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Respect and Obey: The Development of Adolescents' Perceptions of the Police and the Law

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### Publication Date

2018

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UNIVERSITY OF CALIFORNIA,  
IRVINE

Respect and Obey: The Development of Adolescents' Perceptions of the Police and the Law

DISSERTATION

submitted in partial satisfaction of the requirements  
for the degree of

DOCTOR OF PHILOSOPHY

in Psychology & Social Behavior

by

Adam DuPree Fine

Dissertation Committee:  
Professor Elizabeth Cauffman, Chair  
Professor Chuansheng Chen  
Associate Professor Nicholas Scurich

2018



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## **Acknowledgments**

I would like to express my deepest appreciation and gratitude to my committee chair, Professor Elizabeth Cauffman, who has been an exemplary role model. Without her guidance and persistent help, this dissertation – and my career – would not be possible.

I would also like to thank my committee members, Professor Chuansheng Chen and Professor Nicholas Scurich, whose remarkable bodies of work demonstrate the perfect nexus between rigorous science and policy-applicable research. I am indebted to their feedback and guidance throughout the years.

Further, I would like to thank the Crossroads Principal Investigators, Professor Elizabeth Cauffman, Professor Paul Frick, and Professor Laurence Steinberg, for generously permitting me to use a portion of their data for this dissertation. Additionally, I am greatly appreciative of Sarah Miltimore for her leadership as the Crossroads Project Coordinator.

Finally, I am honored to have received support from the UC Irvine School of Social Ecology Dean's Dissertation Writing Fellowship and Dissertation Data Collection Grant, the American Psychological Foundation Annette Urso Rickel Foundation Dissertation Award for Public Policy, the UC Irvine University-Wide Public Impact Distinguished Fellowship, the Alison Clarke-Stewart Graduate Dissertation Award, and the UC Irvine School of Social Ecology Martha Newkirk Award for Excellence in Research by a Graduate Student.

## Curriculum Vitae

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### EDUCATION

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- 2018      Ph.D., Psychology & Social Behavior; University of California, Irvine  
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*Advanced to Candidacy:* April, 2017  
*Dissertation:* Respect and Obey: The Development of Adolescents' Perceptions of the Police and the Law  
*Committee:* Elizabeth Cauffman, Ph.D. (Chair)  
                  Chuansheng Chen, Ph.D.  
                  Nicholas Scurich, Ph.D.
- 2015      M.A., Social Ecology; University of California, Irvine
- 2012      B.A., Psychology; Georgetown University, *Magna Cum Laude*

### EXPERIENCE

---

- 2018      American Association for the Advancement of Science (AAAS) Catalyzing Advocacy in Science and Engineering (CASE) Workshop in Washington, D.C.
- 2017-18    Dissertation Study: Respect and Obey: The Development of Adolescents' Perceptions of the Police and the Law
- 2016-18    ComplianceNet  
            Founding co-convener (with Benjamin van Rooij and Yuval Feldman) of an international organization of interdisciplinary scholars who study compliance.
- 2016      Substance Abuse and Mental Health Services Administration (SAMHSA) Graduate Research Fellowship (\$35,000)
- 2016-18    UC Irvine Crossroads Study Graduate Research Fellowship  
            PIs: Elizabeth Cauffman, Laurence Steinberg, and Paul J. Frick.
- 2015      UC Irvine Center for Psychology & Law Graduate Research Fellowship
- 2010-12    Georgetown University Center for Research on Adolescents, Women, and the Law Research Assistant  
            Mentored by Jennifer Woolard, Ph.D.
- 2010-11    Georgetown University Cognitive Neuroscience Laboratory Research Assistant  
            Mentored by Chandan Vaidya, Ph.D.



- 2009-12 Georgetown University Center for Research on Children in the United States  
Research Assistant  
Mentored by Deborah Phillips, Ph.D.
- 2012 Policy Intern, *Society for Research in Child Development; Washington, D.C.*  
Mentored by Martha Zaslow, Ph.D.
- 2011 Legislative Intern, *Office of Senator John Kerry; Washington, D.C.*

## PEER-REVIEWED PUBLICATIONS

---

†Denotes mentored student author

- Fine, A.,** Simmons, C., Miltimore, S., Cauffman, E., Steinberg, L., & Frick, P. (*In press*). The School Experiences of Male Adolescent Offenders: Implications for Academic Performance and Recidivism. *Crime and Delinquency*. [Link](#).
- Bersani, B., **Fine, A.,** Piquero, A., Steinberg, L., Frick, P., & Cauffman, E. (*In Press*). Crime Among the Undocumented: Investigating the Offending Histories of Illegal Immigrants. *Migration Letters*.
- Fine, A.,** Baglivio, M., Cauffman, E., Wolff, K., & Piquero, A. (*In Press*). Does the Effect of Self-Regulation on Adolescent Recidivism Vary by Youths' Attitudes? *Criminal Justice and Behavior*. DOI: <https://doi.org/10.1177/0093854817739046> [Link](#).
- Mahler, A., **Fine, A.,** Frick, P., Steinberg, L., & Cauffman, E. (2017). Expecting the unexpected? Expectations for future success among adolescent first-time offenders. *Child Development*. DOI: [10.1111/cdev.12977](https://doi.org/10.1111/cdev.12977) [Link](#).
- Fine, A.,** Wolff, K., Baglivio, M., Piquero, A., Frick, P., Steinberg, L., & Cauffman, E. (2017). Does the Effect of Justice System Attitudes on Adolescent Crime Vary Based on Psychosocial Maturity? *Child Development*. DOI: [10.1111/cdev.12983](https://doi.org/10.1111/cdev.12983). [Link](#).
- Thomas, A., Ozbardacki, N.†, **Fine, A.,** & Cauffman, E. (2017). Effects of Physical and Emotional Maternal Hostility on Adolescents' Depression and Reoffending. *Journal of Research on Adolescence*. DOI: [10.1111/jora.12345](https://doi.org/10.1111/jora.12345). [Link](#).
- Fine, A.,** & van Rooij, B. (2017). For Whom Does Deterrence Affect Behavior? Identifying Key Individual Differences. *Law and Human Behavior*, *41*(4), 354-360. DOI: [10.1037/lhb0000246](https://doi.org/10.1037/lhb0000246) [Link](#).
- Fine, A.,** Donley, S., Cavanagh, C., Steinberg, L., Frick, P., & Cauffman, E. (2017). And Justice for All: Determinants and Effects of Probation Officers' Processing Decisions Regarding First-Time Juvenile Offenders. *Psychology, Public Policy, and Law*, *23*(1), 105-117. [http://dx.doi.org/10.1037/law0000113](https://dx.doi.org/10.1037/law0000113) [Link](#).

- Fine, A.,** Cavanagh, C., Donley, S., Frick, P., Steinberg, L., & Cauffman, E. (2017). Is the effect of justice system attitudes on recidivism stable after youths' first arrest? Race and legal socialization among first-time offenders. *Law and Human Behavior, 41*(2), 146-158. <http://dx.doi.org/10.1037/lhb0000229> [Link](#).
- Cauffman, E., **Fine, A.,** Thomas, A., & Monahan, K. (2017). Trajectories of Violent Behavior among Females and Males. *Child Development, 88*(1), 41-54. DOI: 10.1111/cdev.12678 [Link](#).
- van Rooij, B., **Fine, A.,** Zhang, Y., & Wu, Y. (2017). Comparative Compliance: Digital Piracy, Deterrence, Social Norms, and Duty in China and the United States. *Law & Policy, 39*(1)73-93. DOI: 10.1111/lapo.12071 [Link](#).
- Fine, A.,** Mahler, A., Frick, P., Steinberg, L., & Cauffman, E. (2017). Individual in Context: The Role of Impulse Control on the Association between the Home, School, and Neighborhood Developmental Contexts and Adolescent Delinquency. *Journal of Youth and Adolescence, 46*(7), 1488-1502. DOI: 10.1007/s10964-016-0565-4 [Link](#).
- Fine, A.,** Cavanagh, C., Frick, P., Steinberg, L., & Cauffman, E. (2017). Can Probation Officers Identify Remorse Among Male Adolescent Offenders? *Psychological Assessment, 29*(6), 754-761. DOI: 10.1037/pas0000391 [Link](#).
- Fine, A.,** van Rooij, B., Feldman, Y., Shalvi, S., Sheper, E., Leib, M., & Cauffman, E. (2016). Rule Orientation and Behavior: Development and Validation of a Scale Measuring Individual Acceptance of Rule Violation. *Psychology, Public Policy, and Law, 22*(3), 314-329. DOI: <http://dx.doi.org/10.1037/law0000096> [Link](#).
- Fine, A.,** Mahler, A., Simmons, C., Chen, C., Moyzis, R., & Cauffman, E. (2016). Relations between Three Dopaminergic System Genes, School Attachment, and Adolescent Delinquency. *Developmental Psychology, 52*(11), 1893-1903. DOI: 10.1037/dev0000166 [Link](#).
- Fine, A.,** Cavanagh, C., Donley, S., Steinberg, L., Frick, P., & Cauffman, E. (2016). The Role of Peer Arrests on the Development of Youths' Attitudes towards the Justice System. *Law and Human Behavior, 40*(2), 211-218. DOI: 10.1037/lhb0000167 [Link](#).
- Fine, A.,** Cauffman, E., Steinberg, L., & Frick, P. (2016). Self-Control Assessments and Implications for Predicting Adolescent Offending. *Journal of Youth and Adolescence, 45*(4), 701-712. DOI: 10.1007/s10964-016-0425-2. [Link](#).
- Fine, A.,** & Cauffman, E. (2015). Race and Justice System Attitude Formation during the Transition to Adulthood. *Journal of Developmental and Life-Course Criminology, 1*, 325-348. DOI: 10.1007/s40865-015-0021-2 [Link](#).

## LAW REVIEWS

---

\*Equal first-authorship.

\***Fine, A.**, Cauffman, E., Mahler, A., & Simmons, C. (*In Press*). How Developmental Science Influences Juvenile Justice Reform. *University of California, Irvine Law Review*.

## **TECHNICAL REPORTS**

---

**Fine, A.**, & Cauffman, E. (2016). Analysis of Substance Use and Trauma-Related Measures in First Juvenile Contact. *Report for the Substance Abuse and Mental Health Services Administration (SAMHSA)*.

## **OTHER WRITING**

---

Van Rooij, B., & **Fine, A.** (2017). How to Punish a Corporation: Insights from Social and Behavioral Science. *Post for New York University School of Law's Program on Corporate Compliance & Enforcement Blog, moderated by Jennifer Arlen*. [Link](#).

## **GRANTS AND AWARDS**

---

2018	UC Center Sacramento Emerging Scholars Award for Excellence in Research and Public Policy, Honorable Mention
2018	UC Irvine Center for Psychology & Law Travel Award
2018	UC Irvine School of Social Ecology Dean's Dissertation Writing Fellowship
2017	American Psychological Foundation (APF) Annette Urso Rickel Foundation Dissertation Award for Public Policy
2017	UC Irvine University-Wide Public Impact Distinguished Fellowship
2014-17	UC Irvine School of Social Ecology Graduate Mentor Award (Awarded in 2014, 2015, 2016, and 2017)
2017	Alison Clarke-Stewart Graduate Dissertation Award
2017	Long Institute University-Wide Graduate Student Project Grant
2017	UC Irvine School of Social Ecology Martha Newkirk Award for Excellence in Research by a Graduate Student
2017	UC Consortium on Social Science and Law Summer Fellowship
2017	UC Irvine Dean's Dissertation Data Collection Grant
2017	UC Irvine Associated Graduate Students Symposium Judges Award
2017	American Psychology-Law Society (APLS) Conference Travel Award
2017	Society for Research in Child Development (SRCD) Travel Award

- 2017 UC Irvine Chancellor's Office/Associated Graduate Students Travel Grant
- 2016 American Psychology-Law Society (APLS) Grants-in-Aid Award
- 2015 National Science Foundation (NSF) Graduate Research Fellowship Program  
Honorable Mention
- 2014 UC Irvine Multidisciplinary Design Research Grant
- 2014 APAGS/Psi Chi Junior Scientist Fellowship Honorable Mention
- 2014 UC Irvine School of Social Ecology Graduate Mentor Award
- 2014 National Science Foundation (NSF) Graduate Research Fellowship Program  
Honorable Mention
- 2012 Psi Chi Honor Society Conference Travel Award
- 2011 Georgetown University Undergraduate Research Fellowship

#### **CONFERENCE PRESENTATIONS**

---

- Fine, A.** (2018, November). Race, crime and law enforcement in America: Youths' fears, concerns, and perceptions. Paper symposium presented at the *American Society of Criminology (ASC) Conference*. Atlanta, GA.
- Fine, A.,** Frick, P., Steinberg, L., & Cauffman, E. (2018). Reducing Delinquency through Monitoring Justice-System-Involved Male Adolescents: Whose Monitoring Matters? Paper symposium presented at the *Society for Research on Adolescence Conference (SRA)*, Minneapolis, MN.
- Fine, A.** (2018). Legal Socialization: A Social-Ecological Perspective. Paper presented at the *Legal Socialization Conference* at Yale Law School moderated by Tom Tyler.
- Fine, A.,** Donley, S., Cavanagh, C., & Cauffman, E. (2018). A Crisis of Confidence? Adolescents' Perceptions of Law Enforcement from 1976 to 2015. Paper symposium presented at the *American Psychology-Law Society Conference (APLS)*, Memphis, TN.
- Van Rooij, B., & **Fine, A.** (2018). Cultural Overhaul: Assessing and changing deviant cultures. Paper submitted to the *Law and Society Conference*, Toronto, Canada.
- Cavanagh, C., **Fine, A.,** & Cauffman, E. (2017). Legal Socialization and Youth's Perceived Obligation to Obey the Law. Paper presented at the *American Society of Criminology (ASC) Conference*, Philadelphia, PA.
- Fine, A.,** Mahler, A., Steinberg, L., Frick, P., & Cauffman, E. (2017). The Role of Individual Differences on the Association between Contexts and Adolescent Delinquency. Paper

symposium presented at the *Society for Research in Child Development Conference (SRCD)*, Austin, TX.

Donley, S., **Fine, A.**, Simmons, C., Cauffman, E., Pluess, M. (2017). Environmental Sensitivity Among Juvenile Offenders: Do Some Offenders Benefit from a Positive Home Environment More than Others? In Lionetti, F. (Chair) *The Highly Sensitive Child Scale: A New Measure of Differential Susceptibility to Environmental Influences*. Paper symposium presented at the *Society for Research in Child Development Conference (SRCD)*, Austin, TX.

**Fine, A.**, & Cauffman, E. (2017). Justice System Attitudes, Self-Regulation, and Adolescent Offenders. Paper symposium presented at the *American Psychology-Law Society Conference (APLS)*, Seattle, WA.

**Fine, A.**, Cavanagh, C., Donley, S., Frick, P., Steinberg, L., & Cauffman, E. (2017). Youths' Justice System Attitudes, Race, and Recidivism. Paper presented at the *American Psychology-Law Society Conference (APLS)*, Seattle, WA.

**Fine, A.** (2016). Determinants and Effects of Justice System Processing in California. In Chien, S. (Chair). Sklansky, D. (Discussant). *Regulating Criminal Behavior*. Paper symposium presented at the *Stanford Law School Conference on the Impact of Law on Behavior*, Stanford Law School, Stanford, CA.

**Fine, A.**, Cavanagh, C., Donley, S., Steinberg, L., Frick, P., & Cauffman, E. (2016). The Role of Peer Arrests on the Development of Youths' Attitudes towards the Justice System. Paper symposium presented at the *Society for Research on Adolescence Conference (SRA)*, Baltimore, MD.

Cauffman, E. **Fine, A.**, Cavanagh, C., Steinberg, L., & Frick, P. (2016). *Justice system processing and substance use among first time juvenile offenders*. Paper presented at the biennial meeting of the *Society for Research on Adolescence*. Baltimore, MD.

Cauffman, E., **Fine, A.**, Thomas, A., & Monahan, K. (2016). Trajectories of Violent Behavior among Females. In Monahan, K. (Chair). *Developmental Considerations of Desistance from Crime*. Paper symposium presented at the *Society for Research on Adolescence Conference (SRA)*, Baltimore, MD.

Cauffman, E., & **Fine, A.** (2016). Peer Experiences with the Justice System Affect the Legal Socialization of Adolescent Offenders. Paper presented at the *American Psychology-Law Society Conference (APLS)*, Atlanta, GA.

Cavanagh, C., **Fine, A.**, Donley, S., Miltimore, S., & Cauffman, E. (2016). The Role of the Home Environment in Probation Processing Decisions for First-Time Youth Offenders. Paper presented at the *American Psychology-Law Society Conference (APLS)*, Atlanta, GA.

- Fine, A., & van Rooij, B. (2016).** The Psychology of Compliance: Understanding Individual and Contextual Mechanisms. Paper presented at the *Socio-Legal Studies Workshop* Hosted by the UC Irvine School of Law and Department of Criminology, Law, and Society.
- Fine, A., Cauffman, E., & Steinberg, L. (2015).** Impulsivity Assessments and Implications for Predicting Adolescent Offending. In Monahan, K. (Chair) *Development as Process: Delinquency, Substance Use, and Risk Taking During Adolescence*. Symposium presented at the *Society for Research in Child Development Conference (SRCD)*, Philadelphia, PA.
- Fine, A., & Cauffman, E. (2015).** Schools, Impulsivity, and Implications for Adolescent Offending. Poster presented at the *Society for Research in Child Development Conference*, Philadelphia, PA.
- Fine, A., & Cauffman, E. (2015).** Race and Justice System Attitude Formation during the Transition to Adulthood. Poster presented at the *University of California Conference on Social Science and Law*. Irvine, CA.
- van Rooij, B., & **Fine, A. (2014).** Crime Justification in Comparative Perspective. Symposium presented at the *American Society of Criminology Conference (ASC)*, San Francisco, CA.
- Fine, A. (2012).** Predicting the Childcare Experiences of Foster Children: An Ecological Study of Maryland Foster Families. In Phillips, D. (Chair) *Predictors of Childcare Use Among Special Populations*. Symposium presented at the *Eastern Psychological Association Conference (EPA)*, Pittsburgh, PA.

## **SERVICE AND LEADERSHIP**

---

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| 2018      | Volunteer Statistics Consultant at the Statistics Table at the American Psychology-Law Society (APLS) Annual Conference |
| 2016–18   | Society for Research on Adolescence (SRA) Emerging Scholars Committee and Nominations Committee                         |
| 2016–2017 | American Psychology-Law Society (APLS) Student Committee  |
| 2016      | Society for Research in Child Development (SRCD) Symposium Reviewer   |
| 2015–18   | Student Managing Editor of the <i>Journal of Regulation &amp; Governance</i>  |
| 2015      | UC Irvine Student Liaison for Assistant/Associate Professor Search Committee  |
| 2015      | UC Irvine Developmental Psychology Colloquium Coordinator   |

## **TEACHING**

---

- UNIVERSITY OF CALIFORNIA, IRVINE
- |      |  |
|------|--|
| 2018 | Children and the Law; Teaching Assistant |
|------|--|

- 2017 Law and Behavior: Compliance and Enforcement; Course Developer  
Invited to develop the course materials for a Master’s-level course entitled, “Law and Behavior: Compliance and Enforcement.”
- 2016 Introduction to Psychology; Teaching Assistant
- 2015 Adolescent Development; Teaching Assistant
- 2013 Statistical Analyses in Social Ecology; Teaching Assistant
- 2013 Introduction to Psychology; Teaching Assistant

KIPP BELIEVE COLLEGE PREP MIDDLE SCHOOL, NEW ORLEANS, LA  
2012–13 Special Education Resource & Literacy Teacher

ARLINGTON COUNTY DETENTION FACILITY, ARLINGTON, VA  
2010–12 Taught G.E.D. Subjects to Inmates

### **INVITED LECTURES**

---

- 2017 Adolescents and the Law; Undergraduate Course
- 2016 Group-Based Trajectory Modeling and Finite Mixture Models; Graduate Seminar
- 2016 Developmental Psychology and Psychology & Law Colloquium Speaker
- 2015 Internalizing Disorders and Suicide during Adolescence; Undergraduate Course
- 2013 Introduction to Z-Scoring Variables and Using SPSS; Undergraduate Course

### **MENTORSHIP**

---

- 2017–18 Undergraduate Research Opportunities Program Mentor  
Mentor to Tonalli Espinoza, Colleen Brown, & Carlee Hurado
- 2016–2017 Undergraduate Campus-wide Honors Thesis Supervisor  
Mentor to Jorge Ponce
- 2016– Graduate Student Peer Mentor; Department of Psychology and Social Behavior
- 2016 Undergraduate Research Opportunities Program Mentor  
Mentor to Elham Danay, Elizabeth Duran, and Kayleen Garvey
- 2015 Undergraduate Research Opportunities Program Mentor  
Mentor to Christopher B. Tran, Ericka C. Muñoz, Miranda N. Ramos
- 2014 Undergraduate Research Opportunities Program Mentor

Mentor to Lucy Gomez, Allie Reuter, Aubrey Thompson, and Isabelle Christman-Cohen

2013 Multidisciplinary Research Design Program Mentor  
Mentor to Lauren Texter, Nina Ozbardacki, Mary Sargious, and Matthew Guevar

2013 Undergraduate Research Opportunities Program Mentor  
Mentor to Anneji Kim, Angel Rodriguez, Jason Chau, Jonathan Larson, and Rogelio Salgado

### **MENTORED STUDENTS' GRANTS AND AWARDS**

---

2018 Undergraduate Research Opportunities Program Grant (\$750)

2017 Undergraduate Research Opportunities Program Grant (\$900)

2016 Undergraduate Research Opportunities Program Grant (\$650)

2015 Undergraduate Research Opportunities Program Grant (\$300)

2014 Chancellor's Award of Distinction in Undergraduate Research

2014 Undergraduate Research Opportunities Program Grant (\$1,000)

2013 Undergraduate Researcher of the Month

2013 Western Psychological Foundation Student Scholarship Award (\$500)

### **STATISTICAL TRAINING**

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2017 Multilevel Modeling of Non-Normal Data (Trained by Donald Hedeker)

2016 Survival Analysis (Trained by Richard McCleary)

2015 Finite Mixture Models; Group Trajectory Modeling (Trained by Kathryn Monahan)

2014 Applied Longitudinal Data Analysis (Trained by JoAnn Prause)  
Multi-Level/Hierarchical Linear Modeling (Trained by Joey Cheng)  
Structural Equation Modeling (Trained by John Hipp)

2013 Advanced Quantitative Methods (Trained by JoAnn Prause)  
Time-Varying Effects Modeling (Self-taught)

### **AD HOC JOURNAL REVIEWER**

---

*American Journal of Criminal Justice*

*Criminal Justice and Behavior*

*Journal of Community Psychology*

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**MEMBERSHIPS AND AFFILIATIONS**

---

- 2016- ComplianceNet (compliance.net.org), Co-convenor
- 2013- Development, Disorder, and Delinquency Lab, University of California, Irvine
- 2013- Center for Psychology and Law, University of California, Irvine
- 2013- Society for Research on Adolescence (SRA), Student Member
- 2013- American Psychology-Law Society (APLS), Student Member
- 2010- Psi Chi National Honor Society
- 2010- Society for Research in Child Development (SRCD), Student Member

## **Abstract of the Dissertation**

Respect and Obey: The Development of Adolescents' Perceptions of the Police and the Law

By

Adam DuPree Fine

Doctor of Philosophy in Psychology & Social Behavior

University of California, Irvine, 2018

Professor Elizabeth Cauffman, Chair

Legal socialization is the study of how individuals develop their perceptions of legal authorities and laws. Studies demonstrate that adolescents with negative perceptions of legal authorities tend to violate the law, yet the literature has not adequately addressed *how* adolescents develop their perceptions, *why* their perceptions affect behavior, and, despite being a critical component of legal socialization, how individuals develop their perceptions of law. This dissertation applied a developmental approach to filling these gaps in the literature. The first study demonstrated that the development of perceptions of the justice system through adolescence varies based on both race and experience. Specifically, Black youth report the most negative perceptions, followed by Latino, and then White youth, and racial differences increase as youth age. Further, attitudes become worse over time for youth who remain in the system. The second study showed that youth differentiate between legal authorities, such as law enforcement and the justice system, and socio-cultural authorities, such as schools and religious institutions. Further, across races/ethnicities youths' perceptions of law enforcement have declined markedly in recent years. The third study demonstrated that the effect of perceptions on delinquency varies based on developmental level. Finally, the fourth study revealed that the obligation to obey the

law declines through adolescence and how youth perceive law is strongly associated with how their parents view law.

## Introduction

In the United States, there has been a long and complicated relationship between adolescents and the justice system. This has been particularly true for youth of color. The literature on legal socialization, or how individuals develop their perceptions of laws, the institutions that create those laws, and the people within those institutions that enforce the laws, has been growing markedly in recent years. Studies repeatedly show that individuals who perceive law enforcement or the justice system negatively are more likely to violate the law. Indeed, these studies bode well for a field that fundamentally assumes that the law is an essential institution within the social environment that orders society and guides human behavior.

However, legal socialization is not merely the study of linking negative perceptions of law enforcement or the justice system to misbehavior. At its core, it is the study of *how* individuals develop their perceptions, and *why* their perceptions might affect misbehavior. However, the literature has not adequately addressed how adolescents develop their perceptions of legal authority, under what circumstances their perceptions might affect delinquency, and how they develop their perceptions of the law itself. In four studies separated into two sections, this dissertation applied a developmental approach to furthering the research on adolescent legal socialization.

The overarching goal of the first section of this dissertation was to identify how legal socialization occurs throughout adolescence. Research suggests that interactions with justice system actors affects the way individuals perceive the system. However, studies have primarily focused on adults, despite the fact that, as a result of peaking crime involvement during the developmental epoch, adolescents are actually more likely to come into contact with the justice system. Consequently, the first study employed data from a longitudinal sample of 1,216 male

youth who had committed their first offense in three states in the Crossroads Study to examine developmental trajectories of perceptions of the justice system's legitimacy. Uniquely, this study tracked development by age, race, and experience among a sample that reaches the peak of the age-crime curve.

As part of the study of how legal socialization occurs during adolescence, it is critically important to take a developmental view of how adolescents perceive authority figures in general, as well as to take a historical view to consider the contexts in which youth are embedded. If the legal socialization field is to claim that perceptions of legal authority are as critically important as research suggests, it is crucial to demonstrate that adolescents' negative perceptions of legal authority are, indeed, separable from how they perceive other authority figures. Indeed, the general public has, since at least the turn of the 19<sup>th</sup> century, perceived adolescence as an "anti-authority" developmental stage. Thus, the field must demonstrate that adolescents do, in fact, differentiate between various authority figures, rather than exhibit a ubiquitous "anti-authority" attitude. Further, considering the long and complicated relationship between adolescents and the justice system, including the many recent high-profile events involving justice system officials and youth of color, it is surprising that so little research has tracked youths' perceptions historically. This is especially surprising considering multiple scholars in the field have posited that there is an "era of mistrust" in legal authority or perhaps even a "crisis of confidence."

To address these important empirical questions, using annual data from cohorts of nationally-representative youth from 1976 through 2016, the second study examined whether: a) youth differentiate between legal and socio-cultural authorities; b) negative perceptions of the justice system and law enforcement is merely indicative of a ubiquitous "anti-authority" attitude that exists during adolescence; c) there are racial differences in the factor structure of how youth

perceive or differentiate between authorities; and d) youths' perceptions of law enforcement have declined in recent years, as posited by scholars in the field. This study is particularly timely, considering the current political climate is marked by the growing Black Lives Matter and Blue Lives Matter movements and increasing scrutiny of adolescents as a result of their surging political involvement including the *March for Our Lives* protests.

The overarching goal of the second section of the dissertation was to push the field to consider the developmental implications of legal socialization. Discussions of the effects of perceptions of legal authorities on behavior have been largely divorced from considering one of the key developmental changes that occurs during adolescence and governs much of their risk-taking and delinquent behavior: developmental improvements in psychosocial maturity. Using data from the Crossroads Study, the third study examined whether the effect of legitimacy on adolescent delinquency might vary based on psychosocial maturity. This study tested whether the effects of legal attitudes on youth crime involvement is as ubiquitous as theory would suggest, or whether developmental considerations are vital in understanding when legal perceptions may – or may not — affect misbehavior.

Finally, the last study is designed to call attention to homogeneity in the legal socialization literature. Legal socialization is consistently defined as the study of how individuals develop their perceptions of the law and the institutions that create and enforce law. However, studies have focused almost exclusively on individuals' perceptions of the justice system and law enforcement. The development of youths' attitudes towards law is a critical component of public safety and crime desistance, particularly considering that delinquency peaks during adolescence and the developmental epoch is involved in a disproportionate share of crime. Nonetheless, studies have not adequately examined how adolescents develop their perceptions of law and their

obligation to obey the law. The final study sampled 117 adolescent-parent dyads in the community in southern California to examine: 1) if perceptions of law changes through adolescence; and 2) if adolescents' perceptions of law is associated with how their parents view their obligation to obey the law.

In closing, the literature suggests that people are more willing to obey the law if they believe that the law, legal system, and legal actors are unbiased, trustworthy, fair, and just. To justice system officials, acting in ways that meets idealized expectations and garners the voluntary support of individuals in the community is critically important. In totality, the studies in this dissertation are designed to examine how legal socialization occurs during adolescence on multiple levels, including how race/ethnicity, personal experiences, parental attitudes, and the historical periods might affect the way youth develop their attitudes. This dissertation is intended to demonstrate whether, when it comes to legal socialization, adolescence emerges as a critical period and window of opportunity.

### **Study 1: Does Legitimacy Change with Age and Experience?**

The procedural justice model posits that individuals who perceive the justice system to be legitimate and just are more likely to obey the law (Tyler, 1990; Sunshine & Tyler, 2003). Inversely, individuals who view the justice system as less legitimate feel justified in breaking the law (Reisig, Wolfe, & Holtfreter, 2011; Sampson & Bartusch, 1998). Indeed, both adults (e.g., Fagan & Piquero, 2007; Reisig, Wolfe, & Holtfreter, 2011) and adolescents (e.g., Fine & Cauffman, 2015; Fine et al., 2016; Piquero et al., 2005) who perceive the justice system negatively tend to commit more crime. Considering that the way adolescents perceive the justice system may set the tone for how they view and interact with law enforcement during adulthood (Murphy, 2015), identifying whether perceptions stabilize as adolescents mature is essential.

When addressing the important policy question of how youths' perceptions of the justice system develop, it is important to consider that there are stark racial/ethnic differences in juvenile justice system contact. It is now incontrovertible that non-White youth are consistently overrepresented in the system (Piquero, 2008; Stevens & Morash, 2014). However, few studies have tracked the development of adolescents' justice system attitudes separately by race (e.g., Piquero, Bersani, Loughran, & Fagan, 2016; Woolard, Harvell, & Graham, 2008) and even fewer have tracked them by age (e.g., Fine & Cauffman, 2015; Nivette et al., 2015). Critically, none has examined developmental trends in legal socialization among adolescents involved in the justice system and has separated youth who successfully exit the system from youth who are rearrested. That is, we lack empirical evidence of how youths' perceptions of the system may change with age and justice system experience. The present study fills this void with a particularly policy-relevant sample of youth who have come to the attention of the justice system for the first time and who are reaching the peak of the age-crime curve.



## **Justice System Legitimacy**

Legitimacy is a foundational component of criminological research and public policy (Jackson & Gau, 2015). The concept of authority legitimation stems from Max Weber's (1978) work on power, as well as Thibaut and Walker's (1975) work connecting fair and just processes to the willingness to accept undesirable outcomes. Built largely on this classic literature, the procedural justice model of legitimacy has recently emerged (Tyler, 1990; Sunshine & Tyler, 2003). Although definitions of "legitimacy" vary, the consensus is that one's sense of legitimacy reflects a general orientation toward believing the system has legitimate authority power and feeling obligated to abide by its authority (Kelman & Hamilton, 1989; Beetham, 1991). The procedural justice model posits that if one believes that legal authority treats citizens fairly and justly, one is likely to perceive the system as legitimate and feel obligated to obey its authority.

The procedural justice model specifically posits that as opposed to focusing on deterrence-based strategies to force compliance, voluntary compliance occurs when individuals respect the justice process (Tyler, 1990). That is, rather than obeying the law out of fear of punishment or retribution, one obeys the law because one perceives the system as legitimate. Unfair direct (Paternoster, Brame, Bachman, & Sherman, 1997; Slocum, Wiley, & Esbensen, 2016) or vicarious (e.g., Fine, Cavanagh, Donley, Steinberg, Frick, & Cauffman, 2016) experiences with the legal system disrupt one's sense that the justice system is a legitimate authority (Tyler, 1990; Sunshine & Tyler, 2003). The empirical literature does, indeed, suggest that fair treatment signals to citizens that legal authority is legitimate and must be obeyed, and such feelings, in turn, are associated with law-abiding behavior (Hinds, 2009; Paternoster, Brame, Bachman, & Sherman, 1997; Tyler, 1990). In contrast, unfair treatment undermines the obligation to obey legal authority (Agnew, 1992; Sherman, 1993; Tyler, 2006) and is linked to

crime involvement (see Fagan & Piquero, 2007; Reisig, Wolfe, & Holtfreter, 2011). Indeed, as with adults, youth who perceive the justice system's legitimacy negatively are more likely to engage in criminal offending, recidivating, and rule-violating, a pattern that has been found in both community (Trinkner, 2012; Trinkner & Cohn, 2014) and delinquent samples (Cavanagh & Cauffman, 2015; Hinds, 2007; Otto & Dalbet, 2005; Sprott & Greene, 2010; Augustyn & Ward, 2015).

### **Legal Socialization**

Legal socialization is the process through which individuals develop their understanding of laws, the institutions that create those laws, and the people within those institutions that enforce laws (Cohn et al., 2012; Fagan & Tyler, 2005; Trinkner & Cohn, 2014). 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, judge, or probation officer interacts with a youth affects how the youth views the justice system's legitimacy. If the youth feels as though she has been treated unfairly, she is likely to view the system more negatively.

Only a few studies have examined how perceptions develop throughout adolescence. Fagan and Tyler (2005) found that older youth (age 16) reported more negative perceptions than younger youth (age 10). The researchers concluded that perceptions become more negative through adolescence, yet the developmental conclusion is limited by their cross-sectional design and focus on just a few ages. More recently, Nivette and colleagues (2014) conducted a longitudinal analysis of legal cynicism among youth in Switzerland. These researchers found that perceptions were relatively stable between the ages of 13 and 15. 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 when crime involvement tends to reach its peak (Loeber et al., 2012). Further, the researchers focused exclusively on youth in Switzerland. Studying youth in the United States during the present era is particularly important considering that national conversation surrounding perceptions of legal authorities has become increasingly widespread (see Friedman, 2017; Tyler, Goff, & MacCoun, 2015; Trinkner & Tyler, 2016). Finally, the researchers did not sample adolescents with justice system contact. If legal socialization is indeed the product of accumulated interactions with legal authorities as hypothesized (Fagan & Tyler, 2005; Tyler & Huo, 2002), the legal socialization of adolescents in the justice system would likely be markedly different than the legal socialization of community youth.

In fact, only a few studies have examined developmental trends in legal socialization among adolescents involved in the justice system. These studies both used the same sample of serious, predominantly felony-level offenders from the Pathways to Desistance Study. In the first study, Piquero and colleagues (2005) found that youths' perceptions remained stable over the course of 18 months. However, because the authors modeled their analyses using assessment wave rather than age, they were unable to test whether perceptions actually changed through adolescence. The second such study used the full 7 years of data from the Pathways to Desistance Study and modeled perceptions by age (Fine & Cauffman, 2015). The researchers found that in this large sample of youth who had committed serious (felony level) offenses, youths' perceptions of the law consistently declined from ages 16 to 24. Critically, the results revealed different developmental trends by race. Black youth held the most negative views of the system during adolescence, followed by Latino youth and then White youth. However, a large percentage of these felony-level youthful offenders were removed from the community and

housed in secure facilities during significant portions of the study. Whether or not these findings extend to samples of low-level youthful offenders who are serving out their probationary terms in the community remains to be seen.

Despite the study's limitations, the racial/ethnic findings from the Fine and Cauffman (2015) study resonate with the literature focusing on race and procedural justice (see Peck, 2015). Other researchers have found that non-White individuals have more negative attitudes toward the justice system than do White individuals (see Peck, 2015 for a review). This is unsurprising provided that non-White youth face greater community monitoring, disproportionately high justice system involvement, harsher sanctions within the justice system, and more unfair treatment (Cochran & Mears, 2015; Geistman & Smith, 2007; Hagan, Shedd, & Payne, 2005).

Problematically, however, studies on legal socialization and race often dichotomize race/ethnicity into White vs. non-White. There is evidence that Latinos, the fastest-growing ethnic group in the United States, fall between Black and White youth in the degree to which they are criminalized (Hagan, Shedd, & Payne, 2005). Although there is limited empirical work so far, the evidence suggests that Black (Hurst, Frank, & Lee Browning, 2000; Wu, Lake, & Cao, 2015) and Latino youth generally report more negative attitudes towards the police than White youth (Solis, Portillos, & Brunson, 2009; Wu, Lake, & Cao, 2015). The majority of this work, however, has focused on attitudes toward police specifically, and not the justice system more generally. The Fine and Cauffman (2015) study, however, demonstrated that even among serious, felony-level offenders, racial differences in perceptions of the justice system are actually small during early adolescence and become more pronounced as youth transition into adulthood.

## **Present Study**

Recent high-profile instances of violence and acrimony between the justice system and community members—the majority of whom have been non-White—highlight the importance of understanding how young people develop attitudes toward the justice system and on considering the role of race/ethnicity in legal socialization. Yet, to date, only one study has longitudinally examined race/ethnicity and attitudes during youthful offenders' transition to adulthood (Fine & Cauffman, 2015). However, considering this study examined serious, predominantly felony-level offenders who had been involved with the justice system for some time, it is likely that their previous justice system experiences affected their attitudes. It is possible that these youths' declining perceptions may have already been set in place as a result of their histories of repeated justice system contact and involvement. Considering that youths' legal socialization should be the product of accumulated interactions with legal authorities (Fagan & Tyler, 2005; Tyler & Huo, 2002) with the negative effects of unfair treatment becoming even more pronounced over time (Tyler & Huo, 2002), it is critical to evaluate attitudes among youth who have just been arrested for the first time and who are serving their sanctions in the community, as well as to examine whether those who stay in the justice system develop even more negative attitudes than youth successfully exit the justice system. For this reason, it remains to be seen: (a) generally how youths' perceptions of the justice system change throughout adolescence and young adulthood; and (b) whether attitude development varies by justice system experience.

The present study uses a longitudinal sample of adolescent males who were arrested for the first time to test several hypotheses. First, based on the extant literature, it is hypothesized that youths' perceptions will decline as they age into adulthood. In addition, perception development will vary by race. Based on prior research, it is hypothesized that for White, Black, and Latino youth, perceptions will become more negative as they age. However, Black youth

will report more negative perceptions than Latino youth, who will in turn report more negative perceptions than White youth.

Second, considering that accumulated experiences with the justice system should affect attitudes, youth who are rearrested and stay involved in the justice system should develop more negative perceptions of the justice system than youth who are never arrested again. That is, across racial/ethnic groups, it is expected that perceptions will become more negative over time among those youth who are rearrested and stay in the justice system. Specifically, it is anticipated that perceptions will decline at a more rapid rate among youth who are rearrested as compared with those who were arrested and then successfully exit the system.

## **Method**

### **Participants**

The sample includes 1,216 male juvenile offenders from the Crossroads Study who were ages 13 to 17 ( $M = 15.3$ ,  $SD = 1.3$ ) at baseline. Crossroads follows male adolescents after their first official contact with the juvenile justice system and interviews them every 6 months for 3 years. The youths had each been arrested for a range of non-felony offenses, with the most frequent charges including vandalism (17.5%), theft (16.7%), and possession of marijuana (14.8%). Youths were recruited from three sites: Philadelphia, Pennsylvania ( $N = 533$ ); Jefferson Parish, Louisiana ( $N = 151$ ); and Orange County, California ( $N = 532$ ). Consistent with the overrepresentation of racial/ethnic minority youth in the juvenile justice system, the sample was racially diverse: Latino (46%), Black (37%), White (15%), and self-identified other (2%).

Of the initial 1,216 youth enrolled in the study, approximately 96% completed the 6-month interview, 94% the 12-month interview, 94% the 18-month interview, 93% the 24-month interview, 92% the 30-month interview, and 91% the 36-month interview. Results of Little's test

( $\chi^2(1779, N = 1216) = 1852.19, p = .111$ ) indicated that data were missing completely at random (Li, 2013; Little, 1988; Little, 1992).

## **Procedures**

The Institutional Review Board (IRB) at all three institutions (University of California, Irvine; Temple University; University of New Orleans) approved the study procedures. Signed parental consent and youth assent were obtained for all participants before interviews were conducted. Participants were informed of the nature of the study and were told that there was no penalty for not participating. Youth completed an interview within 6 weeks after the disposition hearing for their first arrest, as well as follow-up interviews approximately 6, 12, 18, 24, 30, and 36 months after their initial interview. Face-to-face interviews with the youth ranged from 2–3 hours and were documented using a secure computer-administered program. A Privacy Certificate issued by the Department of Justice protects participants' privacy by exempting their identity and responses from subpoenas, court orders, or other types of involuntary disclosures. Participants were given a detailed explanation of the Privacy Certificate before beginning the interview and were reminded again before sensitive questions, such as those about offending, were asked.

## **Measures**

**Demographic Information.** Youth self-reported general demographic information, including age and race. Youth also reported on the highest level of education that his parent had received, which was used as a proxy for socioeconomic status (Galobardes, Lynch, & Smith, 2007; Lynch & Kaplan, 2000). Prior research supports its validity for assessing SES in adolescents (Lien, Friestad, & Klepp, 2001). Education has been called “perhaps the most fundamental aspect of SES” because it has broad effects across multiple domains of life (APA,

2007), though nonetheless, education is an imperfect measure of SES. Considering the effects of education are discontinuous, such that larger effects are found when degrees are conferred (Backlund, Sorlie, & Johnson, 1999), the variable was coded into three categories: approximately 29.16% had parents who had not finished high school, 32.50% had parents who had finished high school or had received a GED, and 38.34% had at least some exposure to higher education (e.g., trade, business, professional, or college).

**Attitudes towards the Justice System.** At every wave, Tyler's measure of justice system legitimacy was used to assess how the youth perceived the legitimacy of the justice system (Tyler, 1997; Tyler; 1990; Tyler & Huo, 2002). Using a 5-point scale ranging from *Strongly Disagree* to *Strongly Agree*, youth 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*"). A mean score of the 11 items was calculated such that higher values indicated higher levels of perceived legitimacy of the law ( $\alpha_{bl} = .787$ ;  $\alpha_{6mo} = .840$ ;  $\alpha_{12mo} = .853$ ;  $\alpha_{18mo} = .852$ ;  $\alpha_{24mo} = .863$ ;  $\alpha_{30mo} = .863$ ;  $\alpha_{36mo} = .866$ ). As reviewed by Tyler and Jackson (2013), numerous studies find that legitimacy explains variation in both complying with the law and offending in children, adolescents, and adults (e.g., Fagan & Tyler, 2005; Fine et al., 2016; Fine & Cauffman, 2015; Tyler, 2006; Tyler & Fagan, 2008; Reisig, Wolfe, & Holtfreter, 2011).

**Official Record Rearrest.** Data from official records in each jurisdiction were obtained to indicate whether youth had been rearrested at any point during the thirty-six months following his first arrest. Approximately half of the sample (44.57%) had been rearrested at some point in the following three years.

## **Plan of Analysis**



Two-level growth-curve modeling (MLM; Fitzmaurice, Laird, & Ware, 2012; Lui, Rovine, & Molenaar, 2012) was used to examine attitude development over time. Mixed models conceptualize growth curve models using two levels of analysis (Raudenbush & Bryk, 2002). Analyses were estimated with Level 1 as age and Level 2 as individuals. The models were estimated in three stages. First, unconditional growth models were estimated to examine the average pattern of change in perceived legitimacy across all participants. Considering there was significant variability in initial levels (intercept) and change (slope) over time, conditional growth models of legitimacy were estimated. Finally, a model was run to examine how legitimacy develops once accounting for a variety of key predictors, including site, age centered on 13 (i.e., the youngest age in the sample), and SES.

The level 1 equation estimates within-person or intra-individual change over time, assessing individual growth rates. In all models, time is treated as both a random and fixed effect, to explain specific time effects as well as change over time. The level 2 model estimates interindividual change in predictors that are estimated as fixed effects. Accordingly, the model assesses within-person variability in the level 1 predictors as a function of level 2 predictors (Fitzmaurice, Laird, & Ware, 2012). Conditional growth models were estimated to examine whether race and rearrest (included as level 2 variables) account for variability in legitimacy. That is, the models examine attitude development over age separately by race and by rearrest experience. Note that because of the measurement schedule and accelerated cohort design, the sample size at the tail ends ( $N_{\text{Age}13} = 34$ ;  $N_{\text{Age}13.5} = 93$ ;  $N_{\text{Age}14} = 165$ ;  $N_{\text{Age}14.5} = 262$ ;  $N_{\text{Age}15} = 384$ ;  $N_{\text{Age}15.5} = 517$ ;  $N_{\text{Age}16} = 641$ ;  $N_{\text{Age}16.5} = 735$ ;  $N_{\text{Age}17} = 782$ ;  $N_{\text{Age}17.5} = 799$ ;  $N_{\text{Age}18} = 716$ ;  $N_{\text{Age}18.5} = 586$ ;  $N_{\text{Age}19} = 485$ ;  $N_{\text{Age}19.5} = 341$ ;  $N_{\text{Age}20} = 222$ ;  $N_{\text{Age}20.5} = 89$ ;  $N_{\text{Age}21} = 8$ ). As a result, analyses were run with and without cases at ages 13 and 21. As results were the same with or without

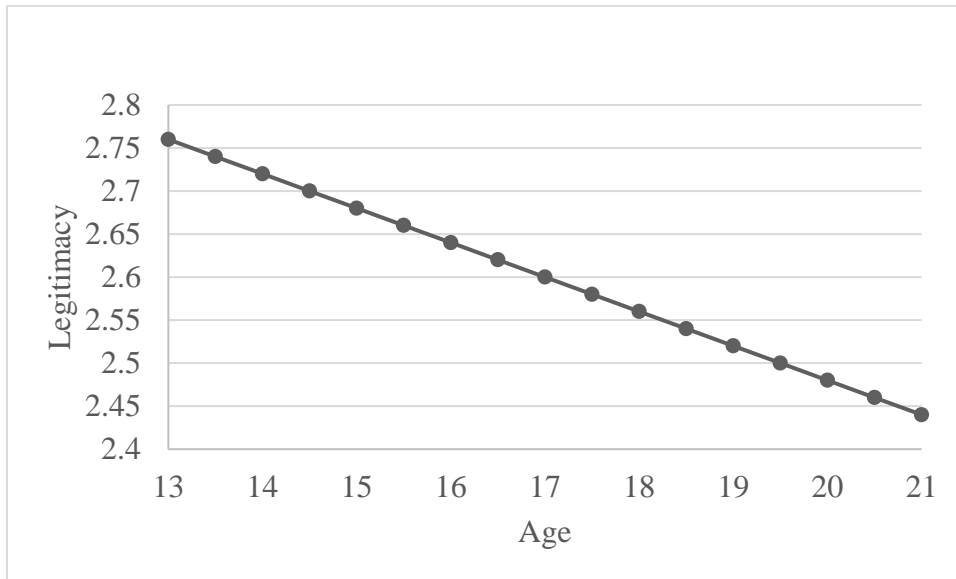
these cases, the models presented include all available data. Further, considering time in facilities (e.g., juvenile hall, residential treatment center) could affect perceptions of the justice system, results were run with and without accounting for time spent in a facility. However, considering a small percentage of youth experienced facilities (e.g., range from <1% of the sample during the first six months to a maximum of 11.45% at 12-18 months; 22.31% of the sample overall) and spent such a small proportion of the recall periods in the facility (e.g., range from <1% of the first six-month recall period to a maximum of 8% at 12-18 months;  $M = 5.79%$  of the 3 years), it is unsurprising that results did not change once accounting for time spent in facilities. Consequently, models are presented without accounting for time on the streets.

## Results

The results of the unconditional means model indicated that approximately 58.4% of the variance was attributable to between-persons differences, whereas 41.6% of the variance was attributable to within-person differences. The results of a linear growth model indicated that perceptions of the justice system declined over time, though the effect size was small. There was significant within-person variation in legitimacy ( $\sigma_e^2 = .12$ ,  $SE = .01$ ,  $95\% CI = .12, .13$ ). There was also significant between-person variation in initial status ( $\sigma_0^2 = .33$ ,  $SE = .03$ ,  $95\% CI = .28, .39$ ) and significant between-person variation in change over time in legitimacy ( $\sigma_1^2 = .02$ ,  $SE = .01$ ,  $95\% CI = .001, .01$ ). A quadratic growth model was also tested, though considering it did not improve the within-person level 1 residual variance component ( $\sigma_e^2 = .12$ ,  $SE = .01$ ,  $95\% CI = .11, .13$ ), the linear growth model was preferred. The control variables, site and SES, were added as Level 2 variables to the next model (Figure 1; Table 1). The results of a Likelihood Ratio Chi-square test and comparisons of the changes in the AIC and BIC indicated that

including the covariates improved model fit ( $\chi^2(4) = 70.41, p < .001; \Delta AIC = 62.41; \Delta BIC = 35.24$ ).

**Figure 1. Attitude Development by Age for the Full Sample**



### Differences in Attitude Development by Race/Ethnicity

Race was added to the model as a Level 2 variable. The results of the Likelihood Ratio Chi-square test suggested that including the interaction between race/ethnicity and time improved model fit ( $\chi^2(6) = 45.03, p < .001$ ; deviance = 7973.32; AIC = 8005.32;  $\Delta AIC = -33.03$ ; BIC = 8114.02;  $\Delta BIC = 7.73$ ; Table 1) and results of an omnibus test of the interaction suggest that it was significant ( $\chi^2(3) = 19.01, p < .001$ ; Figure 2). The results of likelihood-ratio  $\chi^2$  tests suggested that both the random intercept ( $\chi^2(1) = 79.21, p < .001$ ) and random slope ( $\chi^2(1) = 71.18, p < .001$ ) were significant.

The racial/ethnic groups did not report different perceptions of the justice system at age 13 ( $p$ 's  $> .189$ ). Beginning at age 14 ( $dydx = .13, SE = .07, z = 2.01, p = .045, 95\% CI = .01, .26$ ), White youth report more positive perceptions than Black youth. Similarly, Hispanic/Latino youth

report more positive perceptions than Black youth beginning at age 15 ( $dy/dx = .10$ ,  $SE = .05$ ,  $z = 2.06$ ,  $p = .039$ ,  $95\% CI = .01, .19$ ).

**Table 1. Results of Conditional Growth Models**

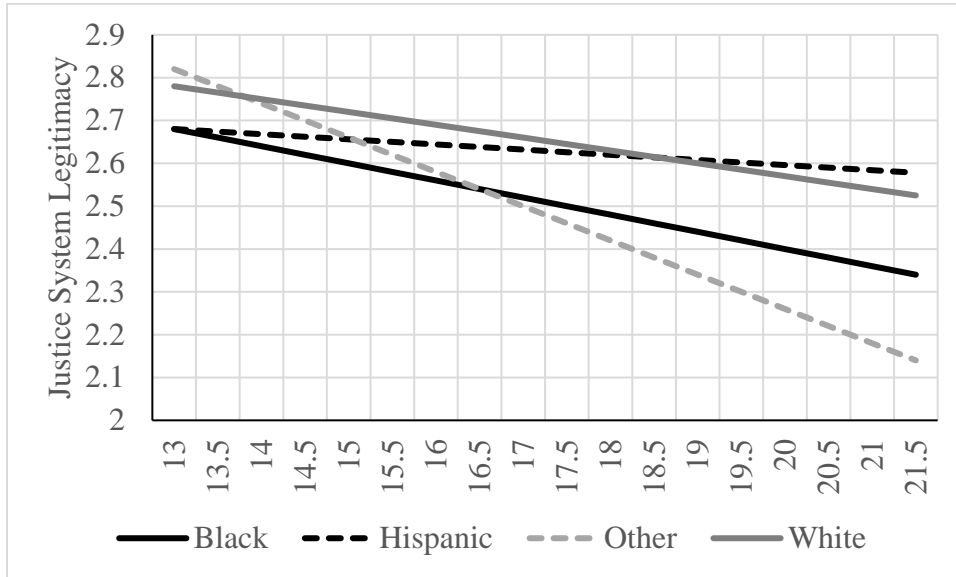
Variable <sup>A</sup>	Coefficient(SE)	Coefficient(SE)
Initial Status (age 13)	2.78 (.07)***	2.79 (.09)***
Race <sup>B</sup>		
Black	-.10 (.08)	-.13 (.10)
Hispanic/Latino	-.10 (.08)	-.05 (.10)
Other	.04 (.17)	-.02 (.21)
Arrest <sup>C</sup>		-.01 (.13)
Rate of Change	-.02 (.01)*	-.02 (.01)*
Race <sup>B</sup> x Age		
Black	-.02 (.01)*	-.01 (.01)
Hispanic/Latino	.01 (.01)	.01 (.01)
Other	-.03 (.01)	-.01 (.01)
Arrest <sup>C</sup> x Age		-.03 (.01)*
Race <sup>B</sup> x Arrest <sup>C</sup>		
Black		.05 (.16)
Hispanic/Latino		-.12 (.15)
Other		.16 (.34)
Race <sup>B</sup> x Arrest <sup>C</sup> x Age		
Black		.01 (.01)
Hispanic/Latino		.01 (.01)
Other		.01 (.01)
<b>Covariance Parameters</b>		
	Estimate	
Random Intercept ( $\sigma_0^2$ )	.31***	.30***
Random Slope ( $\sigma_1^2$ )	.01***	.01***
Covariance ( $\sigma_{01}$ )	-.04***	-.01***
Residual Variance ( $\sigma_e^2$ )	.12***	.12***
<b>Model Fit Statistics</b>		
Deviance	7961.10	7910.75
Log likelihood	-3980.55	-3955.38
AIC	7993.10	7958.75
BIC	8101.77	8121.76

<sup>A</sup>Model accounts for site and SES. <sup>B</sup>Compared to White youth. <sup>C</sup>Compared to no rearrest.  
\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

As depicted in Figure 2, simple slopes analyses indicated that Black youth's ( $dy/dx = -.01$ ,  $SE = .01$ ,  $z = -6.50$ ,  $p < .001$ ,  $95\% CI = -.01, -.001$ ) and White youth's ( $dy/dx = -.01$ ,  $SE = .01$ ,  $z = -2.09$ ,  $p = .036$ ,  $95\% CI = -.01, -.001$ ) perceptions of legitimacy declined as they aged,

whereas Hispanic/Latino youths' perceptions did not significantly change ( $dy/dx = -.001$ ,  $SE = .01$ ,  $z = -1.30$ ,  $p = .192$ ,  $95\% CI = -.002, -.001$ ).

**Figure 2. Attitude Development by Age and by Race**

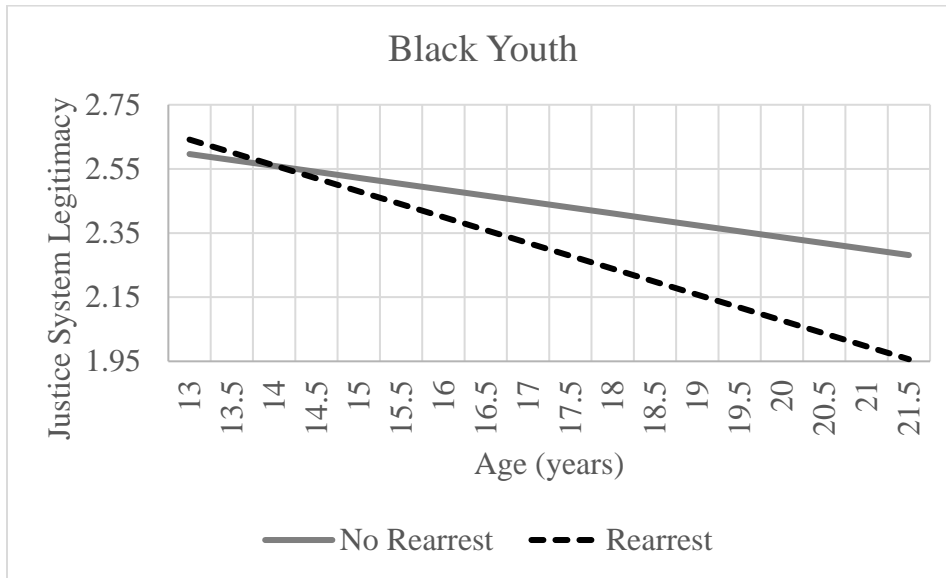


### Differences in Attitude Development by Race/Ethnicity and by Rearrest

In the final model, rearrest was added as a Level 2 predictor. As a reminder, all youth in this study had to have been arrested for their first time to be included in the sample. Including rearrest at any subsequent point as a Level 2 predictor separates the youth into: 1) youth who were arrested just the single time to get them into the Crossroads study; and 2) youth who were rearrested and consequently had sustained justice system contact. The model fit the data well and improved the model fit ( $\chi^2(8) = 50.34$ ,  $p < .001$ ; deviance = 7910.75; AIC = 7958.75;  $\Delta AIC = -34.35$ ; BIC = 8121.76;  $\Delta BIC = 19.99$ ). The results of likelihood-ratio  $\chi^2$  tests suggested that both the random intercept ( $\chi^2(1) = 78.44$ ,  $p < .001$ ) and random slope ( $\chi^2(1) = 61.98$ ,  $p < .001$ ) were significant, though the effects of rearrest across races appeared to be consistent.

The attitudes among Black youth who exited the system ( $dy/dx = -.004$ ,  $SE = .001$ ,  $z = -2.95$ ,  $p = .003$ ,  $95\% CI = -.006, -.001$ ) and among those who were rearrested ( $dy/dx = -.01$ ,  $SE = .001$ ,  $z = -6.41$ ,  $p < .001$ ,  $95\% CI = -.01, -.01$ ) declined as they aged (Figure 3). These findings suggest that among Black youth, attitudes become worse as they age, regardless of their justice system exposure.

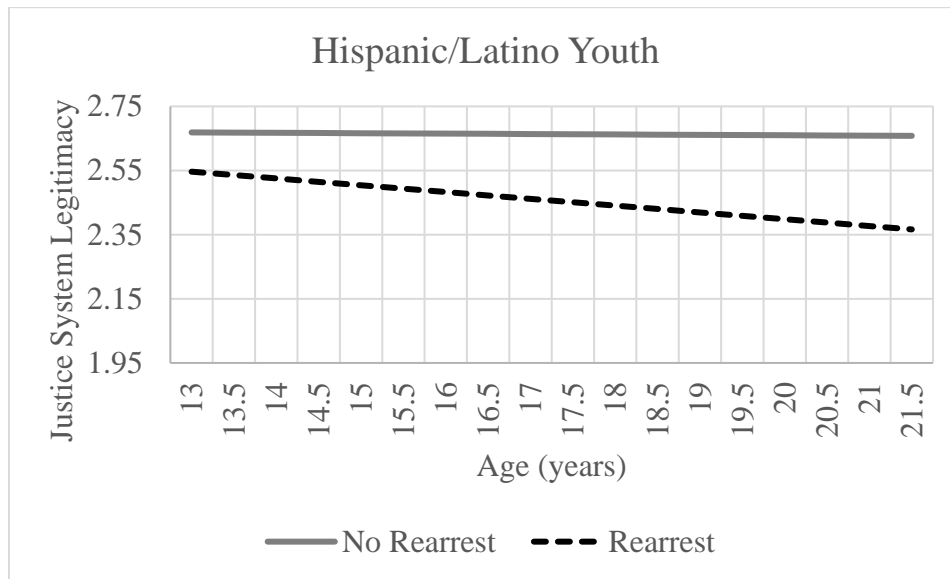
**Figure 3. Attitude Development by Age and Justice System Exposure for Black Youth**



The attitudes among Hispanic/Latino youth who exited the system did not change over time ( $dy/dx = -.001$ ,  $SE = .001$ ,  $z = -.12$ ,  $p = .905$ ,  $95\% CI = -.002, .002$ ) whereas those who were rearrested reported somewhat more negative perceptions over time ( $dy/dx = -.002$ ,  $SE = .001$ ,  $z = -1.88$ ,  $p = .060$ ,  $95\% CI = -.004, -.001$ ). These results indicate that among Hispanic/Latino youth, attitudes appear to change somewhat by age or by justice system exposure.

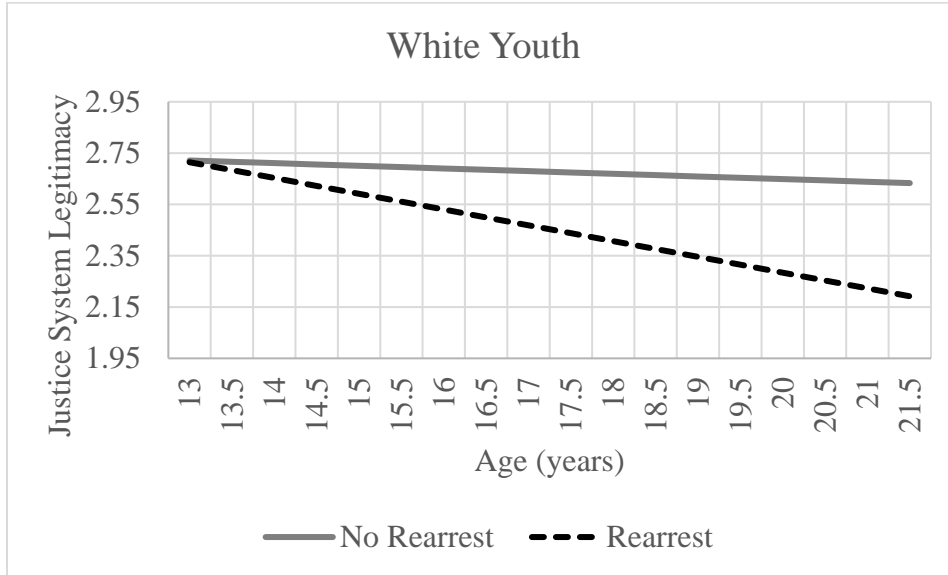
**Figure 4. Attitude Development by Age and Justice System Exposure for Hispanic/Latino**

**Youth**



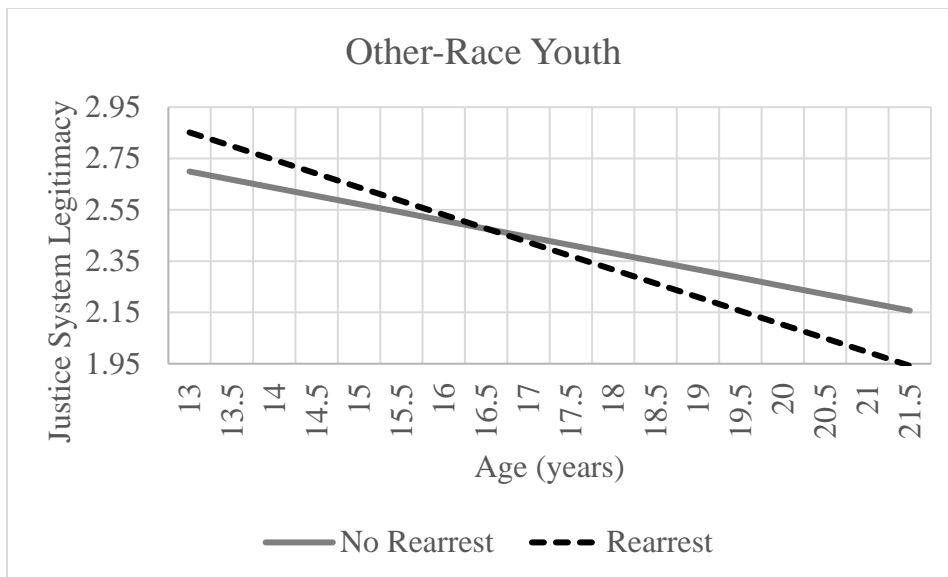
Specifically, the attitudes among White youth who exited the system did not change over time ( $dy/dx = -.001$ ,  $SE = .001$ ,  $z = -.60$ ,  $p = .552$ ,  $95\% CI = -.004, .002$ ) whereas those who were rearrested reported negative perceptions over time ( $dy/dx = -.01$ ,  $SE = .002$ ,  $z = -2.71$ ,  $p = .007$ ,  $95\% CI = -.01, -.002$ ). The results indicate that among White youth, attitudes appear to change somewhat by age and by justice system exposure.

**Figure 5. Attitude Development by Age and Justice System Exposure for White Youth**



The attitudes among Other-race youth who exited the system did not change over time ( $dy/dx = -.001$ ,  $SE = .004$ ,  $z = -1.54$ ,  $p = .122$ ,  $95\% CI = -.02, .001$ ) whereas those who were rearrested reported more negative perceptions over time ( $dy/dx = -.01$ ,  $SE = .002$ ,  $z = -2.10$ ,  $p = .036$ ,  $95\% CI = -.02, -.01$ ). The results indicate that among Other-race youth, attitudes appear to change somewhat by age and by justice system exposure.

**Figure 6. Attitude Development by Age and Justice System Exposure for Other-Race Youth**





## Discussion

Justice system attitudes have direct consequences for crime commission (Augustyn, 2016; Fagan & Piquero, 2007; Kirk & Matsuda, 2011; Reisig, Wolfe, & Holtfreter, 2011; Tyler & Huo, 2002). As compared to individuals with positive perceptions, those who have negative perceptions tend to engage in more crime (Fine et al., 2016). Considering that juveniles often come into repeated contact with justice system officials, juvenile offenders' attitudes towards the justice system may change considerably during adolescence as well as during 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 attitudes and behavior into adulthood (Penner, Viljoen, Douglas, & Roesch, 2014; Tyler & Huo, 2002).

The results of this study indicate that justice system attitude formation occurs during adolescence and into early adulthood. At almost every age assessed from adolescence through early adulthood, Black youth viewed the justice system the most negatively. Although surveys show that Latino adults report more negative attitudes than White adults (see Weitzer, 2014), consistent with evidence from serious, felony-level youthful offenders (see Fine & Cauffman, 2015), the results of this study suggest that attitude differences are largely non-existent at age 13, smaller during the next few years, and grow in magnitude throughout later adolescence. This finding suggests that merely assessing legitimacy perceptions by race during adulthood masks important experiences that occur during adolescence. Indeed, during early adolescence, differences in legitimacy perceptions between races appears to be minimal, yet they appear to expand with age and by experience.

The present study demonstrates that it is critical to consider experience with the justice system. When we examine racial/ethnic groups without considering the role of experience, we might conclude that for all Black, White, and Other-race youth in this sample, perceptions decline as they age or, in the case of Latino youth, do not change at all. However, when we consider rearrest, diverging trends emerge. In particular, the trajectories of perceptions of the system varied based on whether youth were arrested just a single time and then exited the system as compared to those who were rearrested.

Among White and Latino youth who exit the system, attitudes actually appear relatively stable from ages 13 to 21. This finding indicates that perhaps youths' initial justice system contact might be particularly impactful, and suggests that future research should capture youths' perceptions of the system prior to their first arrest to assess the impact of a youth's first arrest on the way they perceive the system considering how a youth perceives the system following his first arrest may set the tone for his perceptions of the justice system into adulthood.

Critically, as hypothesized, the findings indicate that White, Latino, and Black youth who were rearrested exhibited worse attitudes over time as compared with those who were not rearrested. Certainly, this study cannot establish causality, such that it be inappropriate to suggest that justice system involvement clearly causes more negative perceptions, nor do negative perceptions clearly cause more justice system involvement. In reality, the effects are likely bi-directional and cyclical. Scholars have posited that when individuals who report low justice system legitimacy violate the law, they may induce a belief-enforcing response from legal actors, perpetuating a cycle of distrust and offending (Piquero et al., 2005; Fagan & Tyler, 2005). That is, as compared with youth with more positive legitimacy perceptions, youth with negative

legitimacy perceptions may act differently towards legal authorities when they are rearrested, prompting the system to respond in a much more negative manner.

At the same time, it is entirely plausible that because youth with negative perceptions may fear the system more, they may actually act in a more deferential manner when they actually come into contact with the system and its officials. However, as a result of their prior history, the system may itself treat them in ways the youth perceive to be unfair or unjust, which may confirm their pre-existing perceptions of the system and concretize the downward trajectory of their perceptions. However, due to data limitations, these propositions have yet to be tested. Regardless, the present study indicates quite clearly that as compared with youth who exit the system, legitimacy attitudes generally decline at a faster rate for youth who are rearrested and who stay involved with the justice system.

The finding that perceptions decline at a faster rate among youth who have repeated contact with the system is highly problematic considering the juvenile justice system was founded on the principle of *parens patriae*, or the system was designed to act as a benevolent protector of youth (Shoemaker, 2017; Scott & Steinberg, 2009). As such, if the system indeed does act as a benevolent protector of youth, one would expect that youth who stay in the system should report improving perceptions of it. That is, one would hope that perceptions of a benevolent protector would improve with more and repeated experience with it. However, unfortunately, the results indicated that for most youth who have repeated contact with the system, perceptions of the system generally decline with age and experience, setting youth on a trajectory that extends into adulthood.

Finally, although the rearrest-attitudes association did not appear to vary significantly across races, it should be noted that the results of post hoc simple slopes analyses indicated that

for Black youth, attitudes among who exited the system and among those who were rearrested both declined as they aged. These results suggest that among Black youth, attitudes may become worse as they age, regardless of their justice system exposure. Although direct, personal experiences with the justice system affect the way youth perceive the justice system, so too do vicarious experiences, or what family members, neighbors, friends, or the media communicate to the youth about others' experiences. Considering the present media coverage on unjust interactions between young adults of color and the justice system (see Friedman, 2017; Tyler, Goff, & MacCoun, 2015), it is not surprising that such vicarious experiences may play an integral role in explaining why Black youths' perceptions of the system continue to decline even if they exit the system. Regardless, this finding is presented with a note that the rearrest effect on attitudes was largely consistent across races.

Despite the important findings, this study had several limitations. Primarily, the sample consisted entirely of youth who had been arrested and were involved in the justice system. While this serves as a highly policy-relevant sample, the findings may not generalize to youth in the community. That is, while it is important to know that in perceptions of the system become markedly worse among youth who are rearrested, it is unclear how perceptions may vary among youth who have no personal system contact. To fill a significant gap in the empirical literature, future research should directly sample youth in the community and track their attitude development as they age. Doing so would not only provide us with general developmental trends in youths' legitimacy perceptions, but may also illuminate how a first arrest, as opposed to a rearrest, might affect how youth perceive the system's legitimacy. Further, the youngest youth in this sample were age 13 and the oldest were 21. The results indicated that differences by race emerged and increased as youth age. However, it is important for future research to sample

younger youth to determine whether such differences emerge during early adolescence or merely reflect perceptions that were developed during late childhood. Similarly, it is important to examine whether attitudes stabilize during young adulthood or continue declining linearly as these models suggest.

Despite these limitations, this study makes critical contributions to the literature considering it was the first to examine how low-level, juvenile offenders' attitudes towards the justice system change during the transition to adulthood, and to demonstrate that variations emerge based on both system contact and race/ethnicity. The findings clearly indicate a gradient of justice system attitudes by race/ethnicity that begins in adolescence, and perhaps even earlier, and becomes more pronounced into young adulthood. This study also suggests that legitimacy attitudes generally decline at a faster rate for youth who are rearrested and who stay in the juvenile justice system. Consequently, the results of this study indicate that if the justice system seeks to pursue its original *parens patriae* doctrine, officials should seek to improve the way they interact with youthful offenders particularly during early adolescence before youths' perceptions shift towards a downward trajectory.

## **Study 2: Rebels with a Cause: Do Adolescents Differentiate between Authorities and Have Perceptions of Law Enforcement Declined in Recent Years?**

As a result of their emerging developmental capacities, perceptions of authorities materialize during adolescence (Kohlberg, 1963; Vollebergh, Iedema, & Raaijmakers, 2001). In particular, youth begin to critically evaluate legal authorities such as law enforcement and the justice system (Fagan & Tyler, 2005; Tyler & Trinkner, 2018). Recent events depicting the use of force by American police officers have received unprecedented media attention, in large part due to the increasingly wide use of personal cameras on mobile devices (Kies, 2011), police body cameras (e.g., *Floyd v City of New York*, 2013), the rapid dissemination of footage through social media outlets (Pew, 2014), and the rise of the Black Live Matter movement (Harris & Edwards, 2016), casting a spotlight on the relations between police and youth of color. Indeed, largely as a result of widely-publicized deaths of youth of color at the hands of law enforcement and the justice system in the U.S., national conversation surrounding perceptions of legal authorities has become increasingly widespread (see Friedman, 2017; Tyler, Goff, & MacCoun, 2015) leading to what scholars call an “era of mistrust” of law enforcement (Trinkner & Tyler, 2016).

Despite the current media attention on this issue, acrimonious relations between law enforcement and youth are not a 21<sup>st</sup> century phenomenon. The 1990s were marked by the Rodney King riots and the rise of sensationalized “superpredators” (see Krisberg, Hartney, Wolf, & Silva, 2009). More recently, the early 2000s were marked by high-profile “stop and frisk” policies and “broken windows” policing. Although practices and events that reflect unfair policing have dominated minority communities (Watkins, Patton, & Miller, 2016), it is likely that widespread media coverage has raised national awareness of these issues in the collective

consciousness of American youth of all races and ethnicities. Nonetheless, the empirical question of whether, how, and for whom perceptions of law enforcement have changed is yet untested. Consequently, the present study leverages nationally-representative cohort samples of adolescents from 2006 to 2016 to examine whether youths' perceptions of law enforcement have, indeed, declined in recent years and whether changes are limited to particular racial/ethnic groups.

Further, it remains to be seen whether American adolescents' perceptions of these legal authorities are separable from their perceptions of other authority institutions. That is, youths' negative perceptions of law enforcement may simply be indicative of negative perceptions of authority in general. To address this void in our understanding, the present study leverages nationally-representative samples of adolescents in 2016 and 2006 to examine whether modern adolescents in America have a negativity bias toward authority in general and to assess whether there are race differences in how youth perceive various authorities.

### **Legal Socialization**

The legal socialization framework describes the process through which individuals develop perceptions of law enforcement, the justice system, and laws (see Fagan & Tyler, 2005; Piquero, Fagan, Mulvey, Steinberg, & Odgers, 2005). Youth develop such perceptions based on personal experiences (Carr, Napolitano, & Keating, 2007), as well as the experiences and perceptions of friends (Fine, Cavanagh, Donley, Steinberg, Frick, & Cauffman, 2016) neighbors (Kirk & Papachristos, 2011), and family members (Cavanagh & Cauffman, 2015). In particular, those who are treated poorly or hear of others being treated poorly by the system or its officials develop more negative perceptions. Considering that individuals who do not trust law enforcement are less likely to defer to their authority, to report crimes, and to obey the law,

perceptions of law enforcement are a critical element in a law-abiding citizenry (Corsaro, Frank, & Ozer, 2015; Desmond, Papachristos, & Kirk, 2016; Fagan & Tyler, 2005; Tyler, Goff, & MacCoun, 2015). Thus, understanding the general public's perceptions of law enforcement has been argued "to be almost as important as the management of crime itself" (Sindall, Sturgis, & Jennings, 2012). Further, considering perceptions of law enforcement developed during adolescence may set the tone for how they view and interact with law enforcement during adulthood and may erode the obligation to obey laws and authorities (Tyler, 2006; Murphy, 2015), it is critically important to assess perceptions of law enforcement among youth in particular.

Negative perceptions of law enforcement may reflect practices that are unjust, ineffective, or racially/ethnically biased (Brunson & Gau, 2015; Brunson, 2007; Carr, Napolitano, & Keating, 2007). Considering these practices dominate racial/ethnic minority communities (see Watkins, Patton, & Miller, 2016), and tensions between law enforcement and citizens are particularly high in minority communities (Brunson, 2007; Carr, Napolitano, & Keating, 2007), it is perhaps unsurprising that Black/African American (henceforth Black) individuals report the most negative perceptions of law enforcement, followed by Hispanics/Latinx (henceforth Hispanic), while White individuals report the most positive perceptions of law enforcement (Fine & Cauffman, 2016; Lasley, 1994; Murty et al., 1990; Peck, 2015; Taylor et al., 2001; Weitzer & Tuch, 2006).

What we do not know, however, is whether these trends are a recent phenomenon, or whether racial/ethnic differences have been increasing over time. While media attention to unjust interactions between law enforcement and youth appears to be increasing in recent years, such relations, particularly for youth of color, are not a new phenomenon. As juvenile crime rates rose



in the 1980s and early 1990s, policing of youth changed dramatically to become more controlling and punitive (Scott & Steinberg, 2009; Feld, 1991). Although juvenile crime rates declined in the latter 1990s, crime coverage continued to increase (Goidel, Freeman, & Procopio, 2006; Yanich, 1999) and was consistently the top subject in local news (Klite, Bardwell, & Salzman, 1997) throughout the decade. Thus, during the 1990s, the public came to view juveniles as dangerous and began to overestimate the volume of juvenile crime (Roberts, 2004).

At the same time, John DiIulio, a renowned scholar, described some youthful offenders as “super-predators.” Although this rhetoric was promoted by other academics (see Fox, 1996), neither DiIulio nor his colleagues clearly defined the term (Pizarro, Chermak, & Gruenewald, 2007). Nonetheless, the 1990s became marked by the sensationalized “rise of the super-predators” (see Krisberg, Hartney, Wolf, & Silva, 2009 for a review), in which youth, particularly youth of color, were referred to as incorrigible, remorseless criminals who threatened public safety. The general population seized this language, and the rhetoric solidified the image of remorseless, teenage criminals as a major threat in the eyes of the news media and the public (DiIulio, 1995; Gilliam & Iyengar, 2005). Problematically, the portrayal of youth did not just perpetuate the notion that American youth are violent (Yanich, 2005), but regularly connected racial/ethnic minority youth to criminal behavior (Dorfman & Schiraldi, 2001). In fact, the clear subtext of the super-predator rhetoric was that a disproportionate number of youthful offenders were racial minorities (Gilliam & Iyengar, 1998).

As fear over juvenile crime mounted, policy changed to punish youth even more harshly and to police youth even more strictly (Scott & Steinberg, 2009), and law enforcement attention shifted towards crime suppression, particularly pertaining to individuals of color (Epp, Maynard-Moody & Haider-Markel, 2014; Sklansky, 2011). Indeed, most of the individuals affected by

both violent crime and policing practices in the 1990s were Black or Hispanic youth (Cook & Laub, 2002). Coinciding with the “super-predator” era, increased attention on law enforcement also unfolded during the 1990s. The beating of Rodney King precipitated the widely-publicized Los Angeles riots (Murty, Roebuck, & Armstrong, 1994). In the early 1990s, more than 90 percent of the nation was aware of the incident (see Tuch & Weitzer, 1997), as the cover of *Time* read: "Law and disorder: why cops turn violent" (Brown & Benedict, 2002). As a result of ubiquitous media coverage that included violent video footage of King’s beating, adults’ (McAneny, 1995), especially Black adults’ (Lasley, 1994; Tuch & Weitzer, 1997), perceptions of law enforcement grew more negative. Combined with the racially-coded “super-predator” rhetoric surrounding youth of color and the many fatal interactions between police and youth of color during the decade (e.g., Sexton, 1994), it’s likely that America’s youths’ perceptions of law enforcement descended during the 1990s.

However, through the 2000s, crime rates for both juveniles and adults fell dramatically. Calls to be more punitive with youthful offenders declined, and many of the academics who espoused the “super-predator” rhetoric, such as DiIulio, expressed regret with their terminology (see Becker, 2001). Public opinion largely shifted away from strong policing in favor of a more rehabilitative model (see Nagin, Piquero, Scott, & Steinberg, 2009; Scott, Reppucci, Antonishak, & De Gennaro, 2006; Roberts, 2004). What remains to be examined, however, is whether youths’ perceptions of law enforcement improved during these decades. On the one hand, it is possible that youths’ attitudes towards law enforcement rebounded during this period. Alternatively, it is plausible that the “tough on crime” era of the 1990s had lasting effects on youths’ perceptions of law enforcement.

In recent years, national attention has again been captured by the often violent interactions between law enforcement and youth of color (Friedman, 2017, pp. 5). As noted by Tyler and colleagues, in the space of 9 months in 2014, Americans were repeatedly shocked by police killings of four unarmed young Black males (Tyler, Goff, & MacCoun, 2015). Just as the Rodney King incident and other high-profile events in the 1990s likely affected perceptions of law enforcement, these events, along with the many others that have occurred in recent years, may be provoking a sense of crisis in the legitimacy of American law enforcement (Tyler, Goff, & MacCoun, 2015, pp. 76).

Presently, the discussion of youth, race, and law enforcement in the United States is also focusing increasingly on Hispanic youth. Hispanics are the largest ethnic minority in the United States (U.S. Census Bureau, 2016) and they tend to face more intense criminalization and policing than Whites, though less than Blacks (see Hagan, Shedd, & Payne, 2005; Sickmund, Sladky, Kang, & Puzzanchera, 2015). One explanation for this phenomenon posits that policies that promote “cimmigration” (i.e., re-allocating criminal justice resources to immigration issues; see Kubrin, Zatz, & Martinez, 2012; Marias-Rojas, 2016; Perry, 2016; Peterson, 2017) allow for greater law enforcement discretion toward racial/ethnic minorities (Beckett & Evans, 2015; Motomura, 2011; Welch, Payne, Chiricos, & Gertz, 2011), which may lead to racial profiling (Vidales, Day & Powe, 2009), and in turn to declining perceptions of the justice system (Messing, Becerra, Ward-Lasher, & Androff, 2015) and law enforcement (Goff, Epstein, & Reddy, 2013; Vidales, Day & Powe, 2009). In general, Hispanic youth do tend to report more negative attitudes toward the justice system than White youth, but more positive attitudes than Black youth (Fine & Cauffman, 2015; Solis, Portillos, & Brunson, 2009; Wu, Lake, & Cao, 2015). Nonetheless, whether their perceptions have shifted across recent years is unknown,

largely because most research on perceptions of law enforcement continue to focus on Black and White youth (see Peck, 2015; Weitzer, 2014).

### **Authority Socialization**

Simultaneously, since the time of G. Stanley Hall's (1904) characterization of adolescence as a period of "*Sturm und Drang*" (i.e., storm and stress), adolescence has been portrayed as a troubled developmental epoch plagued by constant conflict with authority. Indeed, even dating back to Shakespeare (1898), popular culture has characterized the developmental period as possessing an "anti-authority" attitude (Clark & Wenninger, 1964). Unfortunately, contemporary Americans still tend to perceive the adolescent epoch negatively (see Qu et al., 2016; Hines & Paulson, 2006).

The general public's negative perceptions of the adolescent period as anti-authority can be explained by improvements in adolescents' cognitive capacities (see Steinberg, 2014). During adolescence, youth develop sophisticated social understanding and improve their abstract reasoning abilities (Smetana & Villalobos, 2009). In particular, this increased abstract reasoning ability permits adolescents to more effectively question the limits, necessity, and efficacy of adult authority (Adelson 1972). These improvements enable youth to argue more effectively, which is often misinterpreted as simply being "anti-authority."

Adolescents draw on their understanding of moral, societal, and psychological concepts and their social experiences to develop their perceptions and evaluations of various social and authority institutions (Mulvey, Hitti, Smetana, & Killen, 2016). A growing literature is focusing on understanding adolescents' perceptions of law enforcement and the justice system (see Fagan & Tyler, 2005; Piquero, Fagan, Mulvey, Steinberg, & Odgers, 2005; Tyler, 2017), though the vast majority of the literature has focused on perceptions of law enforcement specifically. Just as

important, however, are attitudes toward the justice system. People's perceptions of the court's ability to maintain order through fair treatment rather than violence play a key role in their willingness to comply with the law and their belief in the legitimacy of the justice system (Tyler, 2006). Indeed, negative perceptions of the justice system during adolescence can lead to increased delinquency and decreased compliance with the law in adulthood (Friedman et al., 2004).

Unfortunately, youth generally perceive the justice system negatively (Hazel et al., 2003; Huerter & Saltzman, 1992). However, it is important to note that adolescents' perceptions of the justice system are not simply tied to the outcomes of cases (Sprott & Greene, 2008). That is, young people's impressions of the court's legitimacy are informed more so by their personal interactions (how they are treated by court officials) and vicarious experiences with the court (witnessing how others are treated) than they are by a favorable or unfavorable outcome (Greene et al., 2010). Similar to their perceptions of law enforcement, youth of color in general perceive greater bias in the legal system than White youth (Brooks & Jeon-Slaughter, 2001).

Compared to younger children, adolescents spend significantly more time outside the home, which provides them more opportunities to interact with civic institutions and authorities (Sherrod, Torney-Purta, & Flanagan, 2010). In addition to legal authorities, then, adolescents interact with a variety of socio-cultural authorities throughout their lives. Throughout childhood and adolescence, school in particular becomes a critically important social institution. The educational system is, indeed, viewed as one of the main avenues through which individuals, particularly youth, interact with the state and develop notions of authority (Justice & Meares, 2014; Tyler & Trinkner, 2018). Youths' belief that educational institutions have the right to exercise power and authority is important for maintaining order in schools. In fact, the less

students perceive teachers' authority as legitimate, the greater the rates of misconduct (Smetana & Bitz, 1996).

Problematically, however, school discipline has shifted towards “policing” and “criminalizing” student behavior in ways that mirror law enforcement and the criminal justice system, particularly for youth of color (see Kupchik, 2010; Welch & Payne, 2010; Welch & Payne, 2018; Rios, 2017). Indeed, a robust literature demonstrates that despite exhibiting equal rates and types of misbehavior as White youth, racial/ethnic minority students are more likely to be disciplined at school and to receive harsher discipline (Banks & Banks, 1993; Bennett & Harris, 1982; Mizel et al., 2016; Rios, 2017; Skiba et al., 2002) including under “zero tolerance” policies (see Curran, 2017; Hoffman, 2014). It is perhaps unsurprising, then, that youth of color perceive greater discrimination in their treatment at school (Ruck & Wortley, 2002; Solomon, 1992).

Considering the disproportionately negative effects on youth of color, coupled with the emerging evidence that more punitive school environments create cultures of fear (Fuentes, 2013; Kupchik, 2010; Shedd, 2015), it is plausible that youth of color perceive schools more as authoritarian institutions that control misbehavior and dole out punishment, similar to law enforcement and the justice system. However, only a few studies have examined associations between youths' perceptions of legal institutions and schools (e.g., Amoroso & Ware, 1983; Krause, 1975; Rigby, Schofield, & Slee, 1987). Consistent with this prior literature, more recent work in a predominantly White public school in the southeastern U.S. sampled during the 1990s found that youths' perceptions of teachers were positively associated with their perceptions of law enforcement (Nihart et al., 2005). However, these studies: 1) do not include perceptions of the justice system or other authority institutions; 2) may have results that do not generalize

beyond the historical period; 3) are limited to particular geographic and cultural locales; and 4) often focus on small, predominantly White samples that are unable to parse potential racial/ethnic differences.

Further, in addition to schools, religion is an important socio-cultural institution during adolescence (Wallace & Williams, 1997). However, as compared with the robust literatures on youths' perceptions of law enforcement, justice system, and schools, far less research has been devoted to youths' perceptions of religious institutions. Through social control, religious institutions impact adolescents' beliefs and attitudes about the world around them. Religion provides socially acceptable standards and imperatives to guide youths' choices and behaviors (Smith, 2003). Research shows that more positive perceptions of religion are associated with lower rates of delinquency and violence (Charles, Curry, & Chalfant, 1985; Powell, 1997). Thus, similar to schools, religion plays an important authoritative role in youths' lives. Yet, it appears as though modern American adolescents may be less religious than previous generations (Twenge et al., 2015).

Importantly, the influence of religion appears to be greater among ethnic minority youth as compared to White youth (Benson, 1993). Specifically, compared with White youth, Black and Hispanic/Latino youth are more likely to regularly attend religious services and indicate religion as very important in their lives. As a result, youth of color may perceive religious institutions more positively than to White youth.

### **Present Study**

To address empirical gaps in our understanding of how adolescents perceive various authority institutions, the present study leverages nationally-representative samples of high school students in 2016 and 2006 to answer several questions. *First, are youths' perceptions of*

*law enforcement and justice system merely indicative of how they perceive socio-cultural authorities, such as public schools and religious organizations?* Youths' perceptions of legal authorities are expected to be positively correlated with their perceptions of socio-cultural authorities, though the associations within each broader category are expected to be larger than the associations between the two categories. That is, as a whole, youth will perceive law enforcement and courts in similar ways as schools and religious institutions, but they will differentiate between legal institutions and socio-cultural institutions. Rather than be merely indicative of pessimistic attitudes towards authority institutions in general, youths' perceptions of law enforcement and the justice system will be separable from how they perceive schools and religious institutions.

*Second, are there differences by race?* Differences are expected in both latent means and factor structure. Consistent with prior research, Black and Hispanic youth will likely have more negative perceptions of legal authorities compared to White youth. Further, provided that youth of color generally receive disproportionate amounts and particularly severe punishment in school, it is expected that their perceptions of schools will load more strongly onto their perceptions of law enforcement and the justice system than to their perceptions of religious institutions. That is, rather than find a two-factor "Legal Institutions" construct for youth of color, it is expected that a constellation of perceptions of law enforcement, justice system, and school will emerge, such that the factors will load jointly onto a construct representing to "Control Institutions."

Finally, analyses are repeated using data from 2006, a decade earlier. Comparing the findings from 2016 with data from 2006 enables the examination of whether: a) the structural



way youth organize their perceptions of authorities has changed in recent years; and b) youths' general perceptions of authorities have declined.

The present study also leverages nationally representative samples of high school students from 1976 to the present to answer several questions related to historical trends. First, *have youths' perceptions of law enforcement actually shifted over the past 40 years?* It is hypothesized that during the 1990s, youths' perceptions of law enforcement will have declined dramatically, particularly among youth of color, before rebounding in the early 2000s, and finally declining again in more recent years.

Second, *have perceptions of law enforcement consistently differed between White youth and youth of color throughout the decades or have they become more similar in recent years?* It is hypothesized that youth of color will have reported consistently more negative perceptions throughout the decades. However, we also expect perceptions of American law enforcement to have declined in recent years among all youth, indicating a sort of "consciousness" (Friedman, 2017, pp. 6) and "crisis of legitimacy" (Tyler, Goff, & MacCoun, 2015, pp. 76) as posited by other scholars. As such, it is hypothesized that there will be historically large drops in youths' perceptions of law enforcement in recent years, yet a convergence of perceptions between White youth and youth of color. At the same time, it is important to consider that for racial/ethnic minority youth, police-citizen interactions have been consistently negative, even before the onslaught of mobile device cameras and social media coverage. For racial/ethnic minority youth, the gravity of police-citizen interactions that receive media attention may not differ from the gravity of police-citizen interactions that do not receive media attention. As a result, there is reason to believe that racial/ethnic minority youths' perceptions of the police may not change over time.

## Method

### Participants

To address the study aims, data were obtained from the Monitoring the Future study (MTF; Johnston et al., 2016; Bachman et al., 2015). MTF conducts annual, cross-sectional, self-reported surveys of 12<sup>th</sup> grade students in the 48 continuous U.S. states. MTF employs a multi-stage random sampling design with replacement to yield nationally-representative cohorts (see Johnson et al., 2016). The first set of analyses included youth sampled in 2016 ( $N_{Complete} = 1,309$ ; Johnston et al., 2016), with a comparison cohort sample 10 years earlier in 2006 ( $N_{Complete} = 1,414$ ; Johnston et al., 2006). The second set of analyses included all annual waves spanning 1976 through 2016 ( $N = 84,041$ ). All survey responses are confidential and all procedures are reviewed and approved on an annual basis by the University of Michigan's Institutional Review Board.

### Measures

**Demographics.** Prior to 2005, youths' self-identified race/ethnicity was coded dichotomously into either White or non-White. Beginning in 2005, the racial/ethnic categorizations of the study were altered, yielding three self-identified categorizations of racial/ethnic identity: White, Hispanic, or Black.

**Perceptions of Authorities and Institutions.** Youth in each cohort were asked, "How good or bad a job is being done for the country as a whole by [institution]?" Responses were provided using a 5-point Likert scale, ranging from *very poor* to *very good* with higher scores indicative of more positive perceptions of the institution. Youth were also asked the identical question regarding each of the following: 1) the police and law enforcement; 2) the justice system; 3) public schools; and 4) churches/religious organizations.

## Plan of Analysis

The analyses were conducted in two stages. All analyses were repeated both with and without weighting variables. As the results were substantively similar (e.g., direction, significance, and effect size) with and without the weights, the findings are presented without the weights for clarity of interpretation. The first analytic stage tested associations between youths' perceptions of each authority and institution. First, bivariate correlations between youths' perceptions of each institution in 2016 were estimated. Second, a principal component factor analysis with varimax rotation with Kaiser normalization was conducted, hypothesizing that any identified factors would be correlated. Third, youths' perceptions of all authorities and institutions were factor analyzed within a structural equation modeling framework. A combination of model fit indices were used to assess model fit (Hooper, Coughlan, & Mullen, 2008; Hu & Bentler, 1999; Kline, 2005), including the comparative fit index ( $CFI > .95$ ; Bentler, 1990) and the Tucker-Lewis index ( $TLI > .95$ ; Tucker & Lewis, 1973). The root mean square error of approximation (RMSEA; Browne & Cudeck, 1992) was not calculated because its use in models with small  $df$  is problematic and potentially misleading (Kenny, Kaniskan, & McCoach, 2015). Finally, measurement invariance was compared between Black, Hispanic, and White youth (Acock, 2013). Analyses were conducted in Stata 14 (StataCorp, 2015).

Next, all models were repeated using data in 2006 in order to compare the cohort of youth 10 years prior to the present. To compare differences in the means between 2016 and 2006, effect sizes were assessed using the bias-corrected Hedges'  $g$  that uses pooled standard deviations (Hedges, 1981; Hedges & Olkin, 1985). Hedges'  $g$  was computed by using the square root of the mean square error from the analysis of variance testing for differences between the two cohorts' estimates. Considering the effect size estimate is slightly biased, it was corrected

using a factor provided by Hedges and Olkin (1985) that is designed to conservatively reduce effect sizes. Hedges  $g$  is preferred over Cohen's  $d$  when groups are dissimilar in size because it pools weighted standard deviations (Hedges, 1981). Hedges  $g$  effect sizes are interpreted in the same way as Cohen's  $d$ , such that a score of .25 would indicate that the difference between the groups is equivalent to one-fourth of a standard deviation, a score of .5 would indicate the difference between the groups is equivalent to one-half of a standard deviation, and so on (Ellis, 2010).

In the second stage, historical trends in youths' perceptions of law enforcement were modeled using population-average mean scores. Because youth self-identified as either White or non-White between 1976 and 2004, group means are modeled for each of these two groups. Beginning in 2005, youth self-identified as White, Hispanic, or Black, thus group means are modeled for each of these three groups for the years 2005 through 2016. The analyses proceeded in two stages. The first stage identified trends within each racial/ethnic group's perceptions of law enforcement over time. That is, models exhibited White youths' perceptions for each year between 1976 and 2016, non-White youths' perceptions between 1976 and 2004, Hispanic youths' perceptions between 2005 and 2016, and finally Black youths' perceptions between 2005 and 2016. The second stage identified differences between each racial and ethnic group. This stage examined whether, when, and by how much perceptions differed between White and non-White youth (between 1976 and 2004), Hispanic youth and White youth (2005 through 2015), Black youth and White youth (2005 through 2016), and Black youth and Hispanic youth (2005 through 2016). Effect sizes were assessed using Hedges'  $g$  (Hedges, 1981).

## **Results**

### **Youths' Perceptions of Authority Institutions in 2016**

The results of the bivariate correlations in 2016 indicated that, as expected, youths' perceptions of different institutions were all positively and significantly correlated (Table 2). However, youths' perceptions of authority institutions differed,  $F(3, 1306) = 46.46, p < .001$ . Specifically, youths' perceptions of the justice system were worse than their perceptions of law enforcement, ( $t(1308) = -2.45, p = .014$ ). Youths' perceptions of law enforcement were similar to their perceptions of public schools ( $t(1308) = -0.06, p = .952$ ), which were in turn lower than their perceptions of religious institutions ( $t(1308) = -9.43, p < .001$ ). That is, in 2016, youth perceived religious institutions the most positively, followed by both public schools and police/law enforcement, and finally had the worst perceptions of the justice system.

The results of both the principal component factor analysis and the confirmatory factor analysis indicated that, as expected, there were two factors (Table 3; Figure 1). As hypothesized, youths' perceptions of law enforcement and the justice system mapped onto a single factor that we call Legal Institutions, whereas their perceptions of schools and religious organizations mapped onto a second factor that we call Socio-Cultural Institutions (CFI = .98; TLI = .88; AIC = 14961.04; BIC = 15028.34; CD = .84).

To examine invariance across racial/ethnic group, a structural equation model was fit that imposed equivalent form on all relationships, but did not impose equality constraints. That is, the model allowed the indicators to load onto the same latent variables in each group, but the loadings themselves were not required to be equal. The results indicated that the model imposing invariance constraints outperformed the model in which the parameters were not constrained to be equal ( $\chi^2(2) = 21.02, p < .001$ ). This suggests that the structural form of the two-latent-construct model did not vary by race/ethnicity.

The next model examined whether the loadings varied by racial/ethnic group, which would indicate whether the latent variables have the same meaning across racial/ethnic groups. The invariant loadings model did not perform significantly worse ( $\chi^2(4) = 6.73, p = .15$ ), indicating that the racial/ethnic groups did not differ on the meaning of each construct. That is, across racial/ethnic groups, the observed variables loaded similarly onto the latent variables. However, as expected, the intercepts were not equal across groups ( $\chi^2(8) = 97.11, p < .001$ ), indicating that the means of the latent variables differed by race. Compared with White youth, Black youth ( $M = -.56, SD = .13, z = -4.43, p < .001; Effect Size = -.64$ ) and Hispanic ( $M = -.28, SD = .09, z = -2.94, p = .003; Effect Size = -.33$ ) both reported significantly worse perceptions of the legal institution latent construct, with effect sizes in the moderate-to-large range<sup>1</sup>. Further, compared with Hispanic youth, Black youth reported worse perceptions of legal institutions ( $M = -.28, SE = .13, z = -2.16, p = .031; Effect Size = -.29$ ). These results indicated that Black youths' perceptions of legal institutions are one-third of a standard deviation worse than Hispanic youth and more than one-half of a standard deviation worse than White youth (Table 4).

Contrary to expectations, perceptions of socio-cultural institutions did not vary by race/ethnicity. Black youth ( $M = .04, SD = .09, z = .49, p = .623; Effect Size = .06$ ) and Hispanic youth ( $M = .13, SD = .09, z = 1.53, p = .125; Effect Size = .19$ ) reported similar perceptions of socio-cultural institutions as White youth (Table 4). Black youth and Hispanic youth also reported similar perceptions of socio-cultural institutions ( $M = -.09, SD = .12, z = -.77, p = .444; Effect Size = -.13$ ). That is, whereas perceptions of legal institutions varied by race, perceptions of socio-cultural institutions did not vary by race/ethnicity.

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<sup>1</sup> Effect sizes are based on dividing the latent mean by the pooled standard deviation (Acock, 2013; pg 231).

## **Youths' Perceptions of Authority Institutions in 2006**

Similar to 2016, youths' perceptions of institutions in 2006 were all positively and significantly correlated (Table 2). Just as in 2016, youth perceived specific institutions differently in 2006,  $F(3, 1411) = 73.83, p < .001$ , and the rank ordering of their perceptions of institutions were largely similar a decade earlier. Both cohorts of youth perceived religious institutions the most positively and the justice system the most negatively. However, youth perceived police/law enforcement, the justice system, and religious organizations more negatively in 2016 than they did in 2006, though effect sizes were small (Hedges  $g$ 's  $-.09, -.10$ , and  $-.12$ , respectively). Perceptions of public schools did not change from 2006 to 2016 (Table 2).

The factor analyses and differences in youths' perceptions of the latent institutions using 2006 data were consistent with results from 2016 (Tables 2-4): 1) youths' perceptions loaded onto a legal institutions construct and a socio-cultural institutions construct; 2) White youth reported the most positive perceptions of legal institutions, followed by Hispanic youth, and then Black youth; and 3) all three groups reported similar perceptions of socio-cultural institutions. These results indicated that in totality, factor structures and racial differences in youths' perceptions of authority institutions were largely consistent in 2006 and 2016.

**Table 2. Bivariate Correlations and Means (SDs) in 2016 (N = 1,309) and 2006 (N = 1,414).**

	2016				2016 vs 2006		
	1	2	3	4	Mean Δ	Hedge's g	95% CI
1. Law Enforcement	3.06 (1.19)				-.10*	-.09	-.16, -.01
2. Justice System	.55***	2.99 (.98)			- .10**	-.10	-.18, -.03
3. Public School	.29***	.36***	3.07 (1.08)		-.06	-.06	-.13, .02
4. Religious Organizations	.29***	.25***	.36***	3.40 (1.13)	- .13**	-.12	-.19, -.04

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

**Table 3. Principal Component Factor Analysis (PCFA) Factor Loadings and Confirmatory Factor Analysis (CFA) Loadings Results in 2016 and 2006**

	2016				2006					
	PCFA		CFA		PCFA		CFA			
	Institution		Institution		Institution		Institution			
	Legal	Socio-Cultural	Legal	Socio-Cultural	Legal	Socio-Cultural	Legal	Socio-Cultural		
		Loading <sup>1</sup>	Var.	Loading <sup>1</sup>	Var.	Loading <sup>1</sup>	Var.	Loading <sup>1</sup>	Var.	
Law Enforcement	.57	.31	.68***	.54	.60	.29	.77***	.41		
Justice System	.58	.35	.80***	.36	.60	.29	.72***	.48		
Public School	.29	.46			.26	.43			.64***	.60
Religious Organizations	.23	.43			.17	.41			.49***	.76

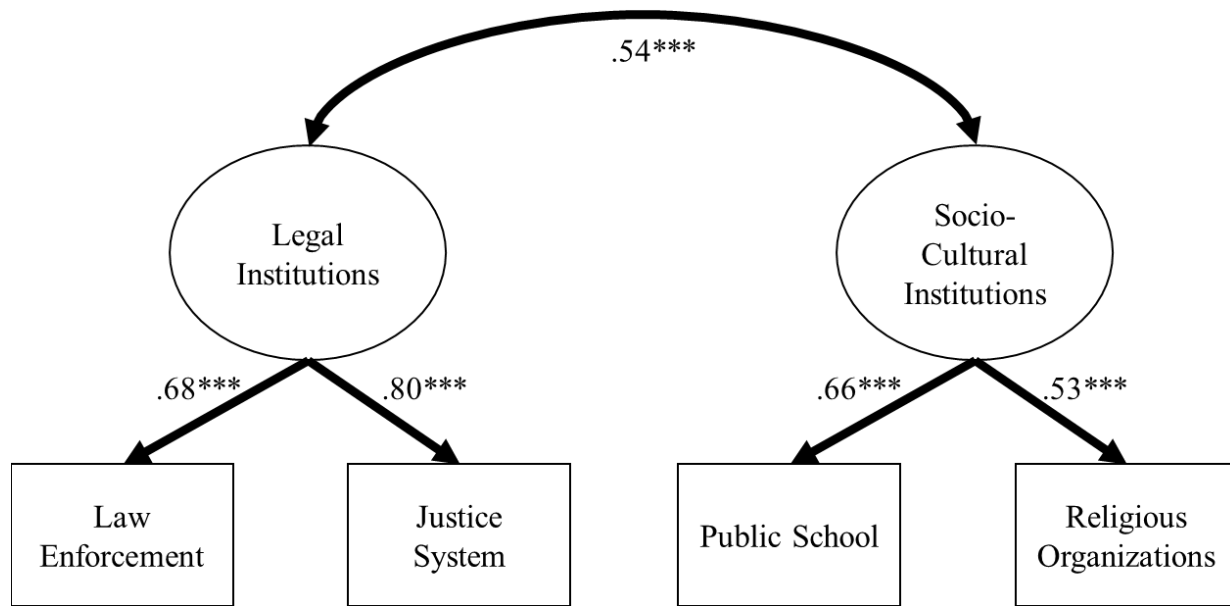
<sup>1</sup>Standardized. \*\*\* $p < .001$



**Table 4. Between Race Comparisons on Perceptions of Legal and Socio-Cultural Authority Institutions by Year**

Group Comparison	Legal Authority Institutions		Socio-Cultural Authority Institutions	
	2016	2006	2016	2006
Black vs White	$M = -.56, SD = .13, z = -4.43, p < .001; Effect Size^2 = -.64$	$M = -.51, SE = .09, z = -5.73, p < .001; Effect Size = -.60$	$M = .04, SD = .09, z = .49, p = .623; Effect Size = .06$	$M = .05, SD = .08, z = .08, p = .540; Effect Size = .09$
Hispanic vs White	$M = -.28, SD = .09, z = -2.94, p = .003; Effect Size = -.33$	$M = -.24, SE = .08, z = -2.84, p = .005; Effect Size = -.28$	$M = .13, SD = .09, z = 1.53, p = .770; Effect Size = .19$	$M = .11, SD = .08, z = 1.47, p = .142; Effect Size = .16$
Black vs Hispanic	$M = -.28, SE = .13, z = -2.16, p = .031; Effect Size = -.29$	$M = -.27, SE = .11, z = -2.44, p = .015; Effect Size = -.30$	$M = -.09, SD = .12, z = -.77, p = .444; Effect Size = -.13$	$M = -.07, SD = .10, z = -.64, p = .521; Effect Size = -.11$

**Figure 7. Youths' Perceptions of Authority Institutions in 2016 (results are standardized)**



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

<sup>2</sup> Effect sizes are based on dividing the latent mean by the pooled standard deviation (Acock, 2013; pg 231).

### Have Youths' Perceptions of Law Enforcement Shifted over the Past 40 Years?

**White Youth.** As depicted in Figure 8 and Table 5, White youths' perceptions of law enforcement remained moderately stable from the 1970s through 1990 ( $M_{Hedges' Gs^3} = -.01$ ;  $Range_{Hedges' Gs^4} = -.07, .08$ ). As expected, White youths' perceptions declined during the early 1990s ( $M_{Hedges' Gs} = -.04$ ;  $Range_{Hedges' Gs} = -.12, .10$ ). However, during the 2000s, they improved to return to pre-1990s levels and remained stable from 2005 to 2013 ( $M_{Hedges' Gs} = .00$ ). Importantly, White youths' perceptions of law enforcement declined from 2012-2013 ( $\Delta M = -.10$ ,  $p = .031$ ,  $Hedges' G = -.10$ ,  $95\% CI = -.18, -.01$ ) and again from 2013-2014 ( $\Delta M = -.14$ ,  $p = .006$ ,  $Hedges' G = -.13$ ,  $95\% CI = -.21, -.04$ ) before improving from 2015 to 2016 ( $\Delta M = .25$ ,  $p < .001$ ,  $Hedges' G = .22$ ,  $95\% CI = -.13, .31$ ).

**Non-White Youth.** As depicted in Figure 8 and Tables 5-7, non-White youths' perceptions of law enforcement remained moderately consistent during the 1970s ( $M_{Hedges' Gs} = .03$ ) and 1980s ( $M_{Hedges' Gs} = -.01$ ). However, during the early 1990s, non-White youths' perceptions declined significantly ( $M_{Hedges' Gs} = -.18$ ), particularly from 1990 to 1991 ( $M_{Hedges' Gs} = -.52$ ). For comparison, the decline in White youths' perceptions from 1990 to 1991 was significant ( $p = .012$ ), but one-fourth the magnitude ( $Hedges' G, M = -.12$ ). From the late 1990s to 2004, non-White youths' perceptions increased slowly but steadily ( $M_{Hedges' Gs} = .05$ ).

Beginning in 2005 (Tables 5 & 7), the data for non-White youths could be separated into either Hispanic or Black. From 2006 to 2013, both Hispanic youths' perceptions ( $M_{Hedges' Gs} = -.02$ ) and Black youths' perceptions ( $M_{Hedges' Gs} = .02$ ) of law enforcement fluctuated year to year, but overall remained moderately stable. However, similar to trends observed with White youth, both Hispanic and Black youths' attitudes began declining in 2014. The significant decline in

<sup>3</sup>  $M_{Hedges' Gs}$  refers to the average of the effect sizes for the years in question.

<sup>4</sup>  $Range_{Hedges' Gs}$  refers to the range of the effect sizes for the years in question.

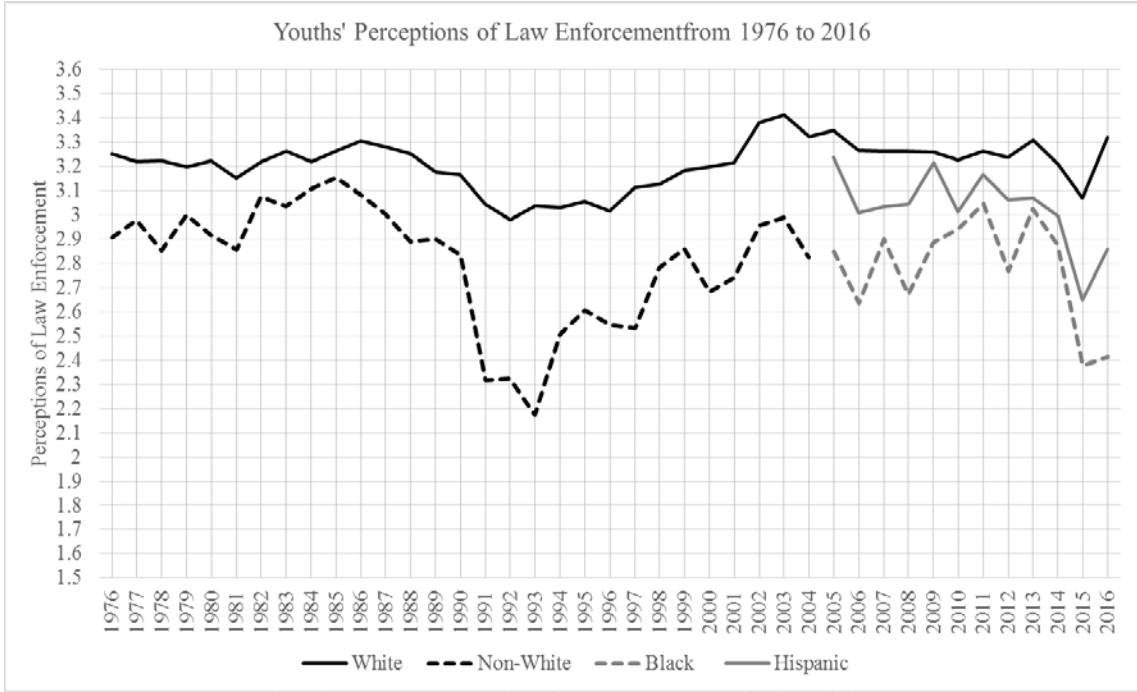
2015 was even greater for both Hispanic ( $\Delta M = -.35, p < .001, Hedges' G = -.31, 95\% CI = -.47, -.15$ ) and Black ( $\Delta M = -.50, p < .001, Hedges' G = -.39, 95\% CI = -.59, -.20$ ) youth compared to White youth. Black youths' perceptions plateaued from 2015 to 2016 whereas Hispanic youths' perceptions increased ( $\Delta M = .21, p = .03, Hedges' G = .18, 95\% CI = .02, .35$ ).

**Table 5. Descriptive Statistics on Perceptions of Law Enforcement**

Year	White			Non-White			Black			Hispanic		
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>
1976	2,430	3.25	1.03	309	2.91	1.17						
1977	2,626	3.22	1.00	407	2.98	1.05						
1978	2,808	3.22	1.00	402	2.85	1.05						
1979	2,574	3.20	1.01	286	3.00	1.09						
1980	2,510	3.22	0.96	340	2.91	0.98						
1981	2,644	3.15	0.98	451	2.86	1.11						
1982	2,675	3.22	0.96	418	3.07	1.03						
1983	2,434	3.26	0.95	388	3.04	1.06						
1984	2,327	3.22	0.97	421	3.10	1.04						
1985	2,308	3.26	0.95	392	3.15	1.03						
1986	2,114	3.30	0.94	368	3.08	1.05						
1987	2,307	3.28	0.94	319	3.00	0.98						
1988	2,278	3.25	0.98	364	2.89	1.03						
1989	1,908	3.17	0.98	331	2.90	1.11						
1990	1,756	3.16	0.97	242	2.83	0.98						
1991	1,607	3.04	1.01	305	2.31	1.00						
1992	1,680	2.98	1.04	381	2.32	1.08						
1993	1,708	3.04	1.03	322	2.17	1.04						
1994	1,651	3.03	1.01	251	2.51	1.08						
1995	1,660	3.05	0.98	270	2.61	1.08						
1996	1,415	3.01	1.04	324	2.55	1.14						
1997	1,424	3.11	1.00	327	2.53	1.07						
1998	1,492	3.13	1.01	292	2.78	1.11						
1999	1,379	3.18	1.03	272	2.86	1.18						
2000	1,228	3.20	1.05	283	2.68	1.06						
2001	1,156	3.21	1.02	253	2.74	1.07						
2002	1,244	3.38	1.03	203	2.96	1.10						
2003	1,343	3.41	1.01	253	2.99	1.01						
2004	1,403	3.32	1.02	237	2.82	1.10						
2005	1,461	3.35	1.01				211	2.85	1.14	236	3.24	1.13
2006	1,355	3.26	1.02				230	2.63	1.15	254	3.01	1.14
2007	1,358	3.26	1.04				244	2.90	1.06	276	3.03	1.15
2008	1,182	3.26	1.04				240	2.67	1.09	294	3.04	1.02
2009	1,163	3.26	1.04				182	2.88	1.11	306	3.22	1.05

2010	1,186	3.22	1.03	247	2.94	1.17	311	3.01	1.13
2011	1,107	3.26	1.05	273	3.04	1.14	280	3.16	1.10
2012	1,153	3.24	1.06	185	2.77	1.12	289	3.06	1.09
2013	1,074	3.31	1.07	170	3.02	1.13	292	3.07	1.11
2014	944	3.21	1.04	181	2.87	1.25	296	2.99	1.06
2015	1,010	3.07	1.17	236	2.38	1.27	315	2.65	1.17
2016	908	3.32	1.13	199	2.41	1.20	257	2.86	1.12

**Figure 8. Youths' Perceptions of Law Enforcement: 1976-2016**



**Table 6. Within Race Change (versus Previous Year) on Perceptions of Law Enforcement: 1977-2016**

Year	White versus Previous Year					Non-White versus Previous Year				
	Mean Difference	<i>p</i> -value	Hedges' <i>G</i>	95% CI for <i>G</i>		Mean Difference	<i>p</i> -value	Hedges' <i>G</i>	95% CI for <i>G</i>	
				Lower	Upper				Lower	Upper
1977	-0.03	0.23	-0.03	-0.09	0.02	0.07	0.39	0.06	-0.08	0.21
1978	0.01	0.85	0.01	-0.05	0.06	-0.12	0.09	-0.12	-0.26	0.02
1979	-0.03	0.34	-0.03	-0.08	0.03	0.15	0.08	0.14	-0.01	0.29
1980	0.03	0.34	0.03	-0.03	0.08	-0.09	0.29	-0.09	-0.24	0.07
1981	-0.07	0.01	-0.07	-0.13	-0.02	-0.06	0.46	-0.05	-0.19	0.09
1982	0.07	0.01	0.07	0.02	0.12	0.22	0.00	0.20	0.07	0.34
1983	0.04	0.11	0.05	-0.01	0.10	-0.04	0.61	-0.04	-0.17	0.10
1984	-0.05	0.10	-0.05	-0.10	0.01	0.07	0.36	0.07	-0.07	0.20
1985	0.04	0.11	0.05	-0.01	0.10	0.05	0.50	0.05	-0.09	0.18
1986	0.04	0.13	0.05	-0.01	0.10	-0.07	0.34	-0.07	-0.21	0.07
1987	-0.03	0.35	-0.03	-0.09	0.03	-0.08	0.31	-0.08	-0.23	0.07
1988	-0.03	0.35	-0.03	-0.09	0.03	-0.12	0.14	-0.11	-0.27	0.04
1989	-0.08	0.01	-0.08	-0.14	-0.02	0.01	0.90	0.01	-0.14	0.16
1990	-0.01	0.74	-0.01	-0.08	0.05	-0.06	0.48	-0.06	-0.22	0.11
1991	-0.12	0.00	-0.12	-0.19	-0.05	-0.52	0.00	-0.52	-0.69	-0.35
1992	-0.06	0.08	-0.06	-0.13	0.01	0.01	0.92	0.01	-0.14	0.16
1993	0.06	0.11	0.05	-0.01	0.12	-0.15	0.07	-0.14	-0.29	0.01
1994	-0.01	0.88	-0.01	-0.07	0.06	0.33	0.00	0.31	0.15	0.48
1995	0.02	0.49	0.02	-0.04	0.09	0.10	0.29	0.09	-0.08	0.27
1996	-0.04	0.26	-0.04	-0.11	0.03	-0.06	0.51	-0.05	-0.22	0.11
1997	0.10	0.01	0.10	0.02	0.17	-0.01	0.87	-0.01	-0.17	0.14
1998	0.01	0.70	0.01	-0.06	0.09	0.25	0.00	0.23	0.07	0.39
1999	0.05	0.16	0.05	-0.02	0.13	0.08	0.41	0.07	-0.10	0.23
2000	0.02	0.68	0.02	-0.06	0.09	-0.18	0.06	-0.16	-0.33	0.01
2001	0.02	0.69	0.02	-0.06	0.10	0.06	0.51	0.06	-0.11	0.23
2002	0.16	0.00	0.16	0.08	0.24	0.21	0.04	0.20	0.01	0.38
2003	0.03	0.44	0.03	-0.05	0.11	0.03	0.74	0.03	-0.15	0.22
2004	-0.09	0.02	-0.09	-0.16	-0.01	-0.17	0.08	-0.16	-0.33	0.02
2005	0.03	0.49	0.03	-0.05	0.10					
2006	-0.09	0.03	-0.08	-0.16	-0.01					
2007	0.00	0.99	0.00	-0.08	0.07					
2008	0.00	1.00	0.00	-0.08	0.08					
2009	-0.01	0.90	0.00	-0.09	0.08					
2010	-0.03	0.43	-0.03	-0.11	0.05					
2011	0.04	0.39	0.04	-0.05	0.12					
2012	-0.02	0.58	-0.02	-0.11	0.06					
2013	0.07	0.11	0.07	-0.02	0.15					
2014	-0.10	0.03	-0.10	-0.18	-0.01					
2015	-0.14	0.01	-0.13	-0.21	-0.04					
2016	0.25	0.00	0.22	0.13	0.31					

**Table 7. Within Race Change (versus Previous Year) on Perceptions of Law Enforcement for Black and Hispanic Youth: 2006-2016**

Year	Black vs Previous Year					Hispanic vs Previous Year				
	Mean Difference	<i>p</i> -value	Hedges' <i>G</i>	95% CI for <i>G</i>		Mean Difference	<i>p</i> -value	Hedges' <i>G</i>	95% CI for <i>G</i>	
				Lower	Upper				Lower	Upper
2006	-0.21	0.05	-0.19	-0.37	0.00	-0.23	0.03	-0.20	-0.38	-0.02
2007	0.26	0.01	0.24	0.06	0.42	0.02	0.80	0.02	-0.15	0.19
2008	-0.23	0.02	-0.21	-0.39	-0.03	0.01	0.90	0.01	-0.15	0.17
2009	0.21	0.05	0.19	0.00	0.39	0.17	0.04	0.17	0.01	0.33
2010	0.06	0.60	0.05	-0.14	0.24	-0.21	0.02	-0.19	-0.35	-0.03
2011	0.10	0.32	0.09	-0.09	0.26	0.15	0.09	0.14	-0.02	0.30
2012	-0.28	0.01	-0.24	-0.43	-0.06	-0.10	0.27	-0.09	-0.26	0.07
2013	0.26	0.03	0.23	0.02	0.44	0.01	0.95	0.01	-0.16	0.17
2014	-0.15	0.24	-0.13	-0.34	0.08	-0.08	0.40	-0.07	-0.23	0.09
2015	-0.50	0.00	-0.39	-0.59	-0.20	-0.35	0.00	-0.31	-0.47	-0.15
2016	0.03	0.77	0.03	-0.16	0.22	0.21	0.03	0.18	0.02	0.35

**Have Perceptions of Law Enforcement Consistently Differed Between White and Non-White Youths?**

Non-White youths' perceptions of law enforcement were compared with White youths' perceptions during each year from 1976 through 2004. Non-White youths consistently reported more negative perceptions of law enforcement than White youths during the 1970s ( $M_{Hedges' Gs} = -.28$ ) and 1980s ( $M_{Hedges' Gs} = -.24$ ). As expected, the differences between the groups increased during the 1990s ( $M_{Hedges' Gs} = -.51$ ). Non-White youths continued to report more negative perceptions than White youth through 2004 ( $M_{Hedges' Gs} = -.45$ ), though compared with the gap during the 1990s, the gap in perceptions during the early 2000s slightly declined.

From 2005 through 2016, Black youth generally reported more negative perceptions than Hispanic youth ( $M_{Hedges' Gs} = -.19$ ). The differences in perceptions does not appear to be shifting in recent years. The differences between White and Hispanic youth ( $M_{Hedges' Gs} = .21$ ) were generally of the same magnitude as the differences between Hispanic and Black youth ( $M_{Hedges' Gs} = .21$ ).

$G_s = -.19$ ). From 2005 through 2016, Black youth ( $M_{Hedges'} G_s = -.43$ ) and Hispanic youth ( $M_{Hedges'} G_s = -.21$ ) consistently reported more negative perceptions than White youth.

However, the difference between Black and White youths increased from 2014 to 2015 and, importantly, reached its largest difference in the most recent years. From 2015 to 2016, the difference between Black and White youths' perceptions of law enforcement reached a historical high, with Black youths' perceptions reaching almost a full standard deviation lower than White youths' ( $\Delta M = -.91, p < .001, Hedges' G = -.79, 95\% CI = -.96, -.63$ ). Similarly, even though the difference between Hispanic and White youths increased from 2014 to 2015 ( $\Delta M = -.42, p < .001, Hedges' G = -.36, 95\% CI = -.49, -.23$ ), as compared to differences at any other year, it reached a historically-high difference from 2015 to 2016 ( $\Delta M = -.46, p < .001, Hedges' G = -.41, 95\% CI = -.55, -.27$ ). This suggests that the perception gap between Black and White youths or Hispanic and White youths may be increasing with time and the gap may be historically high. A more conservative interpretation, however, is that in 2016, the racial/ethnic gap in perceptions of law enforcement grew to its widest point in over a decade.

## Discussion

During adolescence, perceptions of legal and socio-cultural authority institutions materialize. Research indicates that adolescents generally perceive law enforcement and the justice system negatively (Augustyn, 2016; Tyler & Trinkner, 2018). Critically, as a result of the repeated media broadcasts of fatal and often unjust interactions between law enforcement and youth of color, scholars are concerned that perceptions of legal authorities are declining (Tyler, Goff, & MacCoun, 2015). However, it is unclear whether youths' negative perceptions of legal authorities merely reflect their perceptions of authority in general or if they are separable from their perceptions of socio-cultural authority institutions. Further, although scholars have posited

that we currently live in an “era of mistrust” in legal authority (Trinkner & Tyler, 2016), it is unclear whether youths’ perceptions of law enforcement have, indeed, declined recently.

Utilizing representative samples of 12<sup>th</sup> graders in the U.S. in 2016 and 2006, the present study investigated whether youth differentiate between institutions and examined whether perceptions varied by race. On the most basic level, the results indicated that youth differentiated between the four authority institutions (law enforcement/police; justice system, public schools, and religious institutions). Adolescents tended to perceive religious institutions the most positively, followed by both public schools and police/law enforcement, and perceptions of the justice system tended to be the least favorable. This latter finding is perhaps unsurprising provided the recent events and almost ubiquitous media coverage surrounding questions of “justice” within the United States.

The results of this study also revealed that within each year, youths’ perceptions of religious institutions, public schools, police/law enforcement, and the justice system were all positively and significantly correlated. Youth who viewed one type of authority more negatively also tended to view other institutions more negatively. This finding suggests that when we assess youths’ perceptions of these institutions, we are generally tapping into an underlying, general orientation towards authority.

Critically, however, this study provides evidence that in general, youths’ perceptions actually load onto two higher-order latent constructs. As expected, youths’ perceptions of law enforcement and the justice system mapped onto a single construct that we called “Legal Institutions”. Similarly, their perceptions of schools and religious organizations mapped onto a second construct called “Socio-Cultural Institutions”. That is, the findings indicated that in general, youth in both 2016 and 2006 differentiate between legal authorities and socio-cultural



authorities, and overall, youths' perceptions of socio-cultural institutions were more positive than their perceptions of legal institutions.

Provided that youth of color, as compared to White youth, generally receive disproportionate amounts and particularly severe punishment in school, we expected that their perceptions of schools would load more with their perceptions of law enforcement and the justice system than to their perceptions of religious institutions. As such, we expected that rather than calling the construct Legal Institutions, the constellation of law enforcement, justice system, and school could be referred to as "Control Institutions" for youth of color (see Gottfredson, 2006; Agnew, 1985). In contrast, we expected White youths' perceptions of schools to load clearly with their perceptions of religious institutions, as the two may be perceived as supportive and guiding.

Contrary to our expectations, however, we found no racial/ethnic differences in the factor structures in either 2006 or 2016. Adolescents viewed police/law enforcement and the justice system as legal institutions, likely responsible for control and discipline, whereas schools and religious organizations were perceived separately, likely as educational, guiding, and supportive. This finding indicates that despite prior evidence that youth of color are disproportionately punished in schools and such punishment contributes in large part to the school-to-prison pipeline, youth of color perceive schools more positively than law enforcement and the justice system, and tend to associate them more with religious authority than with legal authority.

As expected, based on prior research (Fine & Cauffman, 2015; Peck, 2015; Solomon, 1992; Weitzer & Tuch, 2006), in 2016 and 2006, Black youth reported the worst perceptions of legal institutions, followed by Hispanic youth, and finally White youth. Problematically, negative perceptions of law enforcement and the justice system during adolescence are linked to

increased criminality and mistrust of legal authorities in adulthood (Friedman et al., 2004; Desmond, Papachristos, & Kirk, 2016). Thus, strategies should be taken to improve law enforcement and justice system practices that may negatively affect the way the public views them, as well as to reduce disproportionate minority contact with law enforcement and the justice system. Doing so may effectively break racial/ethnic minority youth out of a continuous cycle of negative interactions with and mistrust of legal authorities.

However, contrary to our hypotheses, mean levels in youths' perceptions of socio-cultural institutions did not vary by race. This suggests that racial differences in attitudes toward authority are particularly salient when considering legal institutions. The finding that Black and Hispanic youth in the United States tend to report more negative perceptions of legal institutions than White youth, yet similar perceptions of socio-cultural institutions, suggests that they are clearly differentiating between the types of institutions. With the current social tension surrounding interactions between the law and minority youth, it is perhaps not surprising that youth of color have more negative attitudes about legal institutions. However, the current study indicates that these negative evaluations do not appear to be detrimentally affecting the way youth of color perceive other authorities.

Importantly, although the rank ordering and overall factor structure of youths' perceptions was largely consistent between 2006 and 2016, youths' perceptions of most institutions were, in fact, worse in 2016. Youths' perceptions of law enforcement, justice system, and religious organizations were significantly lower in 2016 than they were in 2006, though the effect sizes were small and the differences amounted to between .09 and .12 standard deviations. These findings indicate that compared to 2006, youths' perceptions of authority in general were significantly worse in 2016, but the modest effect sizes indicate that the differences are small.

Indeed, when data for law enforcement are specifically analyzed across the decades, the current study illustrates quite clearly that from 1976 to 2016, cohorts of high school seniors have held different opinions about how well law enforcement agents are doing their job. As expected, there are numerous small fluctuations in cohorts' opinions. However, the present study uncovers several larger trends. First, both White and non-White youth surveyed at the beginning of the 1990s reported more positive views of law enforcement than those surveyed in the mid-1990s. A similar decline in perceptions of law enforcement is seen in most recent years. Importantly, across nearly all years of the current study, White youths held the most positive views of law enforcement, followed by Hispanic youths, then Black youths.

Several of the current findings resonate with the existing literature, whereas others provide important additions. First, previous work has consistently shown that compared to non-White youths, White youths hold more positive views of law enforcement, perceiving police to be more legitimate, just, and effective. The current study adds additional support for this notion by showing that for the past 40 years, the racial/ethnic discrepancy in youths' perceptions of law enforcement has been largely consistent. However, the current work provides nuance to this gross finding by illustrating that the degree of this discrepancy has varied over the decades. That is, depending on the year and thus historical climate and events, the discrepancy in non-White and White youths' perceptions of law enforcement has been enhanced or minimized. This provides evidence that youths' perceptions of law enforcement are dynamic, interacting with and being shaped by historical factors that can either promote or deter similar perceptions of law enforcement across racial/ethnic groups. In the same vein, while previous work has identified individual-level factors—such as one's own experiences with law enforcement or a friend's experience with law enforcement—that shape perceptions of police, the current study provides

evidence of national trends in youths' perceptions. The current study's findings provide evidence that even on a national level, both changes within racial/ethnic groups and differences between racial/ethnic groups are observable regarding youths' perceptions of law enforcement.

Further, the current study provides novel evidence that over the past 40 years, non-White youths' perceptions of law enforcement appear to be more easily influenced or malleable in that they demonstrate a larger magnitude of change from year to year. In comparison, White youths' perceptions of law enforcement reflect less drastic change, remaining more consistently positive. This may suggest that the perceptions of non-White youth are more strongly affected by changes in policing practices. Although tentative, this may indicate that policies and protocols that influence police-community interactions (in both positive and negative ways) could have stronger impacts in non-White compared to White communities, thus explaining non-White youths' more volatile perceptions of law enforcement. This is hopeful in the sense that "good" police practices may have the potential to drastically improve non-White youths' perceptions of law enforcement in a short period of time—a trend the data depict during the late 1990's and early 2000's. On the other hand, and consistent with previous work, this also suggests that "bad" law enforcement practices may have especially detrimental effects among non-White youth.

Despite its strengths, the current study has several limitations. Primarily, a single item was used to measure perceptions of authorities. While single-item measures can still provide reliable and valid information, the single-item measure of youths' perceptions of authorities may not be capturing the full range of ways adolescents' could evaluate the authorities, such as perceived trustworthiness or fairness. For instance, according to social domain theory, individuals utilize various domains of social knowledge (e.g., moral domain; conventional domain) to judge behaviors, rules, and institutions (Turiel, 1983). Thus far, the majority of

research on social domain theory has focused on adolescents' reasoning about rules established by parents (see Oosterhoff & Metzger, 2017) though some studies have expanded to sociopolitical values and civic engagement (Metzger, Oosterhoff, Palmer, & Ferris, 2014). Using a multi-item measure of perceptions of authorities may yield a more complete profile of youths' perceptions and differentiate between various components (see Smetana & Villalobos, 2009; Turiel, 1983).

Further, as noted, the current study provides evidence that youths' perceptions of law enforcement are subject to time—youths' perceptions change on a yearly timescale. As argued, this provides support that youths' perceptions of law enforcement are likely shaped by historical contexts and current events. Nonetheless a limitation of the current study is an inability to decipher specifically which historical contexts and what current events are shaping youths' perceptions, and why. One conceivable explanation for the decline in youths' perceptions during the early 1990s is the onset of the “super predator” era during which teenagers were portrayed and feared as criminal and incorrigible. A fruitful avenue for future research is to assess not only historical changes in youths' perceptions of law enforcement as the current study does, but to also assess youths' exposure to particular current events and their understanding and attitudes towards historical contexts. This could help to determine if these factors are predictive of youths' perceptions of law enforcement. While the current study does not directly test this relation, it provides a crucial first step illustrating that changes in youths' perceptions of law enforcement are observable across history.

Despite these limitations, the present study reveals several important findings. First, while youths' perceptions of law enforcement, the justice system, and religious organizations were worse in 2016 than they were in 2006, the way youth structured their perceptions of

authorities overall did not change. Whether the declining trends represent momentary deviations remains to be seen and is an important direction for future research. Second, while America's youths' perceptions of various authorities are positively correlated, youth view legal institutions and socio-cultural institutions distinctly. While there may be an "era of mistrust" in adolescents' perceptions of American law enforcement and the justice system (Trinkner & Tyler, 2016), such that across races/ethnicities, adolescents' perceptions of law enforcement recently declined to the lowest point in several decades, the present study makes it clear that America's youth do not exhibit a ubiquitous "anti-authority" attitude.

### **Study 3: Does the Association between Legitimacy and Delinquency Vary by Psychosocial Maturity?**

Adolescents who perceive the justice system negatively are at a higher risk of engaging in crime (Fagan & Tyler, 2005; Piquero et al., 2005) because they do not feel a responsibility to obey the laws set forth by a system they believe to be unjust and illegitimate (Beetham, 1991; Tyler, 1990; Sunshine & Tyler, 2003). In fact, perceptions of the justice system are associated with youth crime above and beyond other individual differences such as personality characteristics (Fagan & Tyler, 2005). While this procedural justice framework is supported by a number of studies, it can be improved by incorporating a developmental perspective, one that acknowledges how psychosocial immaturity affects adolescent behavior (Steinberg, 2008; Monahan, Steinberg, & Piquero, 2015). Irrespective of many other risk factors, youth who have difficulty controlling their behavior are at risk of engaging in crime (Caffman & Steinberg, 2000; Gottfredson & Hirschi, 1990). For instance, if a youth is psychosocially immature and unable to regulate his or her behavior, the youth's attitudes towards the justice system may not affect crime commission. That is, more than how positively a youth views the justice system, the youth's inability to regulate behavior likely drives crime involvement. The present study merges these two perspectives to determine whether psychosocial maturity moderates the effect of youths' justice system attitudes on reoffending.

#### **Developmental Perspective to Procedural Justice**

The procedural justice model posits that an individual's view of the justice system affects his or her likelihood of violating the law (Tyler & Huo, 2002). Considering that a fair and just system signals to citizens that legal authority is to be obeyed (Hinds, 2009; Tyler, 1990), one's sense of the justice system's legitimacy reflects a general orientation toward the social

responsibility to obey legal authority and the law (Kelman & Hamilton, 1989; Beetham, 1991). Individuals who perceive the justice system to be legitimate, therefore, should be more likely to obey the law (Tyler, 1990; Sunshine & Tyler, 2003). Conversely, individuals who view the justice system as less legitimate should feel more justified in breaking the law (Reisig, Wolfe, & Holtfreter, 2011; Sampson & Bartusch, 1998). Indeed, both adults (e.g., Fagan & Piquero, 2007; Reisig, Wolfe, & Holtfreter, 2011) and adolescents (e.g., Fagan & Tyler, 2005; Fine & Cauffman, 2015; Piquero et al., 2005) who perceive the justice system negatively commit more crime. While this procedural justice framework is supported by a number of studies, it can be improved by incorporating a developmental perspective, one that acknowledges how psychosocial immaturity affects adolescent behavior (Steinberg, 2008; Monahan, Steinberg, & Piquero, 2015).

Developmental theories posit that individuals who are psychosocially immature are likely to engage in crime (Monahan, Steinberg, Cauffman, & Mulvey, 2013). Steinberg and Cauffman (1996) put forth a model of psychosocial maturity that includes temperance (impulse control and suppression of aggression), perspective (consideration of others and future orientation), and responsibility (the ability to take personal responsibility for one's behavior and resist peer influences). The psychosocial maturity model specifically emphasizes those psychosocial factors that are relevant to decision making (Cauffman & Steinberg, 2000; Steinberg & Cauffman, 1996; p. 251), which align nicely with the factors Gottfredson and Hirschi (1990; p. 89) use to operationalize self-control: orientation toward the future (vs. immediate gratification), planning ahead (vs. impulsive behavior), physical restraint (vs. using aggression when frustrated), and concern for others (vs. self-centered behavior). Critically, irrespective of many other risk factors, youth who have difficulty controlling their behavior are at risk of engaging in crime (Cauffman



& Steinberg, 2000; Gottfredson & Hirschi, 1990). Indeed, youth who are more psychosocially mature desist from crime earlier (Monahan, Steinberg, Cauffman, & Mulvey, 2013; Ozkan, 2016), thus psychosocial maturity may underlie youth desistance from crime (Monahan et al., 2009).

Although researchers are beginning to consider that combinations of different risk factors contribute to adolescent behavior (Loeber et al., 1998; Schubert, Mulvey, & Pitzer, 2016), researchers have only begun to integrate the procedural justice and psychosocial maturity perspectives. In fact, only two studies have examined the effects of self-control and justice system attitudes on crime (Reisig, Tankebe, & Mesko, 2014; Reisig, Wolfe, & Holtfreter, 2011). These studies found that self-control and attitudes contributed independently to crime. While these findings are important, the present study makes four critical contributions. First, the prior studies were only able to assess self-control, rather than the higher-order psychosocial maturity construct. Although psychosocial maturity includes self-control, it has a broader developmental meaning (Steinberg & Cauffman, 1996). That is, although it assesses the ability to resist temptations in the moment, it is a broader developmental index that captures overall well-being, including socio-emotional competence and adaptive functioning (see Ozkan, 2016) with implications for being able to make mature decisions (Cauffman & Steinberg, 2000). Second, both prior studies were cross-sectional, which by definition prevented them from accounting for previous behavior when examining statistical predictors of future behavior. Third, the studies sampled American and Slovenian college students. While clearly commendable and important to conduct cross-national research, it is difficult to determine whether findings from college students generalize to other populations (see Reisig, Tankebe, & Mesko, 2014, p. 264; Reisig, Wolfe, & Holtfreter, 2011, p. 1277). It is critically important to examine these processes earlier

during late childhood and especially in adolescence, when attitudes towards the justice system begin to develop (Tyler & Trinkner, 2018). Finally and most importantly, the two studies tested whether self-control attenuated the association between attitudes and crime. Neither examined the potential for psychosocial maturity to moderate the effect of attitudes on criminal behavior.

This is an important omission, as youths' attitudes towards the justice system and psychosocial maturity likely inter-relate to affect youth offending in two ways. First, the legal socialization literature indicates that youth who view the justice system positively are less likely to engage in crime. However, psychosocially immature youth may engage in crime regardless of how positively they view the justice system. These youth are more reactive and impulsive, thus regardless of how positively they view the justice system, psychosocially immature youth may be prone to engage in crime if the opportunity presents itself. That is, it is possible that youths' attitudes about the justice system do not affect their crime involvement if they are simply unable to regulate their behavior. Second, consider that the behavior of psychosocially mature youth is less reactive and less impulsive. Among psychosocially mature youth, attitudes towards the justice system, then, are more likely to impact offending. In line with the procedural justice model, psychosocially mature youth who are better able to regulate their behavior might engage in crime precisely because they view the justice system negatively. Following this, among psychosocially mature youth, attending to the negative attitudes towards the justice system that some youth espouse may offer an important lever for reducing recidivism.

### **Present Study**

The present study extends the developmental literatures on legal socialization and psychosocial maturity in several notable ways. First, consistent with the overrepresentation of racial/ethnic minority youth in the juvenile justice system (Piquero, 2008), we use an

ethnically/racially diverse sample of first-time juvenile offenders from multiple states. This ensures that compared to a single-site study, findings will be more generalizable to the general population of youth involved in the justice system. Second, we investigate a key interaction between attitudes toward the justice system and psychosocial maturity. This integrates the legal socialization framework with the psychosocial maturity framework to illuminate the conditions under which attitudes may affect behavior. Previous studies have not yet integrated these two developmental perspectives. Third, because psychosocial maturity increases with age (Steinberg et al., 2008, 2009), we also examine a potential interactive effect between attitudes and age, as well as the three-way interaction between attitudes, psychosocial maturity, and age. These models provide a nuanced, developmental approach to identifying whether the interaction is specific to psychosocial maturity or chronological age, as well as whether the interactive effect between attitudes and psychosocial maturity changes throughout this period of adolescence. Finally, the present study uses a longitudinal design that allows us to test these interactive effects on later delinquent behavior while accounting for previous offending, thereby permitting us to better describe temporal associations.

First, it is hypothesized that psychosocially immature youth will engage in crime regardless of how positively they view the justice system. That is, youths' attitudes about the justice system will not affect their crime involvement if they are simply unable to regulate their behavior. Second, as would be expected within the procedural justice framework, negative perceptions of the justice system will be associated with reoffending among youth who are psychosocially mature. Youth who are better able to regulate their behavior might engage in crime precisely because they view the justice system negatively.

## Method

### Participants

The sample included 1,216 male juvenile offenders from the Crossroads Study, a longitudinal study that follows male adolescent offenders after their first official contact with the juvenile justice system. As a requirement to be eligible for the study, the youth had each been arrested for offenses of moderate severity, with the most frequent charges including vandalism (17.5%) and theft (16.7%). Youth were sampled from three sites: Philadelphia, Pennsylvania ( $N = 533$ ); Jefferson Parish, Louisiana ( $N = 151$ ); and Orange County, California ( $N = 532$ ). Three sites were used to ensure that, compared to a single-site study, findings would be more generalizable to the general population of youth involved in the justice system. The sample was racially and ethnically diverse: Latino/Hispanic (46%), Black/African American (37%), White (15%), and self-identified other (2%). Results of Little's test of missing completely at random indicated that data were missing completely at random ( $\chi^2(35) = 18.45, p = .990$ ; Little, 1992).

### Procedures

Signed parental consent and youth assent were obtained for all participants before interviews were conducted, and participants were both informed of the nature of the study and told there was no penalty for not participating. Youth completed an interview after the disposition hearing for their first arrest, as well as follow-up interviews approximately 6 and 12 months after their initial interview. Face-to-face interviews with the youth ranged from 2–3 hours and were documented using a secure, computer-administered program. Based on the sensitive nature of the sample, a Privacy Certificate was obtained from the Department of Justice, which protects participants' privacy by exempting their identity and responses from subpoenas, court orders, or other types of involuntary disclosures. Participants were given a

detailed explanation of the Certificate before beginning each interview and, importantly, were reminded again before sensitive questions, such as those about offending, were asked.

## Measures

**Attitudes towards the Justice System.** Tyler's measure of justice system legitimacy was used at baseline to assess how the youth perceived the justice system (Tyler; 1990; Tyler & Huo, 2002). Using a 5-point scale ranging from *Strongly Disagree* to *Strongly Agree*, youth 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 ( $M = 2.58$ ,  $SD = .54$ ,  $\alpha = .816$ ). As reviewed by Tyler and Jackson (2013), more legitimacy is associated with less offending.

**Psychosocial Maturity.** Psychosocial maturity consists of temperance, perspective, and responsibility (Steinberg & Cauffman, 1996). At baseline, as with previous research (Dmitrieva, Monahan, Cauffman, & Steinberg, 2012; Monahan, Steinberg, Cauffman, & Mulvey, 2013), the three aspects of psychosocial maturity were assessed using six sub-scales across four measures. Temperance included measures of impulse control and suppression of aggression; perspective included measures of consideration of others and future orientation; and responsibility included measures of personal responsibility and resistance to peer influence.

Three subscales of the Weinberger Adjustment Inventory (Weinberger & Schwartz, 1990) were used: impulse control (8 items; e.g., "I say the first thing that comes into my mind without thinking enough about it"), suppression of aggression (7 items; e.g., "People who get me angry better watch out"), and consideration of others (7 items e.g., "Doing things to help other

people is more important to me than almost anything else”). Participants assessed how accurately each statement matched their own behavior on a 5-point scale ranging from false to true.

The Future Outlook Inventory (Cauffman & Woolard, 1999) was used to assess youths’ future orientation. Participants were asked to rank the degree to which 8 statements (e.g., “I will keep working at difficult, boring tasks if I know they will help me get ahead later”) reflected how they usually act, on a scale of 1 (never true) to 4 (always true).

The Psychosocial Maturity Inventory (Greenberger, Josselson, Knerr, & Knerr, 1975) included a 30-item, reverse-scored subscale that assessed personal responsibility (e.g., “If something more interesting comes along, I will usually stop any work I’m doing”) on a 4-point scale ranging from strongly disagree to strongly agree.

The 10-item Resistance to Peer Influence (Steinberg & Monahan, 2007) measure assessed the degree to which adolescents acted autonomously in interactions with their peers. Participants were read two conflicting statements (e.g., “Some people go along with their friends just to keep their friends happy” and “Other people refuse to go along with what their friends want to do, even though they know it will make their friends unhappy”). They were then asked to choose the statement that most closely reflected their behavior, and then to rate the accuracy of the statement (i.e., “sort of true” or “really true”). Each item was scored on a 4-point scale.

As with previous research (Dmitrieva, Monahan, Cauffman, & Steinberg, 2012; Monahan, Steinberg, Cauffman, & Mulvey, 2013), each subscale was first z-scored and then the z-scores were mean-scored to create a composite index of psychosocial maturity. Higher scores indicate youth are more psychosocially mature ( $M = 0$ ,  $SD = .59$ ,  $range = -1.73, 1.68$ ;  $\alpha = .628$ ). Confirmatory factor analysis evaluated the structural validity of the psychosocial maturity construct, both the three first-order factors (i.e., temperance, responsibility, and perspective) and

the global psychosocial maturity factor. The confirmatory factor model had a good fit:  $\chi^2(6) = 27.62, p < .001$ ; CFI = .978, TLI = .944, RMSEA = .054 (.035, .076).

**Self-reported Offending.** Involvement in criminal behavior was assessed using the Self-Report of Offending (SRO; Huizinga, Esbensen, & Weiher, 1991). At baseline, participants reported if they had ever committed 24 different criminal acts (ranging in severity from selling drugs to homicide), each coded no or yes. Responses were summed to create a lifetime variety score prior to baseline ( $M = 3.68, SD = 3.22, Range = 0, 19$ ). This indicated the number of different types of crimes the youth had ever committed prior to their index arrest. Variety scores are widely used in criminological research because they are highly correlated with measures of seriousness and frequency of antisocial behavior (see Monahan & Piquero, 2009), yet are less subject to recall bias than are self-reports of frequency of antisocial behavior (see Osgood, McMorris, & Potenza, 2002). Thus, the variety score approach is the preferred method for summarizing individual criminal offending because it takes into account heterogeneity in crime types and gives more weight to more serious behaviors (Sweeten, 2012).

During each subsequent six-month recall period, youth were asked if they had committed any of the 24 offenses. We calculated a reoffending variety score assessing the variety of offenses committed during the following twelve months ( $M = 2.13, SD = 2.93, Range = 0, 18$ ). This variable assesses the variety of crimes committed across the following twelve months, though it is important to note that analyses remain consistent if we use a shorter 6-month reoffending interval.

**Covariates.** At baseline, youth self-reported general demographic information, including their age ( $M = 15.4, SD = 1.3$ ) and race. Youth also reported on the highest level of education that their parents had received, which was used as a proxy for socioeconomic status (SES;

Galobardes, Lynch, & Smith, 2007). Prior research supports its validity for assessing SES in adolescents (Lien, Friestad, & Klepp, 2001). Education has been called “perhaps the most fundamental aspect of SES” because it has broad effects across multiple domains of life (APA, 2007). Nonetheless, education is an imperfect measure of SES. A more robust approach would be to assess different dimensions of SES, such as income and occupation, and determine how each dimension contributes to the outcome (APA, 2007; pg 11). While it would clearly be desirable to do so, unfortunately the present data precluded assessing different dimensions of SES. Considering the effects of education are discontinuous, such that larger effects are found when degrees are conferred (Backlund, Sorlie, & Johnson, 1999), the variable was coded into three categories: youth who had at least one parent who had not graduated from high school (29.5%); youth who had at least one parent graduate from high school (32.6%); and youth who had at least one parent with education beyond a high school diploma (37.9%). The Wechsler Abbreviated Scale of Intelligence (Wechsler, 1999) was administered at baseline. A full-scale IQ estimate ( $M = 88.4$ ,  $SD = 11.7$ ) was created by combining scores from the verbal ability scale and matrix reasoning. Because intelligence is related to both delinquency and self-control (Loeber et al., 2012; White et al., 1994), IQ was used as a covariate in all analyses.

**Measurement Equivalence.** Measurement equivalence is an important issue in any study that contains persons of different races/ethnicities and socioeconomic status. We tested our key measures (e.g., legitimacy, psychosocial maturity) across racial/ethnic and SES categorizations and found that measures were consistent across all groups. For example, confirmatory factor analysis models for psychosocial maturity were consistent across SES categorizations (CFI's > .96; SMSR's < .03).

### **Analytic Plan**



Zero-order correlations were first calculated to examine the associations among the key study variables (Table 8). These were followed by negative binomial regression analyses to determine which independent variables contributed independently to the prediction of reoffending and to test three interactive effects: interaction between psychosocial maturity and attitudes; the interaction between age and attitudes; and the three-way interaction between psychosocial maturity, age, and attitudes. Because self-reported offending is a count variable with a skewed distribution, ordinary least squares regression (OLS) would not have been an appropriate method (Long & Freese, 2003). Negative binomial regression has several advantages over OLS regression and Poisson regression because it is suited for analyzing skewed dependent variables, over-dispersed data (i.e., variance of the dependent variable exceeds its mean), and data where there are a large number of “0” values for the dependent variable, as is the case in this study. Because negative binomial regression assumes a skewed distribution for the dependent variable, it is unnecessary to log the dependent variable. Results of likelihood-ratio tests indicated that the negative binomial regression was more appropriate than the traditional Poisson model in each instance. Site was used as a covariate because three groups are too few to adequately cluster the data (Maas & Hox, 2005). All models accounted for youth age, IQ, parental education (categorical with less than a high school diploma as the comparison group), site (categorical with California as the reference group), race (categorical with White youth as the comparison group), and lifetime self-reported offending. The results are consistent if we use parental education as a continuous variable or change the reference group, if we change the reference group for site, and if we either switch the reference group or recode the race variable into three categories (e.g., White, Black, or Latino).

**Table 8. Zero-Order Correlations among Main Study Variables**

Variable	1	2	3	4	5
1 Age	–				
2 IQ	0.06	–			
3 Psychosocial Maturity	0.12***	0.13***	–		
4 Legitimacy	-0.11***	0.01	0.28***	–	
5 Self-Reported Offending at Baseline	0.17***	0.09**	-0.36***	-0.34***	–
6 Self-Reported Offending in Next Year	0.02	<0.01	-0.31***	-0.24***	0.57**

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

### Results

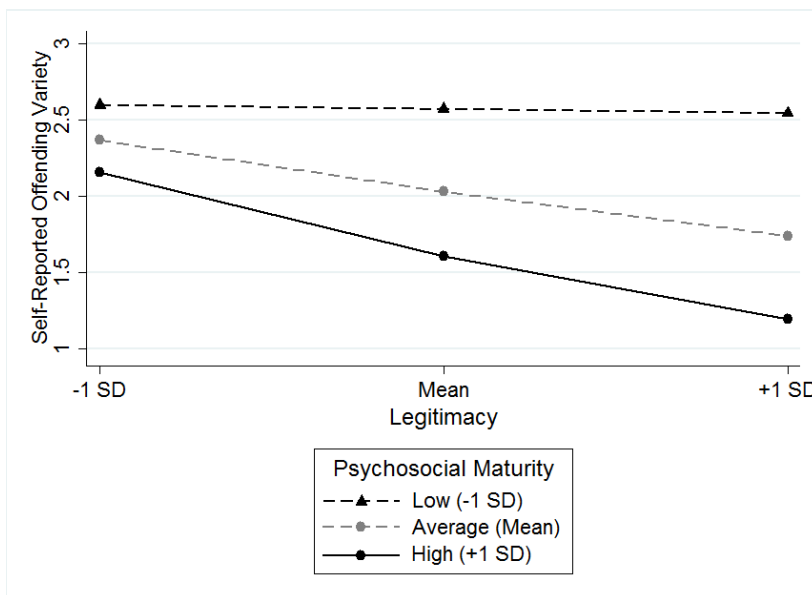
The results of the first negative binomial regression indicate that both attitudes toward the justice system and psychosocial maturity were independently associated with youth reoffending (Table 9). The interaction between youth attitudes and psychosocial maturity was added in the second model. Results indicated that the interaction was significant (Figure 1;  $IRR = .64$ ,  $SE = .08$ ,  $p < .001$ ,  $95\% CI = .51, .82$ ). Results of simple slopes analyses indicated that among psychosocially immature youth (-1 SD), attitudes towards the justice system were not associated with reoffending ( $dydx = -.04$ ,  $SE = .26$ ,  $p = .854$ ,  $95\% CI = -.55, .46$ ). Among youth with moderate psychosocial maturity (mean) ( $dydx = -.59$ ,  $SE = .17$ ,  $p < .001$ ,  $95\% CI = -.92, -.26$ ) or high psychosocial maturity (+1 SD) ( $dydx = -1.43$ ,  $SE = .24$ ,  $p < .001$ ,  $95\% CI = -1.43, -.51$ ), more positive attitudes towards the justice system were associated with less reoffending.

The next model tested the interaction between attitudes and chronological age in order to determine whether the effect of legitimacy varied by developmental level or merely by age. The interaction between attitudes and age was not significant ( $IRR = 1.01$ ,  $SE = .05$ ,  $p = .998$ ,  $95\% CI = .90, 1.11$ ), indicating that the effect of legitimacy attitudes on reoffending did not vary by age.

The final model tested the three-way interaction between attitudes, psychosocial maturity, and age. The interaction term was not significant ( $IRR = .92, SE = .09, p = .388, 95\% CI = .91, 1.11$ ), indicating that the interactive effect between legitimacy and psychosocial maturity did not vary by chronological age. It appears as though the associations between psychosocial maturity, legitimacy, and reoffending are consistent across this period of adolescence.

The model was replicated for all three sub-dimensions of psychosocial maturity: temperance ( $IRR = .73, SE = .06, p < .001, 95\% CI = .62, .86$ ); perspective ( $IRR = .83, SE = .07, p = .017, 95\% CI = .71, .97$ ); and responsibility ( $IRR = .77, SE = .07, p = .003, 95\% CI = .65, .91$ ). This indicates that attitudes towards the justice system interact with each psychosocial maturity sub-dimension to affect recidivism, such that no specific sub-dimension is driving the association of the higher-order psychosocial maturity construct.

**Figure 9 Interaction of Youth Psychosocial Maturity and Legitimacy Attitudes Predicting Self-Reported Offending in the Following Year**



**Table 9. Negative Binomial Regressions for Predicting Self-Reported Offending in the Following Year**

	Model 1				Model 2				Model 3				
	IRR <sup>a</sup>	SE	95% CI		IRR	SE	95% CI		IRR	SE	95% CI		
Race <sup>b</sup>													
Black	0.87	0.1	0.6	1.1	0.87	0.1	0.6	1.1	0.87	0.1	0.6	1.1	
		2	6	3		2	7	3		2	6	3	
Latino	0.86	0.1	0.6	1.0	0.86	0.1	0.6	1.0	0.86	0.1	0.6	1.0	
		0	8	9		0	8	8		0	8	9	
Other	0.77	0.1	0.4	1.2	0.78	0.1	0.4	1.2	0.77	0.1	0.4	1.2	
		9	8	5		9	8	7		9	8	5	
Site <sup>c</sup>													
Louisiana	0.76 <sup>+</sup>	0.1	0.5	1.0	0.76*	0.1	0.5	0.9	0.76 <sup>+</sup>	0.1	0.5	1.0	
		1	8	1		1	8	9		1	8	1	
Pennsylvania	0.91	0.1	0.7	1.1	0.91	0.1	0.7	1.1	0.91	0.1	0.7	1.1	
		0	3	2		0	4	3		0	3	3	
Parental Education <sup>d</sup>													
High School Graduate	0.98	0.1	0.8	1.1	0.99	0.1	0.8	1.2	0.98	0.1	0.8	1.1	
		0	0	9		0	1	0		0	0	9	
More than High School Education	0.99	0.1	0.8	1.2	0.99	0.1	0.8	1.2	0.98	0.1	0.8	1.2	
		0	1	0		0	1	1		0	1	0	
Lifetime Offending	1.17**	0.0	1.1	1.2	1.17**	0.0	1.1	1.2	1.17**	0.0	1.1	1.2	
	*	1	4	0	*	1	4	0	*	1	4	0	
IQ	1.00	0.0	0.9	1.0	1.00	0.0	0.9	1.0	1.00	0.0	0.9	1.0	
		1	9	0		1	9	0		1	9	1	
Age	0.93*	0.0	0.8	0.9	0.93*	0.0	0.8	0.9	0.93*	0.0	0.8	0.9	
		3	7	9		3	7	9		3	7	9	
Legitimacy	0.77**	0.0	0.6	0.8	0.76**	0.0	0.6	0.8	0.77 <sup>+</sup>	0.1	0.5	1.0	
		6	6	9	*	6	5	8		1	8	1	
Psychosocial Maturity	0.68**	0.0	0.5	0.7	0.67**	0.0	0.5	0.7	0.68**	0.0	0.5	0.7	
	*	5	9	9	*	5	8	8	*	5	9	9	
Legitimacy x Psychosocial Maturity					0.64**	0.0	0.5	0.8					
					*	8	1	2					
Legitimacy x Age									1.01	0.0	0.9	1.1	
										5	0	1	
LR $\chi^2$		317.55***					330.93***					317.55***	
$R^2_{Pseudo}$		.09					.10					.09	

<sup>a</sup>IRR: Incidence-rate ratios. <sup>b</sup>Comparison group is White. <sup>c</sup>Comparison group is California. <sup>d</sup>Comparison group is “did not graduate from high school”.

<sup>+</sup> $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

## Discussion

It has long been understood that legal socialization largely occurs during adolescence and that youths' attitudes towards the justice system are associated with the likelihood of violating the law (see Tyler, 1990; Tyler & Trinkner, 2018). Within this perspective, one's attitudes towards the justice system reflect that person's general orientation to obey the law. Indeed, consistent with the literature using a mixture of sampling frames (Fagan & Tyler, 2005; Piquero et al., 2005), this study finds that youth who perceive the system negatively commit more crime than youth who perceive the system more positively.

At the same time, it is well-established that adolescence is critically important for the development of psychosocial maturity. Consistent with the literature (Cauffman & Steinberg, 2000; Monahan, Steinberg, Cauffman, & Mulvey, 2013), the results indicated that psychosocially immature youth engage in more crime than youth who are more psychosocially mature. Previous cross-sectional research has established that both attitudes and aspects of psychosocial maturity are each associated with crime commission among young adults (Reisig, Tankebe, & Mesko, 2014; Reisig, Wolfe, & Holtfreter, 2011). While these findings are critical, the present study builds on this literature through testing, for the first time, a key interaction between justice system attitudes and psychosocial maturity and assessing its longitudinal effects on subsequent criminal behavior even after accounting for prior behavior.

The present study extends the literature by considering a key nexus between attitudes towards the justice system and psychosocial maturity. Although our findings are based on a sample of adolescent offenders, largely because the group of youth is at great risk of offending, there are several important implications for research on developmental theory on legal socialization, especially as it pertains to children and adolescents who have historically been

neglected in this line of work (see Tyler & Trinkner, 2001). As recently noted by Tyler and Trinkner (2001), throughout childhood and adolescence, individuals begin to develop their attitudes towards and perceptions of authorities. During childhood, interactions with authority figures are largely limited to parents, siblings, and teachers. However, during adolescence, youth become more likely to interact with justice system authorities. As a result, it is largely during this developmental period that attitudes towards legal authorities and institutions develop.

Understanding adolescent legal socialization is critically important considering that early legal socialization can act as a “lens” through which adolescents interpret experiences with legal authorities not only during adolescence, but also during adulthood. That is, legal socialization during earlier years can establish expectations about the behavior of legal authorities and institutions, setting the tone and tenor for their future interactions with authorities and perceptions of the institutions (Cohn & White, 1990; Tapp & Levine, 1974). The legal socialization literature suggests that justice system attitudes develop as a function of both developmental processes and experience that primarily occur during childhood and adolescence (Fagan & Tyler, 2005; Fagan & Piquero, 2007; Tyler & Trinkner, 2018).

At the same time, a largely separate literature indicates that adolescence is a developmental period marked by dramatic growth in psychosocial maturity. Steinberg and Cauffman (1996) suggest that three aspects of psychosocial maturity (temperance, perspective, and responsibility) follow a developmental progression throughout adolescence. Whereas self-control assesses the ability to suppress impulses, the three aspects of psychosocial maturity affect the more global ability to make mature judgements (Cauffman & Steinberg, 2000). Research indicates that although psychosocial maturity develops during adolescence, psychosocially

immature youth are prone to engage in crime (Cauffman & Steinberg, 2000; Monahan et al., 2013; Monahan et al., 2009; Ozkan, 2016).

From the legal socialization framework and the psychosocial maturity perspective, then, adolescence is a critically important developmental epoch for both attitudes towards the justice system and psychosocial maturity because these experiences and eventual attitudes are what mark how these children interpret the law and its legal actors in adulthood (Tyler & Trinkner, 2018). The present study merges both perspectives to examine whether psychosocial maturity might moderate the effect of justice system attitudes on adolescent crime. The results demonstrated that psychosocial maturity moderated the effect of attitudes towards the justice system on youth reoffending during the one year following their first arrest. The results indicate that an important developmental process occurs among youth with average or positive attitudes towards the justice system. The procedural justice model posits that youth with more positive attitudes would offend less. However, crucially, the results of this study indicate that psychosocially immature youth are more likely to engage in crime regardless of how positively they view the justice system. Even after accounting for youths' previous offending, among psychosocially immature youth, perceptions of the justice system were not associated with reoffending. In this light, these findings demonstrate the importance of incorporating a developmental perspective in understanding how youths' attitudes towards the justice system affect their behavior. The findings suggest that psychosocial immaturity is crucially important.

At the same time, attitudes towards the justice system were associated with reoffending among youth with moderate or high psychosocial maturity. That is, even after accounting for their prior offending, among youth who were either moderately or highly psychosocially mature, more positive attitudes towards the justice system were associated with less reoffending, and

more negative attitudes were associated with more reoffending. One's sense of legitimacy reflects a general orientation toward the social responsibility to obey legal authority (Kelman & Hamilton, 1989; Beetham, 1991), yet even if a youth perceives the justice system positively, such attitudes appear to only matter if the youth is more psychosocially mature. These findings demonstrate the value of incorporating the psychosocial maturity perspective into the legal socialization framework.

Among the strengths of this study were its methodological and analytical approaches. First, all participants in our study were first-time offenders, enabling us to examine these relations following their first arrest. This is a particularly policy-relevant group of adolescents, as they are just now coming to the attention of the justice system for the first time. Identifying the processes and mechanisms that might reduce youth crime early in their justice system experiences is particularly important (see Tyler and Trinkner, 2017; Chapter 9).

Second, methodologically, the study provided a nuanced, developmental approach to identifying whether the effects of attitudes on youth reoffending varied specifically by psychosocial maturity, by chronological age, or by both. Although the limited age range (13-17) in the present sample clearly limits the generalizability of this conclusion, this finding illustrates the importance of psychosocial maturity, versus chronological age, in applying the procedural justice model developmentally. This is a particularly important finding because it offers one of the first sets of empirical data that speaks directly to Tyler and Trinkner's (2017, p. 50) question about whether "individuals [are] more or less open to change during particular developmental periods." Although future research should use a substantially larger age range across the life course, these findings suggest that processes that may not vary by age may, in fact, vary by developmental stage.



Despite these strengths, the study was limited in important ways. Although we probed interactions with the offenders' ages, due to the study design, the span was limited to ages 13 to 17. Future research would benefit from examining potential interactions across the life span, or at the very least across childhood and young adulthood. Second, the sample was limited to low-level male offenders. Subsequent research should be conducted using more serious, felony-level, or repeat offenders, as well as general population non-offenders. Further, additional research is necessary to examine whether our results generalize to female youth involved in the justice system. For instance, there are some differences in the developmental trajectories of psychosocial maturity among females (Shulman, Harden, Chein, & Steinberg, 2014). Replications of these analyses using more diverse offender samples are important directions for future research. Fourth, it is possible that psychosocial maturity may affect legal socialization, or even vice versa (Reisig, Tankebe, & Mesko, 2012; Wolfe, McLean, & Pratt, 2016). For instance, it is entirely plausible that psychosocially immature youth elicit negative responses from legal authorities, which in turn may affect youths' perceptions of legitimacy (see e.g., Piquero, Gomez-Smith, & Langton, 2004).

In light of these limitations, potential policy proscriptions could focus both on the individual as well as agents of the criminal justice system. With respect to the former, there is a growing base of evidence showing that interventions aimed at improving aspects of psychosocial maturity are not only effective at leading to gains in psychosocial maturity, but are also related to lower delinquency and crime (see Piquero et al., 2016). Additionally, as psychosocially immature youth were most likely to commit crimes regardless of attitudes toward the justice system, interventions targeting the temperance, perspective, and responsibility components of psychosocial maturity figure prominently. One specific evidence-based intervention seemingly

designed to address said components is Aggression Replacement Training (ART; Goldstein, Glick, & Gibbs, 1998). ART has been demonstrated to reduce reoffending by 8.3% with a financial benefit of \$23,015 per participant (Drake, Aos, & Miller, 2009). ART contains social skills training designed specifically to assist youth with slowing reactions to situations, to stop and weigh behavioral alternatives, and to choose the most prosocial one (potentially addressing the impulsivity/self-control component of psychosocial maturity). It also includes anger control training, which focuses on the aggression reduction component of psychosocial maturity. Finally, the moral reasoning component focuses on teaching perspective-taking and empathy. Future work would benefit from assessing changes in psychosocial maturity among ART participants to further the evidence-base of this intervention.

At the same time, it is important to note that the findings of this study should not be used to do away with interventions aimed to improve youths' perceptions of the justice system. These interventions are crucial, as perceptions of the justice system and its officials are critically important not only for crime commission, but also for crime reporting (see Murphy, 2015). There is a growing, evidence-based literature with respect to interventions aimed at police-led interventions that use procedurally-just dialogues centered on improving the perceptions that citizens have regarding police legitimacy (Mazerolle et al., 2013). Similar to psychosocial maturity interventions, these efforts may reduce youth offending. Considering this is the first study to test this interaction between attitudes and psychosocial maturity, replications are critically important and policy recommendations must be tempered. Yet, the results of this study indicate that individual differences in both psychosocial maturity and attitudes must be considered simultaneously. Efforts on *both* of these developmental fronts – that is, psychosocial

maturity and attitudes towards the justice system – are critical for not just improving adolescents’ interactions with the system, but for reducing adolescent crime.

#### **Study 4: Developmental Correlates of Youths' Perceptions of the Law**

Legal socialization is the normative, socio-cognitive process through which individuals develop their attitudes towards law, the institutions that create law, the authorities that enforce law, and their obligation to obey law (Cohn et al., 2012; Trinkner & Cohn, 2014; Tyler & Trinkner, 2018). From a developmental perspective, it is well-established that parents influence their children's attitudes across a wide variety of domains (Maccoby & Martin, 1983; Maccoby, 1992), including delinquency (Orpinas, Murray, & Kelder, 1999; Copeland-Linder, Jones, Haynie, Simons-Morton, Wright, & Cheng, 2007). The development of youths' attitudes towards law is a critical component of public safety and crime desistence, particularly considering that both delinquency (Hirschi & Gottfredson, 1983; Moffitt, 1993; Sweeten, Piquero, & Steinberg, 2013) and risk-taking (Duell et al., 2018) peak during adolescence. Yet, to date, only a handful of studies have directly examined parents as a mechanism of their adolescent's legal socialization (e.g., Cavanagh & Cauffman, 2015; Wolfe, McLean, & Pratt, 2016). Further, virtually none have focused on adolescents' obligation to obey the law in particular despite the consensus that at its core, "The goal of legal socialization is to instill in people a felt obligation or responsibility to follow laws" (Tyler & Trinkner, 2018, pg. 3). To address this deficit, the present study employs a sample of 117 parent-youth dyads in California to: 1) assess rule orientation (i.e., the degree to which individuals feel obligated to obey the law) among adolescents; and 2) address whether adolescent rule orientation is socialized via parents' rule orientation.

#### **Legal Socialization**

A wealth of developmental psychological literature provides evidence that parents shape their children's attitudes and behaviors across a diverse array of domains, including political

beliefs (Gidengil, Wass, & Valaste, 2016), religious beliefs (Pearce & Thornton, 2007), race and culture (Saleem et al., 2016; Wang & Benner, 2016), moral values (Smetana, 1999; Smetana, Crean, & Campione-Barr, 2005; Malti & Buchmann, 2010), conflict resolution (Missotten, Luyckx, Branje, & Van Petegem, 2018), partner violence (Liu, Mumford, & Taylor, 2018), and antisocial behavior (Orpinas, Murray, & Kelder, 1999; Copeland-Linder et al., 2007; Thornberry, 2005; Thornberry et al., 2009). Indeed, the effect of parent-child intergenerational attitude transmission increases as children age and is particularly strong during adolescence (see meta-analysis by Degner & Dalege, 2013).

To date, however, only a handful of studies have directly examined parents as a mechanism of their adolescent's *legal* socialization (see Tyler & Trinkner, 2018). Legal socialization is the process through which individuals develop their understanding of law within society, the authorities that create and enforce the law, and their obligation to obey the law (Cohn et al., 2012; Trinkner & Cohn, 2014). The few studies on adolescent legal socialization demonstrate that adolescents in the justice system adopt their parents' attitudes toward the justice system more generally (Cavanagh & Cauffman, 2015; Wolfe, McLean, & Pratt, 2016), such that parents who view the justice system as less legitimate generally have youth who also feel the justice system is less legitimate.

Although these studies indicate intergenerational transmission may play an important role in broader legal socialization, perceptions of the justice system's legitimacy is a single aspect of legal socialization. The broader construct critically includes youths' obligation to obey the law, which may be the mechanism through which justice system legitimacy actually affects delinquency (see Tyler, 1990; Tyler & Huo, 2002). Further, these studies focused exclusively on youth in the juvenile justice system, who may differ from youth in the community in important

ways. In fact, as no study has examined how parents may affect adolescents' perceptions of law and obligation to obey the law, we lack a developmental understanding of intergenerational transmission of the obligation to obey the law.

Following from Tapp's seminal work (1976; Tapp & Levine, 1974), the legal socialization literature has long recognized that adolescence is a critical period for the development of perceptions of rules and laws (see Cohn, Bucolo, Rebellon, & Van Gundy, 2010; Cohn & White, 1990). During childhood, individuals exhibit an obedience-based perspective, wherein laws and rules are perceived more as immutable forces that must simply be obeyed. Grounded in classic developmental theories of cognitive development (Piaget, 1932/1965) and moral reasoning (Kohlberg, 1963; Tapp & Kohlberg, 1971), the legal socialization literature suggests that as a result of cognitive development that occurs from childhood into adolescence, adolescents become increasingly able to think abstractly (Tapp & Levine, 1974), to consider and to use others' perspectives to guide decision making (Dumontheil, Apperly, & Blakemore, 2010), to empathize with others (Allemand, Steiger, & Fend, 2014), and to engage in hypothetical thinking (Piaget, 1972/2008). This improvement in cognitive development and the ability to think abstractly permits youth to develop increasingly complex conceptions of rules and laws (see Cohn et al., 2010; Cohn et al., 2012). Through these developments, adolescents are expected to become more subjective in their view of society's rules and, theoretically, begin to acknowledge situations in which such rules do not align with their individual moral code (Kohlberg, 1963). That is, the simplistic focus on rule obedience that exists during childhood may begin to shift towards complexity as a result of emerging understanding and consideration of justice, fairness, and complexity during adolescence. Indeed, evidence suggests that

adolescence is a critical time for legal socialization considering that attitudes and perceptions are still being formed (see Augustyn, 2016).

Central to the cognitive developmental approach to legal reasoning and legal socialization is identifying the mechanisms that affect why youth might feel obligated to obey the law (see Tyler & Trinkner, 2018). Indeed, recent reviews of the broad array of the social, criminological, and developmental psychology literatures on legal socialization, crime, and delinquency have identified core mechanisms that affect whether one feels obligated to obey the law and whether one is likely to violate the law (see Feldman, 2011; Fine et al., 2016; Cauffman, Feldman, Jensen, & Arnett, 2000). First, from the robust procedural justice literature, it has become clear that personal and vicarious experiences with justice system actors play an important role in shaping perceptions of law and legal actors (Fagan & Piquero, 2007; Fagan & Tyler, 2005; Piquero et al., 2005). Those who feel as though they were treated unjustly or who believe the law is enforced unfairly are more likely to develop negative perceptions of the law, and, in turn, to feel less obligated to obey it (Tyler & Huo, 2002; Peffley & Hurtwitz, 2010; Sunshine & Tyler, 2003; Tyler, 1990). Indeed, this procedural justice framework has dominated the modern legal socialization field (see Tyler & Trinkner, 2018).

Second, the morality literature indicates that individuals might violate the law if the law opposes their personal moral beliefs and preferences (e.g., Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Gini, Pozzoli, & Hymel, 2014; Shalvi, Gino, Barkan, & Ayal, 2015). That is, adolescents who feel as though the law contrasts with their moral views may feel less obligated to obey the law and may be more likely to engage in delinquency. Third, individuals are simply unable to obey the law if they neither know nor understand the law (e.g., Nielsen & Parker, 2012; Vandenberg, 2003; Winter & May, 2001). Unfortunately, there is evidence that parents

(Cavanagh & Cauffman, 2017; Cleary & Warner, 2017) and youth generally have limited understanding and knowledge of the law (Goodwin-De Faria & Marinos, 2012; Redlich, Silverman, & Steiner, 2003; Flin, Stevenson, & Davies, 1989). Knowing and understanding the law are critically important for affecting the obligation to obey the law.

Fourth, deterrence theory suggests that when individuals decide whether to commit a crime, they calculate both the perceived costs and benefits of crime (e.g., Becker, 1968; Bentham, 1988; Beccaria, 1986). The ratio of the costs of committing the crime to its benefits affects whether individuals feel obligated to obey the law and are likely to violate the law. Indeed, research suggests that if the perceived benefits of committing the crime outweigh the costs of getting apprehended and punished, violation is likely to occur (Decker, Wright, & Logie, 1993; Apel & Nagin, 2017).

Finally, individuals are likely to engage in crime when social norms support breaking the law (e.g., Cialdini, 2007; Cialdini & Trost, 1998; Feldman & Harel, 2008; Tankard & Paluck, 2016). Individuals who see others violate the law, know that others violate the law, or merely believe that others would approve of them breaking the law feel less obligated to obey the law and are themselves more likely to violate the law (Cialdini et al., 1991; Keizer, Lindenberg, & Steg, 2008; Schultz, Khazian, & Zaleski, 2008). Indeed, the power of social, particularly peer, influence on delinquency is especially salient during adolescence (see Dishion, Spracklen, Andrews, & Patterson, 1996; Gardner & Steinberg, 2005; Mowen & Boman, 2018; Wolff & Crockett, 2011).

### **Rule Orientation**

The constellation of these factors, including procedural justice, moral alignment, legal knowledge, deterrence, and social norms, should play a significant role in the developmental



understanding of why adolescents feel obligated to obey the law and why they might engage in delinquency. For instance, it is intuitive that when adolescents believe that laws are not enforced or when their peers regularly engage in delinquency, they might feel less obligated to obey the law. Nonetheless, even when laws are not enforced and even when their peers regularly engage in delinquency, some individuals still feel obligated to obey the law and continue to obey the law. That is, even when the core mechanisms that might reduce the obligation to obey the law are present (e.g., the law is not being enforced; the law is being enforced unfairly; the law contrasts one's moral view; social norms support law violation), there is variation in the extent to which individuals deem it acceptable to violate the law.

Following these insights, Fine and colleagues developed "rule orientation" to assess the degree to which individuals feel obligated to obey the law even when the circumstances that promote delinquency and law violation are present (Fine et al., 2016, 2017). Rule orientation intentionally provides a spectrum where both ends represent individuals who think about their obligation to obey the law in more absolute terms. The low end of the rule orientation spectrum includes individuals who possess a cynical view of the law (see Srole, 1956; Sampson & Bartusch, 1998; Piquero et al., 2005). Youth with low rule orientation believe that they are not obligated to obey the law. The middle section includes individuals who accept some degree of circumstances under which it would be acceptable to violate the law. That is, youth who are moderately rule oriented would deem it sometimes acceptable to engage in delinquency. Finally, the high end of the spectrum represents individuals who feel obligated to obey the law even when the circumstances that generally promote delinquency and law violation are present. That is, youth who are highly rule oriented would feel obligated to obey the law even when known

situations that promote delinquency (e.g., law is not enforced, peers engage in delinquency) are present.

Previous studies have shown that above and beyond known criminogenic risk factors, rule orientation is associated with the propensity to violate the law across a variety of crime vignettes (Fine et al., 2016), as well as with cheating for financial gain (Fine & van Rooij, 2017). In these studies, those who are less rule oriented endorse a greater number of hypothetical offenses and are more likely to engage in fraud to earn money. To date, however, only a handful of studies have assessed rule orientation, and all have focused exclusively on adults. It is critical, as part of a larger effort to further understand legal socialization, to examine how adolescents develop their perceptions of laws and whether parents might be a key socializing factor.

### **Present Study**

The present study draws from the developmental literature to test whether parents are a possible socializing mechanism for adolescents' rule orientation. In all, the present study is designed to be the first to: 1) assess rule orientation among adolescents; 2) examine whether youth rule orientation is linked to their parent's rule orientation; and 3) identify whether rule orientation declines during adolescence. It is hypothesized that youths' rule orientation will derive in large part from their parents' rule orientation. That is, parents who are more rule oriented will have adolescents who are more rule oriented, and inversely, parents who are less rule oriented will have youth who are less rule oriented. Further, considering the ability to think abstractly improves during adolescence (Tapp & Levine, 1974) and such growth theoretically enables youth to develop increasingly complex conceptions of rules and laws (see Cohn et al., 2010; Cohn et al., 2012), we expect that rule orientation will decline as youth age. That is,

compared with younger youth who are expected to be more rule oriented, older youth will be less rule oriented.

## Method

### Participants

The sample for the present study included 117 adolescent ( $M_{age} = 15.54$ ,  $SD = 1.32$ ) and parent ( $M_{age} = 47.02$ ,  $SD = 6.54$ ) dyads from California. Each dyad consisted of one parent and one youth. Youth and parent dyads were recruited from the community in southern California using both paper and electronic flyers. To be eligible, both the youth and their parent had to reside in the state of California, be fluent in English, and both (i.e., adolescent and one parent/legal guardian) had to participate in the study. The parent's participation was contingent on youth's participation in the study and vice versa. Youth participants were additionally required to be between the ages of 13-17 years at the time of the study. Each person could only participate in the study one time. Youth and their parents each received a \$10 gift card for participating. Study procedures were approved by the Institutional Review Board at the University of California, Irvine.

### Measures

**Demographic Covariates.** Youth and their parents self-reported general demographic information, including age and race. Youth were predominantly White (47.86%), followed by Asian (24.79%), Latino (18.80%), and self-identified Other race (8.55%). Similarly, parents were predominantly White (43.48%), followed by Asian (26.96%), Latino (19.13%), and self-identified other race (10.43%). Parents also reported on the highest level of education that they had received, which was used as a proxy for socioeconomic status (Galobardes, Lynch, & Smith, 2007; Lynch & Kaplan, 2000). Approximately 13.27% had a high school diploma or less,

15.93% had taken college classes, and 70.80% had a college diploma. As such, this constituted a highly educated sample. As it is possible that prior justice system contact may affect rule orientation, both youth and their parents were asked about prior justice system contact (e.g., past arrest). Only 5 of the parents and 2 of the youth had experienced an arrest.

**Rule Orientation.** Both youth and their parents completed the 12-item, self-reported Rule Orientation measure (RO; Fine, van Rooij, et al., 2016). The measure began with the following statement, “*It is acceptable for people to break a particular law or legal rule if:*”. Participants were then asked to indicate, on a seven-point Likert scale ranging from *strongly agree* to *strongly disagree*, the extent to which they agreed or disagreed with twelve subsequent statements (see Table 10). Items were reverse-scored such that higher scores would indicate more rule orientation. That is, an individual who scores low on RO accepts a wider variety of possible justifications for engaging in delinquency, and an individual who scores high on RO accepts fewer possible justifications for violating laws. Previous research has demonstrated divergent validity with established measures such as procedural justice and moral disengagement (Fine, van Rooij, et al., 2016).

### **Plan of Analysis**

To explore construct validity, a principal component factor analysis (PCFA) was conducted, including a scree plot (Clark & Watson, 1995; Floyd & Widaman, 1995). The PCFA model was repeated with varimax rotation and Kaiser normalization. Item-total correlations were also examined, and Cronbach’s alpha was calculated as an indicator of internal consistency. The RO scale was then analyzed for variation from the normal distribution. Finally, the effect of parents’ rule orientation on adolescents’ rule orientation was assessed using ordinary least squares (OLS) regression, net of the covariates: youth age, race (White coded 1, versus non-

White), and parental education (as a proxy for SES). Considering that prior justice system contact may affect rule orientation, parental arrest was included as a covariate in the final model. Youths' prior arrests were also included as a covariate. However, considering only one youth had been arrested, the results did not change when the variable was included or when analyses were repeated without that case. For parsimony, this variable was omitted from the models.

## **Results**

### **Factor Analyses**

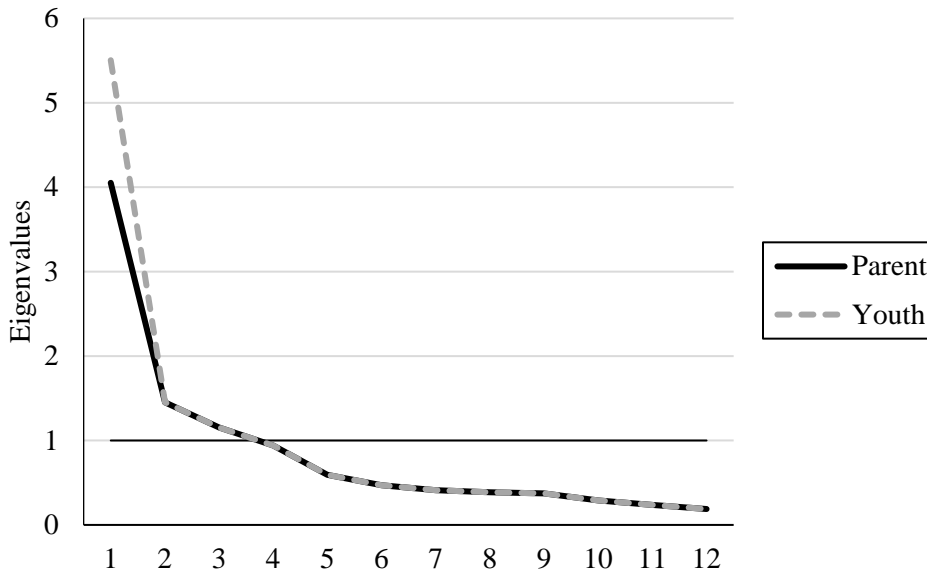
The sample size approximated the rule-of-thumb ratio of 10 observations to 1 variable (Costello & Osborne, 2005; Yong & Pearce, 2013). The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO; Kaiser, 1974) value (.84) confirmed that the sample size was appropriate for the factor analysis (see also de Winter, Dudou, & Wieringa, 2009). The data were absent multicollinearity and singularity (squared multiple correlations ranged from .48 to .65; Tabachnick & Fidell, 2007).

The results of the principal component factor analysis and scree plot using the parent data indicated that there were three Eigenvalues above the 1.0 threshold. The first eigenvalue was very large (5.51), indicating that the first factor accounted for 55.05% of the variance. All items loaded strongly onto the first factor (values ranged from .53 to .80). The second eigenvalue was 1.45, indicating that the second factor accounted for 14.52% of the variance. The final eigenvalue above 1.0 was 1.15, accounting for 11.55% of the variance. As such, in the parent data, there is some evidence for a single factor solution or a three-factor solution (Figure 10).

Similarly, the results of the principal component factor analysis and scree plot using the youth data indicated that there were also three Eigenvalues above the 1.0 threshold (Figure 10). The first eigenvalue was very large (4.85), indicating that the first factor accounted for 48.47%

of the variance and all items loaded strongly onto the first factor (values ranged from .49 to .73). The second eigenvalue was substantially smaller (1.52) as was the third and final (1.16) eigenvalue above 1.0.

**Figure 10. Scree Plot of Parent and Youth Rule Orientation Data**



The rotated factor solution for both parents and youth is provided in Table 10. For both parents and youth, five of the items loaded onto a single factor. The items pertain to whether the law or rule is against your moral principles, makes unreasonable demands of you, was made without representing your interests, and is enforced unfairly. That is, the items pertain to perceptions of legitimacy, procedural justice, and moral alignment. As such, we consider these “Legitimacy” concerns. For both parent and youth, a largely consistent second factor emerged from the data. Considering the items that tapped knowing the law and understanding the law most strongly explained the factor, we called the factor, “Knowledge.” However, for youth, the item, “You are in one way or another unable to do what this legal rule asks of you” loaded onto this factor (.57) as well as the Legitimacy factor (.50). The third and final factor was most

strongly explained by items tapping into whether friends and colleagues broke the law or rule, or thought breaking the law or rule was justified. As such, it is labeled, “Social.”

**Table 10. Rotated factor solutions for parent and youth rule orientations**

	Parent						Youth					
	Rotated Factor Solution <sup>A</sup>				$\alpha = .89$		Rotated Factor Solution <sup>A</sup>				$\alpha = .86$	
<i>It is acceptable for people to break a particular law or legal rule if:</i>	Factor 1 <sup>B</sup>	Factor 2 <sup>C</sup>	Factor 3 <sup>D</sup>	Uniqueness	Item-Total r	$\alpha$ if omit	Factor 1 <sup>B</sup>	Factor 2 <sup>C</sup>	Factor 3 <sup>D</sup>	Uniqueness	Item-Total r	$\alpha$ if omit
The legal rule is clearly against your moral principles	<b>0.83</b>			0.30	0.65	0.89	<b>0.71</b>			0.49	0.50	0.86
This legal rule makes unreasonable demands of you	<b>0.82</b>			0.26	0.73	0.88	<b>0.79</b>			0.29	0.68	0.85
You feel that this legal rule was made without representing your interests	<b>0.67</b>			0.36	0.75	0.88	<b>0.66</b>			0.44	0.67	0.85
You think this legal rule is enforced unfairly	<b>0.61</b>			0.40	0.76	0.88	<b>0.72</b>			0.33	0.73	0.84
You are in one way or another unable to do what this legal rule asks of you	<b>0.70</b>			0.39	0.72	0.88	0.50	<b>0.57</b>		0.43	0.68	0.85
You do not know this legal rule		<b>0.80</b>		0.28	0.70	0.88		<b>0.81</b>		0.30	0.66	0.85
You do not understand this legal rule		<b>0.79</b>		0.29	0.67	0.88		<b>0.66</b>		0.45	0.66	0.85
This legal rule has not been published		<b>0.79</b>		0.29	0.62	0.89		<b>0.75</b>		0.33	0.67	0.85
Obeying this legal rule is very expensive for you			<b>0.53</b>	0.33	0.79	0.88		<b>0.63</b>		0.56	0.58	0.86
Most of your direct colleagues and/or friends also break this legal rule			<b>0.89</b>	0.19	0.53	0.89		<b>0.87</b>		0.21	0.56	0.86
Most of your direct colleagues and/or friends think breaking the legal rule is justified			<b>0.80</b>	0.33	0.54	0.89		<b>0.88</b>		0.21	0.53	0.86
This legal rule is not enforced			<b>0.57</b>	0.48	0.64	0.89		<b>0.64</b>		0.43	0.64	0.85

NOTE: The measure begins with the following statement, “*It is acceptable for people to break a particular law or legal rule if:*”.

<sup>A</sup> Blanks set at .50. <sup>B</sup>Factor 1 = Legitimacy. <sup>C</sup>Factor 2 = Knowledge. <sup>D</sup>Factor 3 = Social.



Next, item-total correlations and Cronbach's alpha were calculated as indicators of the RO measure's overall internal consistency (Table 10). The RO scale was internally consistent for both youth ( $\alpha = .86$ ) and parents ( $\alpha = .89$ ). The item-total correlations indicated that the items were all significantly and strongly correlated with the overall construct, and the removal of any item did not change the overall alpha by more than .02 units. To calculate the overall rule orientation for each person, the items were mean-scored ( $M_{\text{parents}} = 4.72$ ,  $SD = 1.11$ ;  $M_{\text{youth}} = 4.36$ ,  $SD = 1.01$ ). The results of tests for normality indicate that the parent (Shapiro-Francia  $W = .98$ ,  $p = .11$ ) and youth (Shapiro-Francia  $W = .98$ ,  $p = .08$ ) rule orientation scores did not diverge from the normal distribution. Parents reported significantly higher rule orientation than youth ( $t(113) = 3.41$ ,  $p < .001$ ;  $\Delta = .37$ ; *bootstrapped 1,000 replications*  $\Delta = .34$ ,  $SE = .11$ ,  $95\% CI = .13, .55$ ; *Cohen's d* = .34,  $95\% CI = .08, .60$ ; *Hedge's g* = .34,  $95\% CI = .08, .60$ ). As expected, parent and youth rule orientation were highly correlated ( $r = .407$ ,  $p < .001$ ).

### **Variation in Adolescent Rule Orientation**

A series of OLS regressions was conducted to examine which predictors explained variation in rule orientation (Table 11). The results of the base model ( $F(3, 109) = 3.18$ ,  $p = .03$ ) indicated that race and parental education were not associated with youth rule orientation. However, consistent with the hypothesis, youth age was associated with rule orientation such that older youth were less rule oriented than were younger youth ( $\Delta R^2 = 6.12\%$ ;  $\Delta R^2_{adj} = 5.37\%$ ;  $95\% CI R^2_{adj} (\omega^2) = .01, .17$ ). In the second model, parental rule orientation was added. As expected, parental rule orientation was positively and strongly associated with youth rule orientation ( $\Delta R^2 = 15.46\%$ ;  $\Delta R^2_{adj} = 15.13\%$ ;  $95\% CI R^2_{adj} (\omega^2) = .05, .28$ ). Adding it to the model nearly tripled the amount of explained variance.

Considering that prior justice system contact may affect rule orientation, parental arrest was included as a covariate in the final model. When parental arrest was added to the model, the results indicated that parental arrest was negatively associated with youth rule orientation, such that youth whose parent had been arrested reported less rule orientation themselves. Adding parental arrest history increased the explained variance by approximately 2-3% ( $\Delta R^2 = 3.02\%$ ;  $\Delta R^2_{adj} = 2.38\%$ ;  $95\% CI R^2_{adj}(\omega^2) = .01, .12$ ). However, provided the small sample size ( $N = 5$ ), the results must be interpreted cautiously. The models were repeated using factor scores for rule orientation, but results did not change in statistical significance, direction, or magnitude.

**Table 11. Youth Rule Orientation Regressed on Parental Rule Orientation.**

	Model 1			Model 2			Model 3		
	<i>b</i> ( <i>SE</i> )	95% <i>CI</i>	<i>B</i>	<i>b</i> ( <i>SE</i> )	95% <i>CI</i>	<i>B</i>	<i>b</i> ( <i>SE</i> )	95% <i>CI</i>	<i>B</i>
Youth Race <sup>A</sup>	.01 (.20)	-.38, .39	.01	-.12 (.18)	-.47, .24	-	-.11 (.18)	-.46, .25	-.06
Youth Age	-.19** (.07)	-.33, .05	-	-.18** (.06)	-.31, .05	-	-.18** (.06)	-.30, .05	-.24
Parent Education	-.12 (.09)	-.29, .05	-.14	-.09 (.08)	-.24, .07	-.10	-.10 (.08)	-.26, .05	-.12
Parent Rule Orientation				.35*** (.08)	.20, .51	.39	.37*** (.08)	.21, .52	.40
Parent Arrest <sup>B</sup>							-.84* (.42)	-1.66, .02	-.17
R <sup>2</sup>		.08			.24			.27	
R <sup>2</sup> Adjusted		.06			.21			.23	

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

<sup>A</sup>Dichotomous: 1 = White, 0 = non-White. <sup>B</sup>Dichotomous: that 1 = arrest, 0 = no arrest.

## Discussion

The developmental study of legal socialization was largely initiated during the 1970s (Tapp, 1976; Tapp & Kohlberg, 1971). Despite its recent resurgence, the literature on legal socialization continues to primarily focus on how youth develop their perceptions of law enforcement and the justice system (see Tyler & Trinkner, 2018). However, as the study of how individuals develop their understanding of laws within society, the institutions that create those

laws, and the people that enforce the laws (see Cohn et al., 2012; Trinkner & Cohn, 2014; Tyler & Trinkner, 2018), legal socialization does not solely encompass perceptions of the justice system and law enforcement. In fact, the original developmental roots of the field highlighted the importance of understanding how youth develop their understanding of and relationship with laws (e.g., Tapp, 1976; Tapp & Kohlberg, 1971). Nonetheless, a critically under-studied area in the modern field is how youth develop their perceptions of laws in general and their obligation to obey the law in particular. Accordingly, the primary focus of this study was to establish whether the newly-created rule orientation measure could be used with adolescents, to identify whether parents may also socialize their youths' general orientation to laws and feeling obligated to obey the law even when faced with the traditional mechanisms that promote delinquency, and to examine whether rule orientation may decline through adolescence.

The results of this study indicate that the factor structure of rule orientation is largely consistent among both youth and their parents. Evidence emerged for three factors, which we labeled: 1) Legitimacy, which concerns moral alignment, fair enforcement, and representation; 2) Knowledge, which concerns knowing and understanding the law; and 3) Social, which concerns whether one's friends and colleagues either break the law or think breaking the law is justified.

These three factors align nicely with the factors that the literature considers key influences on youth delinquency, including moral alignment, procedural justice, legal knowledge, and social norms. As such, these findings indicate that the duty to obey the law is shaped by three general and interrelated perspectives: how individuals perceive the legal system in terms of moral alignment and procedural justice (i.e., legitimacy); individuals' awareness of the law's existence and understanding of the law (i.e., knowledge); and the cues they perceive from their peers and social context (i.e., social). However, the high alphas among both the adult

and youth samples also indicate that the total scale is internally consistent and can be used as a single measure. Indeed, the measure provides an overall index that assesses the extent to which individuals – both adolescents and adults– vary in their obligation to obey the law even when faced with the various mechanisms that promote crime and delinquency.

Interestingly, the present study demonstrates that even within this limited range of ages 13 to 17, older youth report less rule orientation than do younger youth. This finding suggests that younger youth see fewer conditions under which it would be acceptable to violate rules and laws. As youth age, it is likely that they begin to see more conditions under which it would be acceptable to violate rules and laws. This finding appears to resonate well with the classic literature that conceived of legal socialization as a sequential process (see Tapp, 1976; Tapp & Kohlberg, 1971), such that as youth age, they begin to develop more complex notions of laws and rules. In particular, the literature suggested that from childhood through adolescence, youth grow out of perceiving laws and rules as immutable and omnipresent forces that simply must be obeyed.

However, whereas the classical models presumed a sequential and inherently hierarchical ordering in legal socialization that progresses in a stage-like fashion that eventually reaches an apex point, the rule orientation framework presumes no such apex. Instead, the framework posits that individuals vary in the extent to which they accept various circumstances for violating the law and focuses on identifying sources of the variation. Although cross-sectional, this study suggests that as youth progress through this period of adolescence, they likely become less rule oriented. However, the process is certainly not uniform and immense variability remains in youths' rule orientation. In fact, youth age only explained approximately 6.12% of the variability in rule orientation.

Perhaps most importantly, the present study examined the association between parent rule orientation and youth rule orientation. The results indicated that neither race nor parental education was associated with youth rule orientation. Critically, the variable that explained the most variation in youth rule orientation was parent rule orientation. As expected, parents who were more oriented to the law tended to have youth who also reported being more oriented to the law. Similarly, parents who generally feel less obligated to obey the law had adolescents who also feel less obligated to obey the law. In fact, though the models are correlational, of the variation in youth rule orientation explained by the predictors collectively, parent rule orientation explained approximately 65-73%. However, of the collection of variables tested here, parent rule orientation appears to be the strongest statistical predictor of why certain youth are more or less rule oriented. Based on this developmental understanding of adolescent legal socialization, intergenerational socialization emerges as a vital component in understanding how youth become more rule oriented.

This study is not without its limitations. First, the sample was highly educated and had limited justice system contact. Future studies should replicate these findings with a more diverse sample. Second, in total, the models only accounted for approximately 21-27% of the variation in youth rule orientation. This amount indicates that approximately  $\frac{3}{4}$  of the variation in youth rule orientation still appears to be unexplained. A promising direction for future research is examining other vicarious sources. For instance, the literature suggests that youths' perceptions of law enforcement and the justice system are socialized indirectly through the experiences of peers, friends, and neighbors (see Fagan & Tyler, 2007; Tyler & Trinkner, 2018). It may also be the case that these other developmental contexts in which adolescents are embedded might also affect their orientation to laws.

Further, the study did not examine specific experiences that may affect adolescent rule orientation. Future research should focus on identifying other developmental processes and influences that may lead to more rule orientation as well as the experiences that may reduce rule orientation. Additionally, the prompt preceding the questions stated, “legal rule or law.” By design, this was intentionally vague so as to conjure the image of law in general, rather than specific laws governing specific behaviors, such as violence. Whether the findings extend to more serious crimes, such as dating violence and violence against peers (see Cauffman et al., 2000; Gracia, Rodriguez, & Lila, 2015; Savasuk-Luxton, Adler-Baeder, & Haselschwerdt, 2018) remains to be seen.

Further, it is possible that youth scored lower simply because they had difficulty reading the items. Unfortunately, participants’ understanding of the items was not assessed. However, results of a Flesch-Kincaid Reading Level test (scored as the normative reading level for US school grades) indicated that the scale’s grade level rated at a 5<sup>th</sup>-grade level, and the results of a Flesch Reading Ease test (comprehension difficulty) indicated that the scale was easy to read (74.9%; highest possible score is 100%, and a score above 60-70% is considered easy to follow, see Flesch, 1948; Farr, Jenkins, & Paterson, 1951; Grunder, 1978; Williamson & Martin, 2010).

Finally, the study was cross-sectional in design. Future research should be conducted longitudinally to account for within-person serial correlation and to more accurately estimate whether rule orientation declines during adolescence and to ascertain whether changes either continue throughout development or plateau around particular ages.

Despite these limitations, the present study makes a significant contribution to the developmental literature on adolescent legal socialization. Although the development of youths’ attitudes towards law is a critical component of public safety and delinquency prevention, limited

research has addressed how adolescents develop their attitudes about laws. Resonating with hypotheses from the classic literature, the results indicate that older adolescents do report less rule orientation than do younger adolescents. Further, parents reported comparably higher rule orientation, suggesting that perhaps rule orientation might be curvilinear, exhibiting decreases during adolescence before increasing again during adulthood.

Further, considering studies have not specifically examined whether parents may affect adolescents' obligation to obey the laws even when the mechanisms that promote delinquency exist, the present study filled this void by testing the association between parent and youth rule orientation. If the association had been low, the findings would have indicated that adolescents' rule orientation derives primarily through their own internal processes and unique experiences outside of the family. In this case, the finding would eliminate a promising source (parents) and point to future research towards identifying the internal mechanisms or external sources that underlie youths' rule orientation. However, the results indicated quite clearly that parents and their adolescents share rule orientation, and parent rule orientation proved to be the strongest predictor of youth rule orientation. This finding suggests that at least in part, adolescents likely derive their rule orientation from their parents, and as such, interventions that seek to improve adolescents' perceptions of laws and rules and willingness to obey them should likely begin with their parents.

## Dissertation Summary

The field of legal socialization, largely initiated by psychologists during the 1970s, has experienced a resurging interest in recent years driven mainly by Tyler's (1990) procedural justice framework. However, whereas the field originally focused on childhood and adolescence, the primary focus has shifted towards studying how interactions with the justice system and law enforcement impact adults' perceptions (Tyler & Trinkner, 2018). Despite knowledge that both crime (Loeber et al., 2012) and justice system contact (Snyder, 2012) peak during adolescence, the field has largely ignored the adolescent period and has rarely studied the developmental components of legal socialization.

The four studies in this dissertation used advanced statistical techniques and leveraged primary and secondary data on both community and justice-system-involved youth samples to make critical contributions to our understanding of adolescent legal socialization. In particular, they addressed how adolescents' perceptions vary with age, race/ethnicity, and experience, considered how the historical contexts in which youth are embedded may affect their attitude development, examined the role of psychosocial maturity in explaining under what circumstances their perceptions might affect — or might not affect — delinquency, and pushed beyond studying perceptions of law enforcement or the justice system to examine how youth develop their conceptions of law and their obligation to obey it.

The overarching goal of the first section was to identify how legal socialization occurs throughout adolescence. The first study used data from a longitudinal sample of 1,216 male adolescents in the justice system to demonstrate that the way perceptions of the justice system develop varies based on race/ethnicity and experience. Uniquely, the data show that racial differences grow as youth age from adolescence into young adulthood. Further, perceptions



diverge markedly between youth who exit the system versus those who are rearrested. Among those who successfully exit the justice system, attitudes appear to be relatively stable throughout the transition to young adulthood. These findings suggest that what occurs during adolescence and during this initial justice system exposure may serve as a window of opportunity to affect perceptions into young adulthood.

As part of the study of adolescent legal socialization, the second study considered whether youth actually differentiate between various authority figures. Further, it took a historical perspective to examine whether there actually exists a “crisis of confidence” or an “era of mistrust” of legal authorities as many scholars suggest. Leveraging data from nationally-representative cohort of youth from 1976-2016, the second study revealed that: a) youth differentiate between authorities; b) there are no racial differences in the factor structure of how youth perceive authorities; c) negative perceptions of legal authorities are not merely indicative of a ubiquitous anti-authority attitude; and d) youths’ perceptions of law enforcement have declined in recent years. These findings bode well for a literature that has premised itself on perceptions of legal authority being important. Further, this study provides evidence that across races/ethnicities, youths’ perceptions of authority dipped in recent years. Though only time will tell whether these are momentary valleys, these findings are salient considering the current political climate is marked by the growing Black Lives Matter and Blue Lives Matter movements and increased scrutiny of adolescents following their surging political involvement and the *March for Our Lives* protests. The data suggest that America’s adolescents have become more critical of legal authorities, and such changes should not be attributed to a ubiquitous “anti-authority” attitude.

The overarching goal of the second section was to push the field to consider the developmental implications of legal socialization. Thus far, the field has failed to consider hallmark developmental changes that occur during adolescence, namely the development of self-regulation and psychosocial maturity. The third study demonstrated that legitimacy is consistently related to delinquency across chronological age. However, legitimacy is unrelated to delinquency among psychosocially immature youth. This finding indicates that for youth who are still maturing psychosocially, such developmental considerations should likely take precedence in interventions over legal attitudes. Maturity thus emerges as vitally important in understanding when legal perceptions may not actually affect misbehavior.

Finally, despite the fact that scholars believe that, “The goal of legal socialization is to instill in people a felt obligation or responsibility to follow laws” (Tyler & Trinkner, 2018, pg., 3), how individuals develop their perceptions of the law and their obligation to obey it is critically understudied. Using data on adolescents and their parents in the community, the final study demonstrated that older youth report less rule orientation than do younger youth. This indicates that youths’ views of the law may become more complex as they age. Further, while the cross-sectional design precludes causality, the results indicate that parents’ perceptions explain a substantial portion of youth rule orientation. The finding indicates that to understand how youth develop their perceptions of laws, parents emerge as a key socializing context.

Studies demonstrate that people are more willing to voluntarily obey laws if they believe that the laws, legal system, and legal actors are unbiased, trustworthy, fair, and just. This dissertation shows that modern adolescents’ perceptions of legal authorities may be declining and that they are, at the very least, not favorable. Considering deficits in trust and efficacy are linked with the willingness to cooperate with legal authority and comply with the law, much

must be done to improve the way legal authorities interface with the community. The present dissertation demonstrates that in this pursuit, much attention must be paid to adolescents in particular. The evidence suggests that a multitude of factors, such as personal experiences and parental perceptions, may affect adolescent legal socialization, and what occurs adolescence may set the tone for how they perceive law and legal authority into adulthood. When it comes to legal socialization, adolescence itself emerges as critical period and window of opportunity.

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