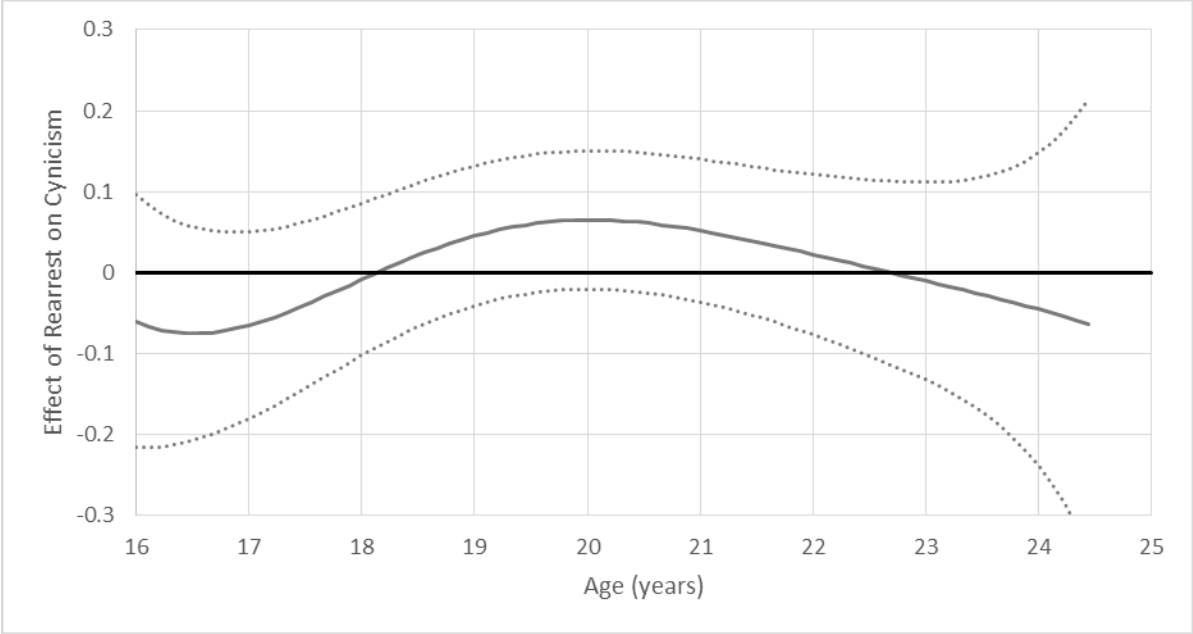


Figure 16. Time-Varying Effects Model of the Effect of Being Rearrested on Cynicism Scores for White Youth.