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ARTICLE

Evaluating the shared and unique predictors of legal cynicism and police legitimacy from adolescence into early adulthood*

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Abstract
In different theoretical traditions, negative social conditions, attachments, and interactions shape the way individuals view the law and its agents. Although most researchers acknowledge the conceptual distinction between different legal attitudes such as legal cynicism and police legitimacy, it remains unclear to what extent these attitudes stem from the same social sources. In the current study, therefore, we evaluate the social and individual factors that influence trajectories of legal cynicism and police legitimacy using a diverse community sample of youths in Zurich, Switzerland. Latent growth curve models were employed to examine patterns of change in legal cynicism and police legitimacy between 13 and 20 years of age. The findings show that legal cynicism and police legitimacy both decline into early adulthood and exhibit high rank-stability over time. Furthermore, we find that legal cynicism is closely related to individual characteristics that reflect one's inability to recognize or abide by their internal rules. By contrast, police legitimacy is shaped by socialization influences, particularly teacher bonds and

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police contacts. These results indicate a need to assess the measurement and interpretation of legal cynicism critically in relation to broader legitimacy beliefs and to investigate the shared and distinct sources of these different constructs.

KEYWORDS

latent growth curve analysis, legal cynicism, legal socialization, low self-control, police legitimacy

Legal attitudes such as legal cynicism and police legitimacy shape the way adolescents interact with and interpret rules and authorities (Cohn, Bucolo, Rebellon, & van Gundy, 2010; Fagan & Tyler, 2005; Nivette, Eisner, Malti, & Ribeaud, 2015; Reisig, Wolfe, & Holtfreter, 2011; Trinkner & Cohn, 2014; Tyler & Trinkner, 2017).[1] Research findings have shown that adolescents and adults who hold negative attitudes toward the law and police are more likely to offend (Fine et al., 2018; Kaiser & Reisig, 2017; Reisig et al., 2011) and hold pro-violence attitudes (Nivette, Eisner, & Ribeaud, 2017) and are less likely to desist (Emery, Jolley, & Wu, 2011). Given the potential importance of legal attitudes as risk factors for criminal and violent outcomes, researchers are increasingly interested in understanding how these attitudes develop over the life course (Fagan & Tyler, 2005; McLean, Wolfe, & Pratt, 2018; Tyler & Trinkner, 2017). Existing research findings indicate that legal attitudes, and in particular legal cynicism, are moderately stable but still changeable during adolescence and early adulthood (Fine & Cauffman, 2015; Nivette et al., 2015; Schuck, 2013; Stewart, Morris, & Weir, 2014). Few longitudinal studies, however, have been focused specifically on legal cynicism, and those that have distinguished between legal cynicism and police legitimacy have reported meaningful differences in the patterns and sources of change between outcomes (e.g., Fagan & Piquero, 2007; Fine & Cauffman, 2015; Kaiser & Reisig, 2017).

The concept of legal cynicism refers to "the sense in which laws or rules are not considered binding" (Sampson & Bartusch, 1998, p. 786), and it is used to measure the "degree to which individuals feel that the law does not apply to them" (Fine & Cauffman, 2015, p. 345; see also Gifford & Reisig, 2019; Nivette et al., 2015). Legal cynicism is conceptually and empirically distinct from the related constructs of obligation to obey the law and "cynicism about the law" (Johnson, Maguire, & Kuhns, 2014). "Cynicism about the law," also known as "legal corruption" (Gifford & Reisig, 2019), reflects the perception that the law is a tool used by elites to maintain power and control (Johnson et al., 2014; Tyler & Huo, 2002). We focus here on the definition and operationalization of legal cynicism by Sampson and Bartusch (1998), given its prominence in both the neighborhood- and the individual-level research literature on legal attitudes (Fagan & Tyler, 2005; Fine & Cauffman, 2015; Gifford & Reisig, 2019; Kaiser & Reisig, 2017; Nivette et al., 2015; Trinkner & Cohn, 2014; Trinkner, Rodrigues, Piccirillo, Gifford, & Gomes, 2019).

Procedural justice refers to individual judgments regarding the fairness of treatment by police (Tyler, 2006), whereas legitimacy attitudes typically refer to the belief that institutions are justified in their use of power (Fagan & Tyler, 2005; Jackson & Gau, 2016). The term "police legitimacy," however, is often used to capture broader perceptions of police performance, including procedural justice, lawfulness,

[1] In this article, we use the term "legal attitudes" as an umbrella term to refer to the broad array of attitudes and orientations related to legal and criminal justice institutions, including the courts, police, and law.

trust, effectiveness, distributive justice, and obligation to obey the police (Bolger & Walters, 2019; Mazerolle, Bennett, Davis, Sargeant, & Manning, 2013; Tankebe, 2013; Tyler, 2006). Notably, there is some debate over the definition and measurement of police legitimacy regarding whether the construct obligation to obey should be included as a dimension of legitimacy or an outcome (Maguire, Lowrey, & Johnson, 2017; Tankebe, 2013). According to Tankebe (2013), the concept of obligation is a much broader concept than legitimacy, which can be influenced in part by normative judgments, instrumental concerns (e.g., fear), as well as more fatalistic or pragmatic acquiescence. Research findings have also shown that measures of procedural justice and trust tend to load onto a single factor and are empirically distinguishable from obligation measures (Johnson et al., 2014; Maguire & Johnson, 2010). For these reasons, and given the ongoing debate, we conceptualize police legitimacy as a reflection of attitudes toward police performance, separate from the concept of obligation.

Police legitimacy and procedural justice are conceptualized as conditional and are expected to change and adapt over time in accordance with social influences, situations, and contexts (Jackson & Gau, 2016). Although developed independently, legal cynicism is also expected to have similar social origins and predictors (Kirk & Papachristos, 2011; Kirk, Papachristos, Fagan, & Tyler, 2012; Nivette et al., 2015; Sampson & Bartusch, 1998) and likewise develop and change in accordance with one's social experiences of injustice. Legal cynicism, however, tends to exhibit greater stability across time compared with perceptions of police legitimacy and is more strongly correlated with individual characteristics than with social influences such as experiences with the police. For example, using a sample of serious youth offenders, Fine and Cauffman (2015, p. 336) found that even though there are enduring between-group differences in legal cynicism, levels remain stable through early adulthood (see also Kaiser & Reisig, 2017; Piquero, Bersani, Loughran, & Fagan, 2016; Piquero, Fagan, Mulvey, Steinberg, & Odgers, 2005). Importantly, subsequent rearrest was not related to changes in legal cynicism, whereas being rearrested was associated with significantly lower legitimacy ratings among White and Black youth.

These findings indicate that legal cynicism may stem from different developmental mechanisms compared with police legitimacy and challenges the notion that cynicism stems primarily from social experiences and interactions with authorities, such as the police (Fine & Cauffman, 2015; see also Nivette et al., 2015). Existing research has been focused more on the social sources of legal cynicism, despite growing evidence that individual propensities, such as low self-control, moral disengagement, and emotional regulation, play an important role in shaping legal attitudes more generally (Cavanaugh & Cauffman, 2015; McLean et al., 2018; Trinkner & Cohn, 2014; Tyler & Trinkner, 2017), and legal cynicism in particular (Kaiser & Reisig, 2017; Nivette et al., 2015; Reisig et al., 2011). A significant gap remains in our understanding regarding the origins and developmental processes that influence different legal attitudinal outcomes, as well as to what extent these different attitudinal measures respond to external experiences. We, therefore, advance our understanding of legal attitudinal development by examining the dynamic link between legal cynicism and police legitimacy during adolescence and early adulthood. In particular, we assess to what extent legal cynicism and police legitimacy are shaped by socialization influences compared with individual propensities over time.

Furthermore, most longitudinal research on legal attitudinal development has been conducted using samples of serious juvenile offenders in the United States (i.e., The Pathways to Desistance Study, see McLean et al., 2018) or among youth that have participated in education or crime prevention programs in schools (i.e., the National Evaluation of the Gang Resistance Education and Training program, see Stewart et al., 2014; D.A.R.E., see Schuck, 2013). A significant gap also remains in our understanding about how these developmental processes occur within a community sample of adolescents, many of which will not have serious encounters with the criminal justice system until later in life (Trinkner & Cohn, 2014). We address this limitation by assessing variation in the level and rate of change in legal

cynicism and police legitimacy among a diverse sample of youths in Zurich, Switzerland (see Eisner, Malti, & Ribeaud, 2011). Therefore, to our knowledge, we are the first to trace the development of legal attitudes during the peak years of offending, that is, from mid-adolescence to early adulthood, in a community sample.

1 | LEGAL ATTITUDINAL DEVELOPMENT

The theoretical origins of legal attitudes are varied, with some focused on neighborhood-level structural and institutional injustices (e.g., Berg, Stewart, Intravia, Warren, & Simons, 2016; Kirk & Papachristos, 2011; Sampson & Bartusch, 1998) and others on individual-level socialization influences and experiences (e.g., Cohn et al., 2010; Fagan & Tyler, 2005; Tyler & Trinkner, 2017). Neighborhood-level researchers have tended to emphasize the contextual conditions, measured by material deprivation, structural inequality, and police maltreatment, that alienate communities and erode commitment to moral and legal rules (Kane, 2005; Kirk & Papachristos, 2011; Kirk et al., 2012; Sampson & Bartusch, 1998). Individual-level researchers have tended to stress the role of socialization agents, particularly the police, in shaping how people view and interact with legal boundaries and authorities throughout the life course (Fagan & Tyler, 2005; McLean et al., 2018; Trinkner & Cohn, 2014; Tyler & Trinkner, 2017). Although these traditions differ in their focus on contextual and interpersonal influences, respectively, they share assumptions about the social sources of legal attitudes. In both theoretical traditions, negative legal attitudes stem from social conditions and interactions that convey feelings of injustice, unfair treatment, and alienation.

Recall that legal cynicism is typically described as the perception that the law is not "binding" or "too weak to warrant trust" (Sampson & Bartusch, 1998, pp. 784–785), whereas police legitimacy broadly reflects perceptions of police performance, procedural justice, and trustworthiness (Jackson & Gau, 2015; Tankebe, 2013). Legal cynicism and perceptions of police (il)legitimacy are expected to correlate; however, in practice, the conceptual distinction and direction of influence between the two concepts is somewhat unclear. Berg et al. (2016), for example, argued that structural conditions influence "moral and legal cynicism," which subsequently influences perceptions of police experiences and criminal injustice. Kirk and Papachristos (2011) argued that legal cynicism stems from unjust structural conditions and negative interactions with the police. Notably, even though Kirk and Papachristos (2011, p. 1207) referred to "legal cynicism," they used items that measured broader approval of police legitimacy (e.g., "the police are not doing a good job in preventing crime" and "the police are not able to maintain order"). In a later publication, Kirk and colleagues (2012) emphasized that legal cynicism and legitimacy "work in tandem" (p. 83) but are "not necessarily two sides of the same coin" (p. 96). Fagan and Tyler (2005) conceptualized legal cynicism as a dimension of legal socialization, alongside measures of moral neutralization and legitimacy, which they argued is shaped by social interactions and negative experiences with the police (see also Fine & Cauffman, 2015; Kaiser & Reisig, 2017). Taken together, legal cynicism is typically treated as one form of legal attitudinal development that is distinct from but closely related to broader perceptions of police legitimacy. The dynamics of this relationship, however, are not always clear, and legal cynicism is often assumed to stem from the same social forces as legal attitudes such as police legitimacy (Fagan & Tyler, 2005; Kirk et al., 2012; Nivette et al., 2015; Tyler & Trinkner, 2017). If researchers are to include legal cynicism within broader frameworks of legal socialization and offending (see, e.g., Kaiser & Reisig, 2017), it is necessary to understand the shared and distinct predictors of legal cynicism compared with police legitimacy. In the following sections, we review the evidence for social and individual influences on legal attitudes, with attention to differential relationships with legal cynicism and police legitimacy.

1.1 | Social antecedents of legal attitudes

Drawing from both neighborhood- and individual-level traditions, it is possible to identify several broad socialization domains that are expected to influence the development of legal attitudes, including legal cynicism and police legitimacy: family, school, peers, and criminal justice (McLean et al., 2018; Tyler & Trinkner, 2017). Actors and experiences within these domains may shape attitudes through direct transmission or modeling of legal attitudes by social actors, and/or characteristics of authority and interactions, such as socioemotional bonds and the quality of treatment and decision-making (Trinkner & Cohn, 2014; Trinkner & Tyler, 2016; Tyler & Trinkner, 2017; Wolfe, McLean, & Pratt, 2017). Early exposure to fair and legitimate informal authorities, such as parents or teachers, serves as the foundation for later understanding of and encounters with formal legal authorities, such as the police (Fagan & Tyler, 2005).

1.1.1 | Family

Throughout childhood and adolescence, individual legal attitudes are shaped by parental attitudes and the child's relationship with their parents (Cavanaugh & Cauffman, 2015; Ferdik, Wolfe, & Blasco, 2014; Nivette et al., 2015; Sargeant & Bond, 2015; Wolfe et al., 2017; Wu, Lake, & Cao, 2015). Findings from research on intergenerational transmission generally support the notion that parental attitudes are a strong predictor for youth attitudes (Cavanaugh & Cauffman, 2015; McLean et al., 2018; Sindall, McCarthy, & Brunton-Smith, 2017; Wolfe et al., 2017; see more generally Degner & Dalege, 2013). Furthermore, parents that create socioemotional bonds and apply rules and punishments fairly and consistently can "lead children to internalize supportive values and develop positive civic attitudes that become part of their identity and sense of self" (Trinkner & Cohn, 2014, p. 124). Different parenting practices reflect different models of authority, whereby practices aimed at establishing good quality treatment, consistent and fair decision-making, and reasonable boundaries are expected to instill a sense of trustworthiness in authorities more generally (Tyler & Trinkner, 2017).

Generally, the findings from research on the impact of parental bonds and interactions on legal attitudes are somewhat mixed (Fagan & Tyler, 2005; Wolfe et al., 2017). Some scholars have found that adolescents who have stronger bonds with their parents, measured variously by parental involvement, supervision, and attachment, are more likely to view the police and law favorably (Ferdik et al., 2014; Nivette et al., 2015; Sargeant & Bond, 2015; Wolfe et al., 2017). These associations, however, tend to be small or indirect and vary across ethnic groups (Nivette et al., 2015; Wu, Lake, & Cao, 2015). To our knowledge, only one study group has directly compared the influence of parental and family influences on legal cynicism and legitimacy (see Fagan & Tyler, 2005). Fagan and Tyler (2005) found no significant direct relationship between parental supervision and legal cynicism, but they did find a significant positive association with perceptions of legitimacy. Although not the focus of their paper, Mulvey and colleagues (2010) reported small, but similar, bivariate correlations between measures of parental influences (i.e., monitoring, parental knowledge, and maternal warmth) and both legal cynicism and legitimacy.

1.1.2 | School

As children enter school, they encounter new and different forms of authority, punishments, and social relationships (Dunn, 2005). According to the legal socialization framework, teachers play a significant role as "rule enforcers" in childhood and adolescence and thus shape attitudes toward rules and perceptions of authority (Flexon, Lurigio, & Greenleaf, 2009; Nihart, Lersch, Sellers, & Mieczkowski, 2005; Piquero et al., 2005; Trinkner & Cohn, 2014). Not only do teachers shape civic attitudes and

values about formal rules and boundaries, but also experiences within the school environment and relationships with teachers communicate signals to adolescents about fair treatment and decision-making (Tyler & Trinkner, 2017).

Findings from research on the relationship between teacher authority and legal orientations are generally focused on the role of teacher authority, teacher–child relationships, and commitment to school (Ferdik et al., 2014; Nivette et al., 2015; Trinkner & Cohn, 2014; Wu et al., 2015). These factors generally reflect an adolescent's attachment and bonds to teachers and school, as well as treatment by school authorities. Evidence of school-related influences on legal attitudes is generally mixed as some researchers have found no relationship (Ferdik et al., 2014; Nivette et al., 2015; see also Little & Steinberg, 2006), some have reported direct associations only for certain ethnic groups (Lurigio, Greenleaf, & Felxon, 2009; Wu et al., 2015), and others have reported strong and consistent relationships across populations (Flexon et al., 2009). Studies aimed at examining school influences on legal cynicism are scarcer. Only one study group to our knowledge examined the relationship between teacher authority and different legal attitudinal outcomes: Trinkner and Cohn (2014) used a vignette design to evaluate dimensions of teacher procedural justice on legitimacy, legal cynicism, and rule-violating behavior. In scenarios where the teacher offered opportunities for voice and showed impartiality, respondents reported significantly higher levels of legitimacy and legal cynicism.

1.1.3 | Peers

Peers play an increasingly important role in socialization processes during adolescence both in and out of school (McLean et al., 2018; Sampson & Laub, 1997). Findings from research on peer influences indicate that individuals tend to associate with "like-minded" peers, and that their attitudes and behaviors become more similar over time (Brechwald & Prinstein, 2011). In previous studies on legal socialization, scholars have found that individuals with delinquent peers tend to have more negative views toward the law and police (Fagan & Tyler, 2005; McLean et al., 2018; Nivette et al., 2015; Wolfe et al., 2017). Delinquent peers are likely to hold attitudes that are conducive to rule-breaking, including deviant norms, neutralization techniques, as well as negative attitudes toward the law and police (Fagan & Tyler, 2005; Ferdik et al., 2014; McLean et al., 2018; Nivette et al., 2015). As such, individuals who associate with delinquent peers are exposed to negative legal attitudes and rule-breaking behaviors and are, therefore, more likely to adapt their views to be in line with their peers (Brechwald & Prinstein, 2011; Weerman, 2011).

Findings from research aimed at examining peer influences on different legal attitudinal outcomes generally coincide with findings from broader legal socialization research, whereby having delinquent peers is related to higher levels of legal cynicism and lower legitimacy (Kaiser & Reisig, 2017; Nivette et al., 2015; see also Mulvey et al., 2010, for correlational evidence). Experiencing peers' arrests has also been shown to have a negative impact on adolescent's perceptions of legitimacy (Fine et al., 2016). There are exceptions, however: Fagan and Tyler (2005) found no significant relationship between deviant peers and legal cynicism or legitimacy in a community sample of youth in New York City, and Fagan and Piquero (2007) likewise found no relationship between perceived social rewards of deviance (e.g., from friends) and legal cynicism or legitimacy among serious youth offenders.

1.1.4 | Criminal justice

For most individuals, their first serious encounter with police and the criminal justice system is most likely to occur during adolescence and early adulthood (Tyler & Trinkner, 2017). This exposure can be direct through day-to-day encounters or personal wrongdoing or indirect through family, friends, and the media (Rosenbaum, Schuck, Costello, Hawkins, & Ring, 2005; Skogan, 2005). Contact with the

criminal justice system in adolescence and early adulthood has been shown to increase significantly the likelihood of future criminal behavior and imprisonment (Johnson, Simons, & Conger, 2004; McAra & McVie, 2007; Slocum & Wiley, 2018). Researchers, however, have argued that it is not the contact itself but the quality of interpersonal treatment (e.g., procedural justice) in police–citizen encounters that influences legal attitudes (Hinds & Murphy, 2007; Maguire et al., 2017; Slocum & Wiley, 2018; Tyler, 2006; Tyler & Huo, 2002; Walters & Bolger, 2018).

Generally, scholars have found some relationship between police contact, perceptions of procedural justice, legitimacy, and legal cynicism (Fagan & Tyler, 2005; Gau, 2015; Hough, Jackson, Bradford, Myhill, & Quinton, 2010; Reisig et al., 2011; Trinkner & Cohn, 2014), with a few exceptions (Fine & Cauffman, 2015; Kaiser & Reisig, 2017; Piquero et al., 2005). For example, using the Pathways to Desistance study, Piquero et al. (2005) found that police procedural justice significantly predicted average perceptions of legitimacy but not of legal cynicism. Likewise, Fine and Cauffman (2015) found that police contact was differentially related to perceptions of legitimacy and legal cynicism, whereby additional contacts and rearrests generally had no association with legal cynicism. Using the same data, Kaiser and Reisig (2017) found a weaker relationship between procedural justice perceptions and legal cynicism compared with legitimacy beliefs. In a vignette study in which components of police procedural justice were varied, Trinkner and Cohn (2014) found that voice and impartiality were positively related to legitimacy evaluations. Voice, however, only marginally reduced evaluations of legal cynicism, whereas impartiality had no association with cynicism. Among a sample of adolescents in Brazil, Trinkner and colleagues (2019) found that direct experiences with the police significantly influenced police legitimacy via perceptions of procedural justice. Police contact and procedural justice, however, were not related to legal cynicism.

1.2 | Individual propensities and legal attitudes

Certain individual propensities are also likely to influence how individuals interpret interactions, form social attachments, and recognize rules and legal boundaries (Augustyn & Ray, 2016; Fine et al., 2018; McLean et al., 2018; Nivette et al., 2015; Reisig et al., 2011). From this perspective, evaluations of the law stem from internal characteristics that affect cognitive processes and not necessarily from social interactions. In practice, these characteristics typically include low self-control, psychosocial maturity, negative emotionality, and callous-unemotional traits (Ameri et al., 2019; Augustyn & Ray, 2016; Fine et al., 2018; Kaiser & Reisig, 2017; Lee, Steinberg, Piquero, & Knight, 2011; Scheuerman & Matthews, 2014; Woolard, Harvell, & Graham, 2008). Individuals with these characteristics are more likely to react negatively to sanctions and to behave in a hostile or defiant manner that can elicit harsher treatment from authorities (Augustyn & Ray, 2016; Mastrofski, Reisig, & McCluskey, 2002; Scheuerman & Matthews, 2014). For example, individuals who seek immediate gratification, who are more self-centered, and less considerate of others' interests will be more likely to be cynical about the need to comply with binding rules (Gottfredson & Hirschi, 1990; Piquero, Gomez-Smith, & Langton, 2004; Reisig et al., 2011; Wolfe, 2011; cf. Wolfe et al., 2017). In a recent study by Ameri et al. (2019) among young offenders in long-term residential facilities, the authors found that the relationship between legal cynicism and offending was greatly attenuated when accounting for temperament issues and psychopathy. They argued that their results indicate that legal cynicism is likely to be "a byproduct of antisocial and criminal propensity" (2019, p. 217).

Researchers have also emphasized the importance of internalized moral norms in determining how individuals interpret legal interactions and boundaries (Berg et al., 2016; Cohn et al., 2010; McLean et al., 2018; Tapp & Levine, 1977; Tyler & Trinkner, 2017; Walters, 2018). In essence, individuals who accept shared rules concerning right and wrong are more likely to agree that the law is binding

(Nivette et al., 2015). Recently, research findings have shown that individual tendencies to neutralize moral norms against deviance and justify rule-breaking are strongly related to legal cynicism and perceptions of police legitimacy (McLean & Wolfe, 2016; McLean et al., 2018; Nivette et al., 2015). These findings are in line with Sampson and Bartusch's (1998, p. 786) original operationalization of legal cynicism, wherein they stated that "[legal cynicism items] tap variation in respondents' ratification of acting in ways that are 'outside' of law and social norms." Individuals engaged in antisocial and criminal behavior are, therefore, expected to espouse higher levels of legal cynicism as a manifestation of antisociality and justification for rule-breaking (Ameri et al., 2019; Nivette et al., 2015).

Importantly, in the few studies in which the influence of individual characteristics on legal attitudinal outcomes has been assessed, scholars generally have found that low self-control, low morality, and negative emotions are more strongly related to legal cynicism compared with police legitimacy (Kaiser & Reisig, 2017; Mulvey et al., 2010; Reisig et al., 2011; but see Fagan & Tyler, 2005). Kaiser and Reisig (2017), for example, found that individual characteristics such as impulse control, moral disengagement, and emotional regulation were more strongly related to between- and within-individual variation in legal cynicism than to legitimacy. Similarly, some scholars have found a stronger associations between legal cynicism and self-reported offending compared with measures of police legitimacy (see Augustyn, 2016; Fagan & Piquero, 2007; Reisig et al., 2011; but see Kaiser & Reisig, 2017; Trinkner et al., 2019).

2 | CURRENT STUDY

Criminologists are increasingly concerned with the sources and development of legal attitudes over the life course. Neighborhood-level researchers tend to emphasize the social structural origins of legal attitudes (see Sampson & Bartusch, 1998), whereas individual-level researchers tend to focus on the transmission of attitudes through social interactions, particularly with the police (see Tyler & Trinkner, 2017). At their core, in both theoretical traditions, researchers argue that negative social conditions, attachments, and interactions shape the way individuals view the law and its agents. Furthermore, even though most researchers acknowledge the conceptual distinction between different legal attitudes such as legal cynicism and legitimacy (e.g., Kirk et al., 2012), it remains unclear to what extent these attitudes stem from the same social experiences and influences. A range of isolated findings indicates that legal cynicism does not behave in the way that these theoretical frameworks suggest, specifically in relation to social experiential factors such as contact with the police (Fine & Cauffman, 2015; Kaiser & Reisig, 2017; Nivette et al., 2015; Reisig et al., 2011). Compared with perceptions of legitimacy, legal cynicism may be less related to socialization processes than assumed in existing frameworks. In addition, the amount of longitudinal research on legal attitudinal development is scarce, and existing evidence derives from samples of serious offenders in the United States (e.g., Kaiser & Reisig, 2017; Piquero et al., 2005). In light of these issues, we aim in the current study to evaluate the social and individual factors that influence trajectories of legal cynicism and police legitimacy using a diverse community sample of youths in Zurich, Switzerland. As a first step, we systematically assess the degree to which legal cynicism and police legitimacy are stable during the peak years of offending (13–20 years of age). The findings from prior research on legal attitudinal change indicate that legal cynicism will show significant rank-stability during adolescence compared with police legitimacy but still display variation in individual trajectories. Next, we examine the extent to which social and individual factors influence legal cynicism and police legitimacy during adolescence and early adulthood. Based on shared theoretical expectations derived from neighborhood- and individual-level research on legal attitudes, family, school, peer, and criminal justice domains are expected to influence

both legal cynicism and police legitimacy over time. Following research on individual characteristics and legal cynicism, we expect that dispositions such as low self-control, moral boundaries, and prior rule-breaking will have stronger associations with legal cynicism compared with police legitimacy. By contrast, socialization influences, in particular police contacts, will be more strongly related to perceptions of police legitimacy than to legal cynicism.

3 | METHOD

We used data from the Zurich Project on Social Development from Childhood to Adulthood (z-proso), an ongoing prospective longitudinal study of a cohort of children who entered 1 of 56 primary schools in the City of Zurich in 2004 (see Eisner et al., 2011). The initial target sample of schools was randomly selected using a stratified sampling procedure in which disadvantaged school districts were oversampled, resulting in 1,675 children from 56 primary schools (Eisner & Ribeaud, 2005). The study comprises eight waves of child interviews at ages 7, 8, 9, 11, 13, 15, 17, and 20 (for detailed information about participation and attrition between waves 1 and 7, see Eisner, Murray, Eisner, & Ribeaud, 2019, p. 28). In the first wave, 81 percent of the target sample participated ($n = 1{,}360$). Active written parent consent was required for the first 6 years of participation in the study. Parents who did not wish to participate themselves were asked whether they would allow their child to participate. From wave 5 (age 13) on, the participating youths were legally old enough to give the active consent to participate on their own, whereas their parents received an information letter that allowed them to proscribe their child's participation (passive consent procedure).

Legal cynicism was measured at ages 13, 15, 17, and 20, and police legitimacy was measured at ages 15, 17, and 20. To estimate the average trajectories of legal cynicism and police legitimacy, the analytical sample was limited to respondents who had participated in all four waves between ages 13 and 20. This was the case for 61 percent ($n = 1{,}034$) of the initial target sample. Regarding attrition, in wave 5 (age 13), the initial target sample was recontacted by the project team, resulting in 1,365 respondents (81 percent of initial target sample in wave 1). Attrition between waves 5 and 6 was low ($n = 36$, 2.6 percent), and between waves 6 and 7, this was somewhat higher ($n = 133$, 10 percent). Between waves 7 and 8, a further 13.6 percent ($n = 163$) dropped out, resulting in 1,034 participants for whom data were available across all waves (75 percent of the sample at wave 5).

The results of analyses of attrition in z-proso have shown that antisocial and problem behaviors, such as aggression, anxiety/depression, ADHD, and nonaggressive conduct disorder, were not related to attrition between waves 5 (age 13) and 7 (age 17; Eisner et al., 2019). In contrast, wave 7 (age 17) dropouts differ from wave 8 (age 20) participants in several regards. The share of males ($M_{dropout} = .59$ vs. $M_{age20} = .49$), immigrants ($M_{dropout} = .58$ vs. $M_{age20} = .47$), those who did not attend advanced secondary education ($M_{dropout} = 97$ percent not attending Gymnasium vs. $M_{age20} = 70$ percent), and those with low socioeconomic status (SES) parents ($M_{dropout} = 39.89$ vs. $M_{age20} = 47.75$) is significantly ($p < .05$) higher in the dropout group compared with the wave 8 (age 20) participants. At wave 7 (age 17), dropouts tended to be significantly more aggressive ($M_{dropout} = 1.71$ vs. $M_{age20} = 1.57$) but did not report more deviant behavior ($M_{dropout} = 1.87$ vs. $M_{age20} = 1.94$). Perhaps most importantly, they did not differ from wave 8 participants as to legal cynicism ($M_{dropout} = 2.25$ vs. $M_{age20} = 2.23$) and police legitimacy ($M_{dropout} = 2.49$ vs. $M_{age20} = 2.58$).

3.1 | Measures

The variables used in this analysis reflect a range of social and individual factors measuring key influences within socialization and individual domains. These domains broadly include risk factors

on parenting, school bonds, peer appraisals of deviance, contacts with the criminal justice system, and individual dispositions that are likely to affect how legal rules and interactions are perceived. For a subset of variables (i.e., parenting, school bonds, and police legitimacy), items were only available for three out of the four waves. Parenting and school-related variables were not asked in the most recent wave (age 20).

3.1.1 | Legal attitudinal variables

Legal cynicism was measured using six items adapted from Karstedt and Farrall (2006) and Sampson and Bartusch (1998). Items included were as follows: “It is okay to do whatever you want as long as you don’t hurt anyone,” “Laws were made to be broken,” and “Sometimes it’s necessary to ignore rules and laws to do what you want.” Respondents indicated their agreement on a four-point, Likert-type scale ranging from “fully untrue” to “fully true”. All items were loaded onto one factor, and the scale was reliable across waves ($\alpha_{age13} = .70$; $\alpha_{age15} = .73$; $\alpha_{age17} = .77$; $\alpha_{age20} = .77$).

Police legitimacy was measured using three items drawn from Sunshine and Tyler (2003) that capture dimensions of police performance, including procedural fairness (the quality of treatment and respect), fairness in police decision-making (apply rules consistently), and confidence in police effectiveness. Respondents indicated their agreement on a four-point, Likert-type scale ranging from “fully untrue” to “fully true”. Items included were as follows: “Police treat people with dignity and respect,” “I’m confident that the police can do their job well,” and “police apply the rules consistently to different people.” Police legitimacy was generally reliable across waves ($\alpha_{age15} = .82$, $\alpha_{age17} = .87$, $\alpha_{age20} = .84$).

3.1.2 | Socialization variables

We included two variables to measure aspects of parental authority and interactions that could influence legal attitudes through socialization: parental involvement and parental supervision. Parenting items were adapted from the Alabama Parenting Questionnaire (Shelton, Frick, & Wootton, 1996) and the Parenting Scale from the Criminological Research Institute of Lower Saxony (Kriminologisches Forschungsinstitut Niedersachsen [KFN]; Wetzels, Enzmann, Mecklenburg, & Pfeiffer, 2001; Wilmers et al., 2002). *Parental involvement* was a proxy for family bonds that consisted of six items to measure on a four-point, Likert-type scale how often a child’s parent talked with them, comforted them, and showed interest ($\alpha_{age13} = .75$, $\alpha_{age15} = .77$, $\alpha_{age17} = .77$). *Parental supervision* reflects aspects of parental authority through control (Stattin & Kerr, 2000). The scale consisted of four items measuring dimensions of parental supervision (four items, e.g., “when you go out in your free time, your parents tell you what time to come home”) on a four-point, Likert-type scale ranging from “never” to “often/always”. The scale was generally reliable across waves ($\alpha_{age13} = .69$, $\alpha_{age15} = .72$, $\alpha_{age17} = .70$).

Teacher–child bonds was used to capture socialization influences in school, particularly in relation to teacher authority. The teacher–child bond scale was adapted from the KFN studies (Wetzels et al., 2001; Wilmers et al., 2002), and it consisted of three items measuring agreement with statements on a four-point, Likert-type scale (from “totally wrong” to “totally correct”). Statements included “I get along with my teacher,” “my teacher treats me fairly,” and “my teacher supports me.” The scale was generally reliable across waves ($\alpha_{age13} = .77$, $\alpha_{age15} = .82$, $\alpha_{age17} = .77$). *School commitment* was a more general measure of a child’s bond to school. School commitment was measured using a four-item scale developed by the z-proso team. Items included “I like going to school,” “I like doing my homework,” and “I find school useless” (inverse coded). Respondents registered their agreement on a four-point, Likert-type scale ranging from “totally wrong” to “totally correct”. The scale was moderately reliable across waves ($\alpha_{age13} = .69$, $\alpha_{age15} = .64$, $\alpha_{age17} = .64$).

Peer disapproval of deviance was measured using two situational vignettes. In the first vignette, a situation of reactive physical aggression upon a provocation by a peer was described, whereas in the second vignette, a situation in which the actor verbally aggresses a peer was described. For each vignette, the respondents had to answer a series of standardized questions expected to be relevant in aggressive decision-making. Peer-related items included the following: "Would your best friends admire you and think you were cool because of this?" "Would your best friends think it is bad to do this?" "Would you be ashamed of your best friends because of this?" "Would it result in bad consequences for you if your best friends found out about this?" All items were answered on four-point Likert scales. The vignette wordings were adapted from an instrument in the KFN studies (Wetzels et al., 2001; Wilmers et al., 2002), whereas the decision-making items were adapted from an instrument used in the Denver Youth Survey (Huizinga, 1988–1992). Responses from both vignettes were combined into a single scale, where higher values indicated greater peer disapproval of deviant behaviors. The eight-item scale was reliable across waves ($\alpha_{age13} = .89$; $\alpha_{age15} = .87$; $\alpha_{age17} = .89$; $\alpha_{age20} = .89$).

Finally, *contact with police* was a dichotomous variable used to measure any self-reported police contact (0 = no, 1 = yes) in relation to wrongdoing in the 2 years prior to the survey wave (i.e., covering ages 11–13, 13–15, 15–17, and 18–20).

3.1.3 | Individual characteristics

To account for individual characteristics that could influence legal cynicism, we included three variables that reflected the propensity to recognize rules and adhere to internalized moral norms: low self-control, morality, and deviant behavior. *Low self-control* included characteristics that relate to an individual's decision-making and judgment processes (Gottfredson & Hirschi, 1990). Low self-control was measured using 10 items adapted from Grasmick, Tittle, Bursik, and Arneklev (1993) in which five subdimensions of self-control (two items each) were incorporated, including impulsivity, self-centeredness, risk-seeking, preference for physical activities, and short temper. Reliability was generally acceptable across waves ($\alpha_{age13} = .78$, $\alpha_{age15} = .75$, $\alpha_{age17} = .73$, $\alpha_{age20} = .74$).

Morality captured an individual's moral evaluations of rule transgressions and was measured through judgments about the wrongfulness of five deviant acts. These included lying to adults, truancy, hitting someone if insulted, stealing something worth less than 5 Swiss Francs (US$5), and insulting someone out of dislike. Responses were recorded on a seven-point scale ranging from "not bad at all" to "very bad". The scale was reliable across waves ($\alpha_{age13} = .80$, $\alpha_{age15} = .77$, $\alpha_{age17} = .75$, $\alpha_{age20} = .74$). To capture broader involvement in antisocial behavior, we included a measure of *deviant behavior*. The instrument is used to measure whether the respondent engaged in 16 possible antisocial behaviors in the past year, including bullying, truancy, substance use, theft, and violence. A variety score was created that reflects how many of the 16 different delinquent acts the respondent engaged in. Variety scores are preferred over alternative delinquency scales as a result of their high reliability and validity (Sweeten, 2012).

3.1.4 | Sociodemographic background

All models included two control variables to account for sociodemographic background: gender and migrant background. *Gender* was coded 0 for females and 1 for males. Furthermore, findings from research on legal attitudinal development in the United States and Europe indicate that second-generation immigrants and ethnic minorities are more likely to come into contact with the police, perceive discrimination by authorities, and be exposed to greater structural disadvantage and inequalities (Piquero et al., 2016; Röder & Mühlau, 2012; Sampson & Bartusch, 1998; van Craen, 2013; van Craen & Skogan, 2015). We therefore included a measure of *migrant background*, which was coded

0 for adolescents with at least one parent born in Switzerland and 1 for adolescents with both parents born abroad.

3.2 | Analytic procedure

Developmental patterns of legal cynicism and police legitimacy were assessed in multiple ways. First, we assessed stability in legal attitudes using the correlation between legal cynicism or police legitimacy at two adjacent time points (e.g., age 13 and age 15). These correlations reflect the rank-stability, or rank ordering, of individuals over time (Caspi & Roberts, 1999). High rank-stability may indicate that attitudes do not change over time, but it can also indicate that attitudes similarly increase or decrease over time. A low correlation reflects greater change or differential trajectories in legal attitudes over time. Standard bivariate correlations between constructs over time are typically biased downward as a result of measurement error (Marsh & Grayson, 1994). To adjust for this bias, we also present disattenuated correlations. As a result, structural equation modeling can be used to estimate autoregressive coefficients between latent constructs over time while accounting for covariance between the error terms for each observed indicator at different occasions (see Marsh, 1993).

Latent growth curve models (LGCMs) were used to model patterns of change in legal cynicism between ages 13 and 20, as well as police legitimacy between ages 15 and 20. Specifically, we used a structural equation modeling framework to estimate the latent intercept and slope based on observed repeated measures of legal cynicism and police legitimacy (Curran, Obeidat, & Losardo, 2010). LGCMs are beneficial in that they can be employed to estimate a unique intercept and slope for each individual, as well as can allow for the inclusion of covariates to examine their potential influence on legal attitudinal trajectories (Bollen & Curran, 2006).

The analyses for this study proceeded in two stages. In the first stage, we estimated unconditional latent growth curves, which produced estimates of the average latent intercept (level) and slope (rate of change) for legal attitudes without covariates (Bollen & Curran, 2006). Unconditional LGCMs allowed for us to identify the optimal shape of legal cynicism and police legitimacy growth during adolescence, in particular, to what extent attitudes change over time (Curran et al., 2010). To do so, we estimated a series of models in a stepwise fashion and compared the goodness of fit using a variety of parameters: the chi-square statistic, root mean square error of approximation (RMSEA), and the Comparative Fit Index (CFI). The best fit was reflected by the lowest chi-square statistic, an RMSEA below .06 and a value above .95 for CFI (Hu & Bentler, 1999). We assessed changes in log-likelihood using a likelihood ratio (LR) test. For legal cynicism, the first model estimated was an intercept-only model, which reflected no significant changes over time in legal cynicism (i.e., no growth). The second model incorporated a linear slope, wherein factor loadings were fixed to 0, .2, .4, and .7. These factor loadings reflected linear time (in years) since the baseline observation (i.e., 2, 4, and 7 years), and they were divided by ten for scaling purposes. In the third model, a quadratic slope (factor loadings = 0, .4, 1.6, 4.9) was estimated. Because police legitimacy was measured at only three time points, we were limited to estimating an intercept-only and linear slope model (factor loadings = 0, .2, .5, reflecting 2 and 5 years since the baseline measurement at age 15).

In the second stage, we explored multivariate relations between theoretical risk factors and between- and within-individual variation in legal cynicism and police legitimacy during adolescence. Specifically, we constructed conditional LGCMs that jointly estimated the influence of time-invariant (TICs) and time-varying covariates (TVCs) on parameters of legal attitudinal growth. TICs are factors that do not vary or are assumed not to vary over time, and they were modeled here as predictors of the latent intercept and slope (Bollan & Curran, 2006). The impact of TICs on the intercept and slope explains between-individual differences in levels and change of legal cynicism and police legitimacy over time.

In the current study, the variables for gender and migrant background were treated as TICs. TVCs do vary over time and were modeled here as direct predictors of observed legal cynicism and police legitimacy at each age. The contemporaneous influence of TVCs must be interpreted net of TICs and underlying growth processes captured in the latent variables (Bollan & Curran, 2006). TVCs explain within-individual differences in legal attitudes and, in essence, reflect deviations from the underlying growth trajectory (Acock, 2013). Dichotomous covariates were recoded as 0, 1, and continuous variables were *z*-standardized with a mean of 0 and standard deviation of 1 to facilitate comparison and interpretation of the results. This means that for continuous covariates, the coefficient (*b*) reflected the relative change in standard deviations of the outcome given a 1 standard deviation change in the covariate. Estimates for TVCs were constrained to be equal to capture the overall association.[2] Taken together, therefore, we examined the social and individual influences on legal cynicism and police legitimacy, independent of underlying growth processes.

To account for missing values in the longitudinal and multivariate models, we used full-information maximum likelihood (FIML) techniques. FIML comprises all available "raw" data to estimate parameters and standard errors (Allison, 2003; Ferro, 2013). Research findings show that FIML approaches provide similar estimates to multiple imputation in longitudinal panel data (Ferro, 2013). In FIML procedures, we assumed that all variables were multivariate normal (Enders, 2012); however, this was not the case in our model for variables such as gender, police contact, and deviance. As such, we applied robust standard errors to account for these violations.[3]

4 | RESULTS

Table 1 displays the descriptive statistics for all variables at all time points in the analyses. The pairwise bivariate correlations for all variables at a single time point (age 17) are reported in table 2. The full correlation matrix for all variables and time points is available in the online supporting information (table OS1). The bivariate relationship between legal cynicism and police legitimacy at age 17 is moderate in strength ($r = –.37$, $p < .001$). The strongest correlates for legal cynicism are low self-control ($r = .55$, $p < .001$), morality ($r = –.49$, $p < .001$), and deviant behavior ($r = .41$, $p < .001$). The strongest correlates for police legitimacy, other than legal cynicism, are deviant behavior ($r = –.34$, $p < .001$), peer disapproval ($r = .31$, $p < .001$), and low self-control ($r = –.33$, $p < .001$). Notably, police contact has a stronger bivariate relationship with police legitimacy ($r = –.22$, $p < .001$) compared with legal cynicism ($r = .13$, $p < .001$).

[2]As an additional analysis, we reestimated all conditional models with unconstrained TVCs to examine whether there are any significant differences in associations over time. To do so, we inspected whether the 95 percent confidence intervals (CIs) for each predictor overlapped between ages. Although there was variation in the size of coefficients for some variables (e.g., police contact and morality), the CIs overlapped across all ages. We interpret this to mean that there were no apparent substantive differences in effect size for predictors over time. We thus report and interpret the results for constrained TVCs only. Unconstrained results are available in tables OS2 through OS5 in the online supporting information. Additional supporting information can be found in the full text tab for this article in the Wiley Online Library at http://onlinelibrary.wiley.com/doi/10.1111/crim.2020.58.issue-1/issuetoc.

[3]For comparison, we also estimated all full models using listwise deletion. For unconditional models, there are only minute differences in estimates between listwise and FIML models. Parental supervision and school commitment are not significant in the listwise models for legal cynicism; however, the sizes of the coefficients are similar. For police legitimacy, parental supervision and gender are not significant in the listwise model, although the coefficients are similar in size. Therefore, the results are likely not substantively affected by the method of handling missing data. The results for all listwise models are available in the online supporting information (see tables OS6–OS11).

TABLE 1 Descriptive statistics for all variables used in the analyses

Variable	*N*	Mean	SD	Min	Max
Legal cynicism (age 13)	1030	2.18	.57	1	4
Legal cynicism (age 15)	1032	2.19	.56	1	4
Legal cynicism (age 17)	1033	2.23	.57	1	4
Legal cynicism (age 20)	1034	2.08	.56	1	4
Parental involvement (age 13)	1030	3.09	.58	1	4
Parental involvement (age 15)	1034	3.01	.62	1	4
Parental involvement (age 17)	1031	2.95	.63	1	4
Parental supervision (age 13)	1019	3.12	.61	1	4
Parental supervision (age 15)	1020	3.21	.62	1	4
Parental supervision (age 17)	1021	3.04	.65	1	4
School commitment (age 13)	1031	.20	.63	−1.50	3.67
School commitment (age 15)	1033	.10	.58	−1.50	3.67
School commitment (age 17)	954	.08	.58	−1.50	3
Teacher–child bonds (age 13)	1031	3.15	.63	1	4
Teacher–child bonds (age 15)	1033	3.06	.66	1	4
Teacher–child bonds (age 17)	954	3.16	.58	1	4
Peer disapproval of deviance (age 13)	1020	1.13	.68	−.25	2.75
Peer disapproval of deviance (age 15)	1032	1.02	.60	−.25	2.75
Peer disapproval of deviance (age 17)	1015	1.25	.64	−.25	2.75
Peer disapproval of deviance (age 20)	1028	1.40	.64	−.25	2.75
Deviant behavior (age 13)	1031	1.91	2.04	0	15
Deviant behavior (age 15)	1033	2.16	2.04	0	15
Deviant behavior (age 17)	1032	1.93	1.90	0	13
Deviant behavior (age 20)	1033	1.49	1.58	0	10
Morality (age 13)	1031	4.62	1.25	1	7
Morality (age 15)	1033	4.25	1.19	1	7
Morality (age 17)	1034	4.39	1.15	1	7
Morality (age 20)	1034	4.76	1.10	1	7
Police contact (1 = yes) (ages 11–13)	1028	.04	.20	0	1
Police contact (1 = yes) (ages 12–15)	1029	.07	.26	0	1
Police contact (1 = yes) (ages 15–17)	1029	.07	.26	0	1
Police contact (1 = yes) (ages 18–20)	1034	.11	.31	0	1
Police legitimacy (age 15)	1019	2.72	.73	1	4
Police legitimacy (age 17)	1016	2.58	.77	1	4
Police legitimacy (age 20)	1027	2.58	.72	1	4
Low self-control (age 13)	984	2.19	.46	1	3.70
Low self-control (age 15)	999	2.25	.42	1	3.90
Low self-control (age 17)	991	2.21	.43	1.10	3.80
Low self-control (age 20)	1033	2.06	.41	1	3.80
Gender (1 = male)	1034	.49	.50	0	1
Migrant background (1 = both parents born outside Switzerland)	1015	.47	.50	0	1

Abbreviation: SD = standard deviation.

TABLE 2 Pairwise correlations between all variables at age 17

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
1 Legal cynicism	1												
2 Police legitimacy	−.37***	1											
3 Parental involvement	−.25***	.15***	1										
4 Parental supervision	−.16***	.15***	.28***	1									
5 School commitment	−.33***	.25***	.16***	.06	1								
6 Teacher–child bond	−.23***	.28***	.20***	−.01	.39***	1							
7 Peer disapproval	−.40***	.31***	.25***	.23***	.27***	.14***	1						
8 Police contact (1 = yes)	.13***	−.22***	−.08**	−.10**	−.07*	−.02	−.19***	1					
9 Low self-control	.55***	−.33***	−.24***	−.14***	−.30***	−.26***	−.39***	.15***	1				
10 Morality	−.49***	.30***	.24***	.15***	.40***	.19***	.46***	−.13***	−.37***	1			
11 Deviant behavior	.41***	−.34***	−.15***	−.15***	−.27***	−.14***	−.32***	.31***	.39***	−.36***	1		
12 Gender (1 = male)	.14***	−.15***	−.11***	−.24***	−.22***	−.02	−.46***	.15***	.12***	−.24***	.26***	1	
13 Migrant background (1 = both parents born outside Switzerland)	.07*	−.03	−.18***	.06	.11***	.01	−.12***	−.03	.07*	.06	−.07*	−.01	1

Notes: The full correlation matrix for all variables and all waves is available in the online supporting information. Range of N = 919–1,033.

TABLE 3 Pairwise bivariate (r) and disattenuated (β) correlations for legal cynicism and police legitimacy between waves (ages 13–20)

Legal Attitudinal Outcome	Pairwise Correlation (r)	N	Disattenuated Correlation (β)	N
Legal Cynicism				
Age 13–15	.42***	1028	.54***	
Age 15–17	.53***	1031	.68***	942
Age 17–20	.54***	1033	.63***	
Police Legitimacy				
Age 15–17	.53***	1001	.62***	995
Age 17–20	.52***	1009	.58***	

Notes: Disattenuated correlations calculated using a multiple indicator simplex model (see Marsh, 1993). ***$p < .001$.

Table 3 displays the stability correlations for legal cynicism at ages 13, 15, 17, and 20 and police legitimacy at ages 15, 17, and 20. Stability correlations are presented as pairwise bivariate correlations (r) and disattenuated correlations (β). The results show that autoregressive correlations for legal cynicism are moderately strong (e.g., $r_{age15\text{-}age17} = .53$, $p < .001$; $r_{age17\text{-}age20} = .54$, $p < .001$) and similar in size compared with bivariate correlations for police legitimacy ($r_{age15\text{-}age17} = .53$, $p < .001$; $r_{age17\text{-}age20} = .52$, $p < .001$). When correcting for measurement error, the stability of legal cynicism becomes even more apparent in late adolescence ($\beta_{age15\text{-}age17} = .68$, $p < .001$; $\beta_{age17\text{-}age20} = .63$, $p < .001$). By comparison, police legitimacy displays somewhat less stability in late adolescence ($\beta_{age15\text{-}age17} = .62$, $p < .001$; $\beta_{age17\text{-}age20} = .58$, $p < .001$);[4] however, these differences are small. Thus, a certain degree of rank-stability in legal cynicism and police legitimacy likely exists throughout adolescence, particularly in later adolescence and early adulthood.

Next, we estimated unconditional growth curve models for legal cynicism and police legitimacy to assess the average level and rate of change in attitudes over time. Specifically, we estimated three models that reflect potential patterns of development of legal cynicism (i.e., an intercept-only model, a linear-slope model, and a quadratic slope model), as well as two models that reflect patterns of police legitimacy (i.e., an intercept-only model and a linear-slope model). Tables 2 and 3 present estimates for the mean intercept, slopes, and variances for each model of legal cynicism and police legitimacy growth, respectively. The fit statistics reveal that a quadratic slope best represents growth in legal cynicism during adolescence. In model 3 of table 4, the chi-square statistic is the lowest ($X^2 = 19.99$, $p < .001$); although still significant, the RMSEA is within an acceptable range (.06) and the CFI is .98. The log-likelihood is the lowest for the nonlinear model, and the LR test indicates the model is significantly improved compared with the linear-slope model ($X^2 = 80.58$, $p < .001$). Taken together, we accept the nonlinear quadratic growth model as the best fit for legal cynicism during adolescence. The fit statistics in table 5 indicate that a linear slope is best suited to describe patterns of police legitimacy during adolescence and early adulthood. Although the RMSEA is not ideal (.10), the CFI is acceptable (.95). The results of the LR test reveal that the linear model is significantly improved compared with the intercept-only model ($X^2 = 39.76$, $p < .001$).

The estimates for the quadratic model (table 4, model 3) show that the average level of legal cynicism at age 13 is 2.17 (95 percent CI = 2.13, 2.20). The positive linear slope combined with a negative quadratic slope demonstrates a concave pattern of legal cynicism over time. The vertex (peak) of the

[4]The marginal decline in stability coefficients for both attitudinal outcomes between ages 17 and 20 is likely a result of an increase in the time between data collection moments in the two most recent waves (i.e., from 2 to 3 years; see more generally Olweus, 1979).

TABLE 4 Comparative parameter estimates and fit statistics for unconditional growth models of legal cynicism (ages 13–20)

	Model 1: Intercept Only	Model 2: Linear Slope		Model 3: Nonlinear Slope		
Variable	**Intercept**	**Intercept**	**Slope**	**Intercept**	**Slope**	**Quad. Slope**
Mean	2.17***	2.21***	−.13***	2.17***	.37***	−.07***
	[2.14, 2.19]	[2.18, 2.24]	[−.18, −.07]	[2.13, 2.20]	[.19, .56]	[−.09, −.05]
Variance	.13	.16	.30	.18	2.40	.02
	[.12, .15]	[.14, .19]	[.23, .40]	[.15, .21]	[1.62, 3.56]	[.01, .04]
Covariance (Int, Slope)			−.09***		−.22***	
Covariance (Int, Quad. Slope)					.01	
Covariance (Slope, Quad. Slope)					−.24***	
Model Fit Statistics						
X^2	182.63***		100.57**		19.99***	
RMSEA	.12		.11		.06	
CFI	.82		.90		.98	
CD	.74		.85		.90	
Log likelihood	−3116.92		−3075.89		−3035.61	

Notes: N = 1,034. CD = coefficient of determination; CFI = comparative fit index; Quad. = quadratic; RMSEA = root mean square error of approximation. 95% confidence intervals reported in brackets; variances across waves are held to be equal. $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

parabola for legal cynicism is 2.26, and it occurs between ages 15 and 17. The covariance estimates report the relationship between latent intercept and growth factors. In model 3 (table 4), the intercept is negatively related to the linear slope, indicating that individuals who start at higher levels of legal cynicism have slower linear growth over time (cov = –.22, $p < .001$). The negative relationship between the linear and quadratic slope reveals that greater linear growth is associated with a sharper deceleration in legal cynicism over time. In essence, then, individuals with greater linear increases in legal cynicism experience a sharper downturn in later adolescence and early adulthood. The estimates for police legitimacy indicate that attitudes steadily decrease between adolescence and early adulthood (b = –.25, 95 percent CI = –.34, –.15). Individuals with higher levels of police legitimacy at age 15 have on average flatter or negative trajectories during adolescence (cov = –.14, $p < .001$). The growth curves for both legal cynicism and police legitimacy are illustrated in figure 1.

In the next step, we estimated conditional growth curve models that include both time-invariant and time-varying covariates. Time-invariant factors are modeled to predict variation in the latent intercept (level) and slope (rate of change) of legal cynicism and police legitimacy. TICs are estimated simultaneously with TVCs and growth curve parameters, and therefore, they must be interpreted as net of these influences. For ease of visualization, the results for TVCs and TICs are reported separately in tables 6 and 7. Recall that all continuous variables are z-standardized, which facilitates comparisons within and between models. Models 1 and 2 in table 6 present the results for legal cynicism without and with police legitimacy, respectively. The results for TVCs indicate that some socialization domains are related to legal cynicism, although the size of the relationship is small. These associations are not straightforward, however. Parental involvement, a proxy for socioemotional bonds, has no direct overall relationship with legal cynicism, whereas individuals who report more supervision by parents are less

TABLE 5 Comparative parameter estimates and fit statistics for unconditional growth models of police legitimacy (Ages 15–20)

	Model 1: Intercept Only	Model 2: Linear Slope	
Variable	Intercept	Intercept	Slope
Mean	2.62***	2.68***	−.25***
	[2.59, 2.66]	[2.64, 2.72]	[−.34, −.15]
Variance	.26	.31	.47
	[.23, .30]	[.27, .36]	[.27, .85]
Covariance (Int. Slope)			−.14***
Model Fit Statistics			
X^2	77.46***		37.70**
RMSEA	.13		.10
CFI	.89		.95
CD	.73		.81
Log likelihood	−3098.76		−3078.88

Notes: N = 1,034. CD = coefficient of determination; CFI = comparative fit index; Quad. = quadratic; RMSEA = root mean square error of approximation. 95% confidence intervals reported in brackets; variances across waves are held to be equal. $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

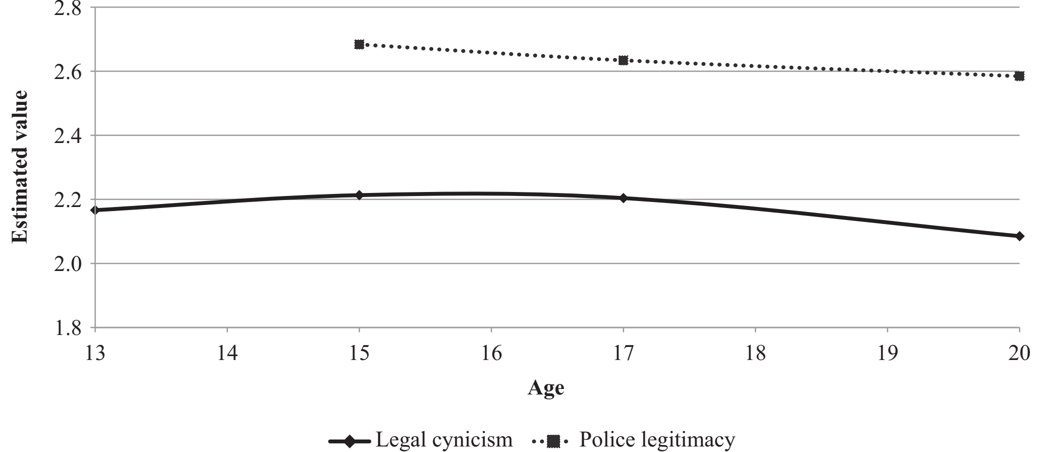

FIGURE 1 Estimated latent growth trajectories of legal cynicism and police legitimacy between ages 13 and 20 (N = 1,034)

likely to be cynical about the law (model 2: b = –.04, 95 percent CI = –.08, –.01). School commitment has a small negative relationship with legal cynicism in the full model (model 2: b = –.04, 95 percent CI = –.08, –.01), but teacher–child bonds is not directly related to legal cynicism (model 2: b = .01, 95 percent CI = –.02, .05). In addition, even though police contact has no significant relationship with legal cynicism, model 2 shows that more positive perceptions of police legitimacy are related to lower cynicism (b = –.11, 95 percent CI = –.15, –.08).

Individual propensities seemingly play a more significant role in shaping legal cynicism. Individuals with low self-control (model 2: b = .29, 95 percent CI = .26, .33) and low moral boundaries (model 2: b = –.20, 95 percent CI = –.24, –.17) are more likely to hold cynical beliefs about the law. Individuals

TABLE 6 Conditional latent growth curve results for time-varying covariates (unconstrained) on legal cynicism during adolescence (ages 13–20)

Time-Varying Predictors	Model 1 *b*	Model 1 95% CI	Model 2 *b*	Model 2 95% CI
Legal Attitudes				
Police legitimacy			$-.11^{***}$	[−.15, −.08]
Socialization Domains				
Parental involvement	−.02	[−.06, .01]	−.02	[−.06, .01]
Parental supervision	$-.05^{*}$	[−.08, −.01]	$-.04^{*}$	[−.08, −.01]
School commitment	$-.05^{*}$	[−.08, −.01]	$-.04^{*}$	[−.08, −.01]
Teacher–child bond	.00	[−.03, .04]	.01	[−.02, .05]
Peer disapproval of deviance	$-.09^{***}$	[−.13, −.06]	$-.08^{***}$	[−.12, −.05]
Police contact (1 = yes)	.07	[−.04, .17]	.03	[−.07, .14]
Individual Propensities				
Low self-control	$.30^{***}$	[.26, .33]	$.29^{***}$	[.26, .33]
Morality	$-.21^{***}$	[−.25, −.18]	$-.20^{***}$	[−.24, −.17]
Deviant behavior	$.15^{***}$	[.12, .18]	$.14^{***}$	[.11, .17]

Notes: $N = 1{,}034$. All continuous variables are *z*-standardized; the model was estimated using robust standard errors; all estimates are independent of TICs and growth factors. $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

TABLE 7 Conditional latent growth curve results for time-invariant covariates (unconstrained) on legal cynicism during adolescence (ages 13–20)

Time-Invariant Predictors	Model 1: Without Police Legitimacy Intercept	Model 1 Linear Slope	Model 1 Quad. Slope	Model 2: With Police Legitimacy Intercept	Model 2 Linear Slope	Model 2 Quad. Slope
Gender (1 = male)	$-.11^{*}$	−.11	.04	−.10	−.28	.06
	[−.21, −.01]	[−.69, .46]	[−.03, .12]	[−.20, .00]	[−.85, .30]	[−.01, .14]
Migrant background (1 = both parents born abroad)	$.11^{*}$	.06	−.02	$.12^{*}$	.02	−.01
	[.01, .21]	[−.52, .64]	[−.09, .06]	[.02, .22]	[−.55, .60]	[−.09, .06]

Notes: $N = 1{,}034$. All continuous variables are *z*-standardized; the model was estimated using robust standard errors; all estimates are independent of TVCs and growth factors. $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

who reported more deviant behavior in the past 12 months were also more likely to hold cynical beliefs (model 2: $b = .15$, 95 percent CI = .12, .18). It is important to note that deviance is measured retrospectively, and so its influence is likely attenuated by subsequent factors measured in the present during each wave of data collection. In relation to TICs, individuals whose parents are both non-Swiss are likely to begin at higher levels of legal cynicism when taking into account all other TVCs and underlying growth ($b = .11$, 95 percent CI = .01, .21).

The results for the time-varying predictors on police legitimacy are presented in table 8. As in table 4, models 1 and 2 in table 8 present the results for police legitimacy without and with legal cynicism, respectively, and net of underlying growth and TICs (see table 9). The results for the TVCs show that, compared with legal cynicism, socialization influences play a more substantial role in explaining variations in police legitimacy through adolescence and early adulthood. Commitment to school (model 2: $b = .05$, 95 percent CI = .01, .10) and teachers (model 2: $b = .14$, 95 percent CI = .10, .18) are related to more positive perceptions of police legitimacy. Similar to legal cynicism, peer disapproval

TABLE 8 Conditional latent growth curve results for time-varying covariates (unconstrained) on police legitimacy during adolescence (ages 15–20)

	Model 1		Model 2	
Time-Varying Predictors	***b***	**95% CI**	***b***	**95% CI**
Legal Attitudes				
Legal cynicism			−.14***	[−.18, −.09]
Socialization Domains				
Parental involvement	−.01	[−.05, .04]	−.01	[−.05, .03]
Parental supervision	.06*	[.01, .10]	.05*	[.01, .09]
School commitment	.05*	[.01, .10]	.05*	[.01, .10]
Teacher–child bond	.14***	[.10, .18]	.14***	[.10, .18]
Peer disapproval of deviance	.08***	[.04, .13]	.07***	[.03, .11]
Police contact (1 = yes)	−.32***	[−.45, −.19]	−.31***	[−.44, −.18]
Individual Propensities				
Low self-control	−.06**	[−.10, −.02]	−.02	[−.07, .02]
Morality	.13***	[.08, .17]	.09***	[.05, .14]
Deviant behavior	−.12***	[−.16, −.07]	−.10***	[−.03, −.11]

Notes: $N = 1{,}034$. All continuous variables are z-standardized; the model was estimated using robust standard errors; all estimates are independent of TICs and growth factors. *$p < .05$; **$p < .01$; ***$p < .001$.

TABLE 9 Conditional latent growth curve results for time-invariant covariates (unconstrained) on police legitimacy during adolescence (ages 15–20)

	Model 1: Without Legal Cynicism		Model 2: With Legal Cynicism	
Time-Invariant Predictors	**Intercept**	**Linear Slope**	**Intercept**	**Linear Slope**
Gender (1 = male)	−.05	.25	−.07	.29*
	[−.16, .06]	[−.02, .51]	[−.18, .04]	[.02, .55]
Migrant background (1 = both parents born abroad)	−.03	−.11	−.01	−.12
	[−.13, .08]	[−.38, .15]	[−.12, .09]	[−.38, .14]

Notes: $N = 1{,}034$. All continuous variables are z-standardized; the model was estimated using robust standard errors; all estimates are independent of TVCs and growth factors. *$p < .05$; **$p < .01$; ***$p < .001$.

of deviance is related to more positive views of the police (model 2: $b = .07$, 95 percent CI = .03, .11). In contrast to legal cynicism, police contact had a significant negative relationship with perceptions of police legitimacy (model 2: $b = –.32$, 95 percent CI = –.45, –.19).

In regard to individual characteristics, the results for police legitimacy partly contrast with legal cynicism. The size of the coefficients for morality (model 2: $b = .09$, 95 percent CI = .05, .14) and deviant behavior (model 2: $b = –.10$, 95 percent CI = –.03, –.11) are weaker for police legitimacy compared with legal cynicism. In contrast to legal cynicism, the relationship between low self-control and police legitimacy is weak (model 1: $b = –.06$, 95 percent CI = –.10, –.02). When legal cynicism is included in model 2, this association weakens substantially and becomes nonsignificant (model 2: $b = –.02$, 95 percent CI = –.07, .02). Finally, in table 9, model 2, the results for TICs show that, net of time-varying covariates and underlying growth, males show significantly steeper increases in police legitimacy between adolescence and early adulthood.

5 | DISCUSSION

The goal of this article was to examine the development of legal attitudes, as measured by legal cynicism and police legitimacy, from adolescence to early adulthood (ages 13–20), and to what extent social experiential and individual factors could be used to explain these patterns. We examined a range of theoretically derived risk factors that reflect key social domains, including parenting, school, peers, and criminal justice. In addition, we assessed to what extent individual propensities are related to one's legal attitudes. Both legal cynicism and police legitimacy exhibited high rank-stability over time, and the results from latent growth curve models show that legal cynicism is not static during adolescence but first increases before declining into early adulthood. We find that legal cynicism is related to individual characteristics that reflect tendencies to recognize or abide by their own internal rules and boundaries, particularly low self-control. Socialization influences also play a role in this process, although the associations are weaker and inconsistent across different operationalizations. These results contrast with patterns and explanations of police legitimacy. Police legitimacy attitudes generally decreased from adolescence to early adulthood, and they were more strongly associated with socialization influences, particularly school and teacher bonds and police contacts. Low self-control was not directly related to perceptions of police legitimacy. In light of these results, we discuss four implications for research and policy related to legal cynicism, police legitimacy, and legal attitudes more generally.

First, our models show that legal cynicism does vary significantly over time, and that these variations on average follow a shallow concave pattern. This finding is in line with that of previous research using the Pathways to Desistance study in which an overall decline in legal cynicism was found (Fine & Cauffman, 2015). The results of these studies, however, also tend to show that as legal cynicism decreases or remains stable, perceptions of legitimacy and procedural justice increase over time (see also McLean et al., 2018; Piquero et al., 2016). By contrast, our results indicate that police legitimacy generally *decreases* from adolescence to early adulthood. Note, however, that measures of police legitimacy were only available for three waves, which limits the possibility of estimating quadratic curves, and so it is possible that the shape of the trajectory may also be nonlinear. Nevertheless, these mixed results may be a result of differences in measurement and operationalization of procedural justice, legitimacy, and general attitudes toward the police (see Jackson & Gau, 2016). The measurement of legitimacy often varies from study to study (Mazerolle et al., 2013) and sometimes even across studies comprising the same data set (e.g., using the Pathways to Desistance Study, Fine & Cauffman, 2015, used an 11-item scale to measure "legitimacy," whereas McLean et al., 2018, used an 8-item scale). In the current study, police legitimacy reflects dimensions of police performance including fair treatment, decision-making, and overall confidence and so arguably captures elements of both procedural justice and legitimacy (Sunshine & Tyler, 2003). We could not measure legitimacy attitudes related to courts, however, which are typically included in measures of overall criminal justice legitimacy (see, e.g., Piquero et al., 2016). As such, our measure is more closely aligned with studies in which only attitudes toward the police are captured, which tend to have results showing stable or increasingly negative attitudes during adolescence (Fagan & Tyler, 2005; Schuck, 2013; Stewart et al., 2014). It is possible that attitudes toward the courts and attitudes toward police follow different developmental pathways, and these underlying differences may account for some of the variation in individual trajectories of combined legitimacy scales (see, e.g., Fine & Cauffman, 2015). Overall, the results indicate that more research is needed to examine to what extent different dimensions of criminal justice legitimacy co-develop over the life course. Specifically, researchers must carefully distinguish between the institutional sources (e.g., police, courts) of procedural justice and legitimacy, as well as work to establish consistent scales operationalizing each theoretical construct.

More substantively, our results reveal that there are likely meaningful differences in the development of legal cynicism and police legitimacy during adolescence and early adulthood, although both are concurrently correlated at any given age. So far, there has been little conceptual distinction between constructs such as legal cynicism and legitimacy within the broader framework of legal attitudinal development and legal socialization. Different manifestations of legal attitudes are typically assumed to develop and change along similar pathways (Fine & Cauffman, 2015; Tyler & Trinkner, 2017), but our results show that both legal cynicism and police legitimacy decline into early adulthood. What drives between- and within-person variation in legal cynicism seemingly differs compared with police legitimacy. Individuals may increasingly accept the "bindingness" of the law, whereas trust in authorities remains conditional on situational characteristics (Fine & Cauffman, 2015). Future research should be aimed at examining the differential nature and sources of stability and change for different legal attitudinal constructs.

It is worth noting that there is a slight peak in legal cynicism in mid-adolescence (ages 15–17) that mirrors the general shape of the aggregate age–crime curve (Sweeten, Piquero, & Steinberg, 2013). Thus, legal cynicism may be part of broader social and cognitive developmental processes that contribute to increases in delinquent behavior during adolescence (McLean et al., 2018; Tyler & Trinkner, 2017). Indeed, our finding that legal cynicism is higher among youth with lower self-control, morality, weaker bonds to prosocial others, as well as peers that approve of deviance and rule-breaking, indicates that legal attitudes are intertwined with more "traditional" risk factors for criminal behavior (Sweeten et al., 2013).

LGCMs show that there are already meaningful between-person differences in legal cynicism at age 13 and police legitimacy at age 15. Furthermore, pairwise and disattenuated correlations reveal that legal cynicism is rank-stable, particularly later in adolescence, which is generally in line with previous research findings that show high continuity in legal attitudes, and particularly legal cynicism, over time (Fine & Cauffman, 2015; Piquero et al., 2005; Stewart et al., 2014). This evident stability in legal attitudes during adolescence and early adulthood is somewhat lower but comparable with findings on personality and behavioral attributes that exhibit high continuity over the life course (e.g., psychopathic traits, see Frick, Kimonis, Dandreaux, & Farell, 2003; aggression, Olweus, 1979; "Big Five" personality characteristics, see Pullman, Raudsepp, & Allik, 2006). For example, these stability coefficients are comparable with disattenuated correlations for aggression over 2 years (.75, see Olweus, 1979, *p.* 867; see also Loeber & Hay, 1997), and raw correlations for five personality dimensions between ages 14 and 16 (.56, see Pullman et al., 2006, p. 456). To understand further the nature of continuity in legal attitudes, it is possible to draw from broader developmental research on the mechanisms contributing to stability and change in attributes such as aggression (see, e.g., Huesmann, Dubow, & Boxer, 2009; Piquero, Carriaga, Diamond, Kazemian, & Farrington, 2012). More research, however, is needed to determine to what extent legal attitudes are stable across the life course, and at what stage attitudes are formed and consolidated. This has implications for how we understand the long- and short-term mechanisms that lead to changes in legal attitudes, and to what extent interactions with criminal justice authorities can *cause* lasting, meaningful changes in attitudes independent of established legal values and orientations (Nagin & Telep, 2017).

Second, we found some evidence that individuals with more prosocial bonds and influences are less cynical toward the law and more positive toward the police. Although these findings generally lend support to a general model of legal socialization wherein negative social encounters, relationships, and experiences of injustice shape legal attitudinal development (Fagan & Tyler, 2005; Kirk et al., 2012; Sampson & Bartusch, 1998; Trinkner & Cohn, 2014; Tyler & Trinkner, 2017), we found, contrary to expectations, that these factors were only weakly and inconsistently related to legal cynicism compared with police legitimacy. Specifically, parental involvement, parental supervision, teacher–child bonds,

and police contact had comparatively weak or nonsignificant relationships with legal cynicism. By contrast, school- and criminal-justice–related socialization influences had stronger associations with perceptions of police legitimacy over time. Adolescents who were more committed to school, felt stronger bonds with their teachers, and those who had fewer negative contacts with the police reported significantly higher than average levels of police legitimacy during adolescence. For example, our measure of school commitment was related to legal cynicism but not to teacher–child bonds. Teacher–child bonds was, however, significantly related to police legitimacy. School commitment captures one's broader attachment and investment in school and education, whereas teacher–child bonds reflects an adolescent's attachment to and fair treatment by their teacher(s). Within the legal socialization framework, the process-based assessment of informal authorities (e.g., teachers) is thought to play a particularly important role in shaping youth's broader views of the law and legal authorities (Trinkner & Cohn, 2014). Our findings indicate, however, that treatment by informal authorities is, perhaps not surprisingly, more relevant to understanding an individual's broader views on criminal justice authorities than attitudes about the law. It is also possible that these variables—parental involvement and supervision, teacher–child bond, and police contact—play an indirect role in shaping legal cynicism by influencing perceptions of police legitimacy, social ties with deviant peers, or individual propensities. Researchers must clearly formulate the shared and divergent developmental processes that influence attitudes toward the law compared with attitudes toward authorities.

Third, our findings contribute to growing evidence that legal cynicism is primarily associated with other (weak) internal mechanisms of control (Augustyn & Ray, 2016; Kaiser & Reisig, 2017; Nivette et al., 2015). By far the strongest concurrent influence on legal cynicism was low self-control, which indicates that legal cynicism is more closely related to one's willingness or ability to obey internalized norms than social influences and attachments.[5] This finding contrasts with findings reported in broader neighborhood- and individual-level literature that demonstrate a robust and strong relationship between social experiences, attachments, and criminal justice attitudes (see for reviews Mazerolle et al., 2013; Walters & Bolger, 2018), as well as original conceptions of legal cynicism as a product of social disadvantage and injustice (Kirk & Papachristos, 2011; Sampson & Bartusch, 1998). Our findings reveal that experiences and perceptions of police play at best a minimal role in shaping cynicism toward the law within a community sample. This result contributes to growing evidence that individual propensities play a more significant role in shaping legal cynicism compared with legitimacy perceptions (Fine & Cauffman, 2015; Kaiser & Reisig, 2017). Importantly, our findings do show support for models of legal socialization (Fagan & Tyler, 2005; Tyler & Trinkner, 2017) and social structural theories of legal attitudinal development for measures of police legitimacy (Kirk & Papachristos, 2011; Sampson & Bartusch, 1998). The results for legal cynicism, however, challenge the notion that legal cynicism is a dimension of criminal justice and legal legitimacy and therefore a product of social experiences and environments. The roots of legal cynicism, as it is typically operationalized using the Sampson and Bartusch (1998) scale, may be more closely related to an individual's personality dimensions or mechanisms of internal control than exogenous social influences.

Finally, the findings of this study have implications for prevention and intervention policy. They contribute to the notion that legal socialization should be a core focus of prevention and intervention strategies between early adolescence and early adulthood (see, e.g., Mazerolle, Antrobus, Cardwell, Piquero, & Bennett, 2019). In particular, the findings on the positive relationship between parental

[5]In a previous study comprising two waves of the Zurich data, Nivette et al. (2015) found that low self-control measured at age 13 may have been mediated by individual involvement in deviant behavior measured at ages 14–15. Therefore, low self-control, legal cynicism, and rule-breaking may be closely intertwined, and legal cynicism may act in congruence with low self-control to bypass rules and justify deviant behavior.

supervision and school commitment, and the negative impact of interactions with the police, demonstrate support for the idea that policies that are focused on supportive and consensus-based strategies are more likely to create the bases for positive legal attitudinal development rather than coercive models of legal socialization (Tyler & Trinkner, 2017). The results for legal cynicism indicate that programs and interventions that aim to improve internal mechanisms of control may also effectively reduce cynicism and likewise delinquent behavior among adolescents (Piquero et al., 2016; Piquero, Jennings, & Farrington, 2010). Additionally, our findings add to the evidence that the strength of teacher–child bonds plays an important role in social development during adolescence and should be emphasized more in prevention research (Obsuth et al., 2017).

5.1 | Limitations and future research

There are several limitations to this study. First, even though we do account for underlying growth, the impact of time-varying covariates reflect contemporaneous associations with legal cynicism at a certain age (Acock, 2013; Bollen & Curran, 2006). As such, we cannot establish causal order among the time-varying covariates and legal cynicism. It is likely that legal attitudes co-develop reciprocally with other social and moral attitudes during adolescence and can play a predictive and post hoc role in justifying rule-breaking behaviors (McLean & Wolfe, 2016; Nivette et al., 2015; Walters, 2018). With longitudinal survey data, it is possible to tease out the direction of these influences using cross-lagged panel and contemporaneous reciprocal effects models (Ribeaud & Eisner, 2015). In addition, in a survey with 2–3-year time lags between data collection moments, it is not possible to detect short-term variations in attitudes that occur between waves. Socialization influences, including experiential effects, can occur in both the long and the short term. A single negative encounter with the police can have immediate short-term effects on attitudes, whereas parenting and family support influences are repeated over long periods of time. It is necessary to distinguish the impact of these different social forces, as well as how they interact with stable individual characteristics (Nagin & Telep, 2017; see, e.g., Augustyn & Ray, 2016).

Second, even though latent growth models are beneficial in estimating individual trajectories of growth, it is possible that this approach masks shared or latent clusters of trajectories (see, e.g., Stewart et al., 2014). Latent group-based trajectory models can be useful for identifying meaningful subgroups within a sample with differential attitudinal trajectories (Nagin & Odgers, 2010; Piquero et al., 2005). Future research should be aimed at assessing to what extent legal attitudinal development is characterized by distinct shared pathways during adolescence and into young adulthood.

Third, in the current model, we do not account for potential patterns of underlying growth in time-varying covariates. It is likely that the social and individual covariates can also be structured as a function of time; that is, they follow some underlying pattern of growth (Bollen & Curran, 2006). The number of covariates included in the current model made the construction of multiple growth curves challenging. Future research, however, should be focused on examining to what extent growth curves for closely related constructs, such as legal cynicism, low self-control, morality, and police legitimacy, co-vary throughout adolescence. This can shed light on parallel developmental processes and the potential underlying factors that drive these developments.

Fourth, even though there are many strengths to the Zurich data, most notably its prospective longitudinal design, the range of relevant social developmental, individual, and legal attitudinal variables, as well as the ethnically diverse international sample, there are some limitations as well. Future studies could benefit from having additional dimensions and sources of socialization, for instance, direct measures of parent legal attitudes and experiences (see, e.g., Wolfe et al., 2017) and

more specific process-based judgments regarding the fairness of and treatment by informal and formal authorities (see, e.g., Trinkner & Cohn, 2014). Researchers should also examine how different styles of parental authority (i.e., authoritarian, permissive, and authoritative), in addition to socioemotional bonds, shape an adolescent's orientation toward the law and police (Trinkner & Cohn, 2014; Trinkner, Cohn, Rebellon, & Van Gundy, 2012). More research is also needed to understand to what extent school organizational characteristics shape students' legal attitudes. Teachers play an important role in the socialization process, but they are also embedded in a broader organizational structure and climate. Students are simultaneously exposed to multiple, possibly conflicting, authorities between teachers and administrators, and so it may be necessary to distinguish between measures of teacher authority and the school-level climate of communication about rules, rule enforcement, and punishment (see, e.g., Gottfredson, Gottfredson, Payne, & Gottfredson, 2005).

In addition, legal cynicism in the Zurich data was first measured at age 13, and police legitimacy at age 15. This short time span within the life course may have limited the possibility of detecting age-graded differences between stages of social and cognitive development (see, e.g., McLean et al., 2018). Future studies should be designed to investigate age-graded differences in socialization influences beyond adolescence, as well as across key stages in the life course (e.g., childhood, early adolescence, and adulthood). Furthermore, there is some debate over the construct validity of the Grasmick et al. (1993) low self-control scale used here (see, e.g., Piquero & Rosay, 1998; Walters, 2016), and so future studies should also be designed to evaluate the robustness of these results using different attitudinal and behavioral operationalizations of low self-control. Finally, the current study was conducted in Switzerland, which is generally comparable with other Western countries in regard to crime rates and support for police (Kutnjak Ivković, 2008; but see Killias & Lanfranconi, 2012). Nevertheless, future research should be aimed at examining the generalizability of these developmental processes across diverse institutional and cultural contexts.

Overall, our findings indicate that legal attitudes, as measured by legal cynicism and police legitimacy, display high levels of continuity throughout adolescence and into young adulthood. In contrast to perceptions of police legitimacy, variation in legal cynicism during adolescence is strongly associated with internal controls compared with socialization influences. In particular, there is evidence that low self-control, deviant behavior, and legal cynicism are closely related, which means that legal cynicism is rooted in dispositions that shape how individuals interpret interactions, form attachments, and recognize moral and legal boundaries (Augustyn & Ray, 2016; Fine et al., 2018; Nivette et al., 2015; Reisig et al., 2011; Wolfe, 2011). These findings contrast with those of theoretical models of legal attitudinal development in which it is assumed that legal cynicism is formed by the same social forces and behaves in a similar way to legitimacy attitudes (Kirk et al., 2012; Sampson & Bartusch, 1998; Tyler & Trinkner, 2017). Future research should be designed to assess the measurement and interpretation of legal cynicism critically in relation to broader legitimacy beliefs and further investigate the shared and distinct sources of these different constructs.

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REFERENCES

Acock, A. C. (2013). *Discovering structural equation modeling using Stata*. College Station: Stata Press.

Allison, P. D. (2003). Missing data techniques for structural equation modeling. *Journal of Abnormal Psychology*, *112*, 545–557.

Ameri, T., Burgason, K. A., DeLisi, M., Heirigs, M. H., Hochstetler, A., & Vaughn, M. G. (2019). Legal cynicism: Independent construct or downstream manifestation of antisocial constructs? New evidence. *International Journal of Law and Psychiatry*, *64*, 211–218. https://doi.org/10.1016/j.ijlp.2019.04.008

Augustyn, M. B. (2016). Updating perceptions of (in)justice. *Journal of Research in Crime and Delinquency*, *53*(2), 255–286. https://doi.org/10.1177/0022427815616991

Augustyn, M. B., & Ray, J. V. (2016). Psychopathy and perceptions of procedural justice. *Journal of Criminal Justice*, *46*, 170–183

Berg, M. T., Stewart, E. A., Intravia, J., Warren, P., & Simons, R. L. (2016). Cynical streets: Neighborhood social processes and perceptions of criminal injustice. *Criminology*, *54*(3), 520–547.

Bolger, P. C., & Walters, G. D. (2019). The relationship between police procedural justice, police legitimacy, and people's willingness to cooperate with law enforcement: A meta-analysis. *Journal of Criminal Justice*, *60*, 93–99.

Bollen, K. A., & Curran, P. J. (2006). *Latent curve models: A structural equation perspective*. Hoboken: Wiley.

Brechwald, W. A., & Prinstein, M. J. (2011). Beyond homophily: A decade of advances in understanding peer influence processes. *Journal of Research on Adolescence*, *21*(1), 166–179. https://doi.org/10.1111/j.1532-7795.2010.00721.x

Caspi, A., & Roberts, B. W. (1999). Personality continuity and change across the life course. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality psychology: Theory and research* (2nd ed., pp. 300–326). New York: Guilford Press.

Cavanaugh, C., & Cauffman, E. (2015). Viewing law and order: Mothers' and sons' justice system legitimacy attitudes and juvenile recidivism. *Psychology, Public Policy, and Law*, *21*(4), 432–441. https://doi.org/10.1037/law0000054

Cohn, E. S., Bucolo, D., Rebellon, C. J., & van Gundy, K. (2010). An integrated model of legal and moral reasoning and rule-violating behavior: The role of legal attitudes. *Law & Human Behavior*, *34*, 295–309. https://doi.org/10.1007/s10979-009-9185-9

Curran, P. J., Obeidat, K., & Losardo, D. (2010). Twelve frequently asked questions about growth curve modeling. *Journal of Cognitive Development*, *11*(2), 121–136. https://doi.org/10.1080/15248371003699969

Degner, J., & Dalege, J. (2013). The apple does not fall far from the tree, or does it? A meta-analysis of parent-child similarity in intergroup attitudes. *Psychological Bulletin*, *139*(6), 1270–1304. https://doi.org/10.1037/a0031436

Dunn, J. (2005). Moral development in early childhood and social interaction in the family. In M. Killen & J. Smetana (Eds.), *Handbook of moral development* (pp. 331–350). Mahwah: Lawrence Earlbaum.

Eisner, M., Malti, T., & Ribeaud, D. (2011). Large-scale criminological field experiments: The Zurich project on the social development of children. In D. Gadd, S. Karstedt, & S. Messner (Eds.), *The SAGE handbook of criminological research methods* (pp. 410–424). London, England: Sage.

Eisner, M., Murray, A. L., Eisner, M., & Ribeaud, D. (2019). A practical guide to the analysis of non-response and attrition in longitudinal research using a real data example. *International Journal of Behavioral Development*, *43*(1), 24–34. https://doi.org/10.1177/0165025418797004

Eisner, M., & Ribeaud, D. (2005). A randomised field experiment to prevent violence: The Zurich intervention and prevention project at schools, ZIPPS. *European Journal of Crime, Criminal Law and Criminal Justice*, *13*, 27–43.

Emery, C. R., Jolley, J. M., & Wu, S. (2011). Desistance from intimate partner violence: The role of legal cynicism, collective efficacy, and social disorganization in Chicago neighborhoods. *American Journal of Community Psychology*, *48*, 373–383.

Enders, C. K. (2012). Dealing with missing data in developmental research. *Child Development Perspectives*, *7*(1), 27–31.

Fagan, J., & Piquero, A. R. (2007). Rational choice and developmental influences on recidivism among adolescent felony offenders. *Journal of Empirical Legal Studies*, *4*(4), 715–748.

Fagan, J., & Tyler, T. R. (2005). Legal socialization of children and adolescents. *Social Justice Research*, *18*(3), 217–242. https://doi.org/10.1007/s11211-005-6823-3

Ferdik, F. V., Wolfe, S. E., & Blasco, N. (2014). Informal social controls, procedural justice and perceived police legitimacy: Do social bonds influence evaluations of police legitimacy? *American Journal of Criminal Justice*, *39*, 471–492. https://doi.org/10.1007/s12103-013-9230-6

Ferro, M. A. (2013). Missing data in longitudinal studies: Cross-sectional multiple imputation provides similar estimates to full-information maximum likelihood. *Annals of Epidemiology*, *24*, 75–77.

Fine, A., & Cauffman, E. (2015). Race and justice system attitude formation during the transition to adulthood. *Journal of Developmental and Life Course Criminology*, *1*, 325–349. https://doi.org/10.1007/s40865-015-0021-2

Fine, A., Cavanagh, C., Donley, S., Steinberg, L., Frick, P. J., & 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. https://doi.org/10.1037/lhb0000167

Fine, A., Wolff, K. T., Baglivio, M. T., Piquero, A. R., Frick, P. J., Steinberg, L., & Cauffman, E. (2018). Does the effect of justice system attitudes on adolescent crime vary based on psychosocial maturity? *Child Development*, *89*(6), e468–e479. https://doi.org/10.1111/cdev.12983

Flexon, J. L., Lurigio, A. J., & Greenleaf, R. G. (2009). Exploring the dimensions of trust in the police among Chicago juveniles. *Journal of Criminal Justice*, *37*, 180–189. https://doi.org/10.1016/j.jcrimjus.2009.02.006

Frick, P. J., Kimonis, E. R., Dandreaux, D. M., & Farell, J. M. (2003). The 4 year stability of psychopathic traits in non-referred youth. *Behavioral Sciences and the Law*, *21*, 713–736.

Gau, J. M. (2015). Procedural justice, police legitimacy, and legal cynicism: A test for mediation effects. *Police Practice and Research: An International Journal*, *16*(5), 402–415. https://doi.org/10.1080/15614263.2014.927766

Gifford, F. E., & Reisig, M. D. (2019). A multidimensional model of legal cynicism. *Law and Human Behavior*, *43*(4), 383–396. https://doi.org/10.1037/lhb0000330

Gottfredson, G. D., Gottfredson, D. C., Payne, A. A., & Gottfredson, N. C. (2005). School climate predictors of school disorder: Results from a national study of delinquency prevention in schools. *Journal of Research in Crime and Delinquency*, *42*(4), 412–444. https://doi.org/10.1177/0022427804271931

Gottfredson, M. R., & Hirschi, T. (1990). *A general theory of crime*. Stanford: Stanford University Press.

Grasmick, H. G., Tittle, C. R., Bursik Jr., R. J., & Arneklev, B. J. (1993). Testing the core empirical implications of Gottfredson and Hirschi's general theory of crime. *Journal of Research in Crime and Delinquency*, *30*(1), 5–29. https://doi.org/10.1177%2F0022427893030001002

Hinds, L., & Murphy, K. (2007). Public satisfaction with police: Using procedural justice to improve police legitimacy. *The Australian and New Zealand Journal of Criminology*, *40*, 27–42.

Hough, M., Jackson, J., Bradford, B., Myhill, A., & Quinton, P. (2010). Procedural justice, trust, and institutional legitimacy. *Policing: A Journal of Policy and Practice*, *4*, 203–210. https://doi.org/10.1093/police/paq027

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, *6*(1), 1–55.

Huesmann, L. R., Dubow, E. F., & Boxer, P. (2009). Continuity of aggression from childhood to early adulthood as a predictor of life outcomes: Implications for the adolescent-limited and life-course persistent models. *Aggressive Behavior*, *35*, 136–149.

Huizinga, D. (1988–1992). *Denver youth survey waves 1–5* [Denver, Colorado]. Ann Arbor: Inter-university Consortium for Political and Social Research. [distributor]. https://doi.org/10.3886/ICPSR36473.v1

Jackson, J., & Gau, J. (2016). Carving up concepts? Differentiating between trust and legitimacy in public attitudes towards legal authority. In E. Shockley, T. M. S. Neal, L. M. PytlikZillig, & B. H. Bornstein (Eds.), *Interdisciplinary perspectives on trust: Towards theoretical and methodological integration*. New York: Springer.

Johnson, D., Maguire, E. R., & Kuhns, J. B. (2014). Public perceptions of the legitimacy of the law and legal authorities: Evidence from the Caribbean. *Law & Society Review*, *48*(4), 947–978.

Johnson, L. M., Simons, R. L., & Conger, R. D. (2004). Criminal justice system involvement and continuity of youth crime: A longitudinal analysis. *Youth & Society*, *36*(1), 3–29. https://doi.org/10.1177/0044118X03260323

Kaiser, K., & Reisig, M. D. (2017). Legal socialization and self-reported criminal offending: The role of procedural justice and legal orientations. *Journal of Quantitative Criminology*, https://doi.org/10.1007/s10940-017-9375-4

Kane, R. J. (2005). Compromised police legitimacy as a predictor of violent crime in structurally disadvantaged communities. *Criminology*, *43*, 469–498. https://doi.org/10.1111/j.0011-1348.2005.00014.x

Karstedt, S., & Farrall, S. (2006). The moral economy of everyday crime: Markets, consumers and citizens. *British Journal of Criminology*, *46*, 1011–1036. https://doi.org/10.1093/bjc/azl082

Killias, M., & Lanfranconi, B. (2012). The crime drop discourse—or the illusion of uniform continental trends: Switzerland as a contrasting case. In J. van Dijk, A. Tseloni, & G. Farrell (Eds.), *The international crime drop: New directions in research* (pp. 268–278). Basingstoke, England: Palgrave Macmillan.

Kirk, D. S., & Papachristos, A. V. (2011). Cultural mechanisms and the persistence of neighborhood violence. *American Journal of Sociology*, *116*(4), 1190–1233. https://doi.org/10.1086/655754

Kirk, D. S., Papachristos, A. V., Fagan, J., & Tyler, T. R. (2012). The paradox of law enforcement in immigrant communities: Does tough immigration enforcement undermine public safety? *The ANNALS of the American Academy of Political and Social Science*, *641*(1), 79–98. https://doi.org/10.1177/0002716211431818

Kutnjak Ivković, S. (2008). A comparative study of public support for the police. *International Criminal Justice Review*, *18*(4), 406–434. https://doi.org/10.1177/1057567708326481

Lee, J. M., Steinberg, L., Piquero, A. R., & Knight, G. P. (2011). Identity-linked perceptions of the police among African American juvenile offenders: A developmental perspective. *Journal of Youth and Adolescence*, *40*, 23–37. https://doi.org/10.1007/s10964-010-9553-2

Little, M., & Steinberg, L. (2006). Psychosocial correlates of adolescent drug dealing in the inner city: Potential roles of opportunity, conventional commitments, and maturity. *Journal of Research in Crime and Delinquency*, *43*(4), 357–386. https://doi.org/10.1177/0022427806291260

Loeber, R., & Hay, D. (1997). Key issues in the development of aggression and violence from childhood to early adulthood. *Annual Review of Psychology*, *48*, 371–410.

Lurigio, A. J., Greenleaf, R. G., & Felxon, J. L. (2009). The effects of race on relationships with police: A survey of African American and Latino youths in Chicago. *Western Criminology Review*, *10*(1), 29–41.

Maguire, E. R., & Johnson, D. (2010). Measuring public perceptions of the police. *Policing: An International Journal of Police Strategies and Management*, *33*(4), 703–730. https://doi.org/10.1108/13639511011085097

Maguire, E. R., Lowrey, B. V., & Johnson, D. (2017). Evaluating the relative impact of positive and negative encounters with the police: A randomized experiment. *Journal of Experimental Criminology*, *13*, 367–391. https://doi.org/10.1007/s11292-016-9276-9

Marsh, H. W. (1993). Stability of individual differences in multiwave panel studies: Comparison of simplex models and one-factor models. *Journal of Education Measurement*, *30*(2), 157–183. https://doi.org/10.1111/j.1745-3984.1993.tb01072.x

Marsh, H. W., & Grayson, D. (1994). Longitudinal stability of latent means and individual differences: A unified approach. *Structural Equation Modeling: A Multidisciplinary Journal*, *1*(4), 317–359. https://doi.org/10.1080/10705519409539984

Mastrofski, S. D., Reisig, M. D., & McCluskey, J. D. (2002). Police disrespect toward the public: An encounter-based analysis. *Criminology*, *40*, 519–552. https://doi.org/10.1111/j.1745-9125.2002.tb00965.x

Mazerolle, L., Antrobus, E., Cardwell, S. M., Piquero, A. R., & Bennett, S. (2019). Harmonizing legal socialization to reduce antisocial behavior: Results from a randomized field trial of truanting young people. *Justice Quarterly*, 1–28. https://doi.org/10.1080/07418825.2019.1618894

Mazerolle, L., Bennett, S., Davis, J., Sargeant, E., & Manning, M. (2013). Procedural justice and police legitimacy: A systematic review of the research evidence. *Journal of Experimental Criminology*, *9*, 245–274. https://doi.org/10.1007/s11292-013-9175-2

McAra, L., & McVie, S. (2007). Youth justice? The impact of system contact on patterns of desistance from offending. *European Journal of Criminology*, *4*(3), 315–345. https://doi.org/10.1177/1477370807077186

McLean, K., & Wolfe, S. E. (2016). A sense of injustice loosens the moral bind of the law: Specifying the links between procedural injustice, neutralizations, and offending. *Criminal Justice and Behavior*, *43*(1), 27–44. https://doi.org/10.1177/0093854815609655

McLean, K., Wolfe, S. E., & Pratt, T. C. (2018). Legitimacy and the life course: An age-graded examination of changes in legitimacy attitudes over time. *Journal of Research in Crime and Delinquency*, https://doi.org/10.1177/0022427818793934

Mulvey, E. P., Steinberg, L., Piquero, A. R., Besana, M., Fagan, J., Schubert, C., & Cauffman, E. (2010). Trajectories of desistance and continuity in antisocial behavior following court adjudication among serious adolescent offenders. *Development and Psychopathology*, *22*, 453–475. https://doi.org/10.1017/S0954579410000179

Nagin, D. S., & Odgers, C. L. (2010). Group-based trajectory modeling (nearly) two decades later. *Journal of Quantitative Criminology*, *26*, 445–453. https://doi.org/10.1007/s10940-010-9113-7

Nagin, D. S., & Telep, C. W. (2017). Procedural justice and legal compliance. *Annual Review of Law and Social Science*, *13*, 1.1–1.24.

Nihart, T., Lersch, K. M., Sellers, C. S., & Mieczkowski, T. (2005). Kids, cops, parents and teachers: Exploring juvenile attitudes towards authority figures. *Western Criminology Review*, *6*(1), 79–88.

Nivette, A. E., Eisner, M., Malti, T., & Ribeaud, D. (2015). The social and developmental antecedents of legal cynicism. *Journal of Research in Crime and Delinquency*, *52*(2), 270–298. https://doi.org/10.1177/0022427814557038

Nivette, A. E., Eisner, M., & Ribeaud, D. (2017). Developmental predictors of violent extremist attitudes: A test of general strain theory. *Journal of Research in Crime and Delinquency*, *54*(6), 755–790. https://doi.org/10.1177/0022427817699035

Obsuth, I., Murray, A. L., Malti, T., Sulger, P., Ribeaud, D., & Eisner, M. (2017). A non-bipartite propensity score analysis of the effects of teacher–student relationships on adolescent problem and prosocial behavior. *Journal of Youth and Adolescence*, *46*(8), 1661–1687. https://doi.org/10.1007/s10964-016-0534-y

Olweus, D. (1979). Stability of aggressive reaction patterns in males: A review. *Psychological Bulletin*, *86*(4), 852–875.

Piquero, A. R., Bersani, B. E., Loughran, T. A., & Fagan, J. (2016). Longitudinal patterns of legal socialization in first-generation immigrants, second-generation immigrants, and native-born serious youthful offenders. *Crime & Delinquency*, *62*(11), 1403–1425. https://doi.org/10.1177/0011128714545830

Piquero, A. R., Carriaga, M. L., Diamond, B., Kazemian, L., & Farrington, D. P. (2012). Stability in aggression revisited. *Aggression and Violent Behavior*, *17*, 365–372.

Piquero, A. R., Fagan, J., Mulvey, E. P., Steinberg, L., & Odgers, C. (2005). Developmental trajectories of legal socialization among serious adolescent offenders. *Journal of Criminal Law and Criminology*, *96*(1), 267–298.

Piquero, A. R., Gomez-Smith, Z., & Langton, L. (2004). Discerning unfairness where others may not: Low self-control and unfair sanction perceptions. *Criminology*, *42*, 699–733.

Piquero, A. R., Jennings, W. G., & Farrington, D. P. (2010). On the malleability of self-control: Theoretical and policy implications regarding a general theory of crime. *Justice Quarterly*, *27*(6), 803–834. https://doi.org/10.1080/07418820903379628

Piquero, A. R., & Rosay, A. B. (1998). The reliability and validity of Grasmick et al.'s self-control scale: A comment on longshore et al. *Criminology*, *36*(1), 157–173.

Pullman, H., Raudsepp, L., & Allik, J. (2006). Stability and change in adolescents' personality: A longitudinal study. *European Journal of Personality*, *20*, 447–459.

Reisig, M. D., Wolfe, S. E., & Holtfreter, K. (2011). Legal cynicism, legitimacy, and criminal offending: The nonconfounding effect of low self-control. *Criminal Justice and Behavior*, *38*, 1265–1279.

Ribeaud, D., & Eisner, M. (2015). The nature of the association between moral neutralization and aggression: A systematic test of causality in early adolescence. *Merrill-Palmer Quarterly*, *61*(1), 68–84.

Röder, A., & Mühlau, P. (2012). What determines the trust of immigrants in criminal justice institutions in Europe? *European Journal of Criminology*, *9*(4), 370–387. https://doi.org/10.1177/1477370812447265

Rosenbaum, D. P., Schuck, A. M., Costello, S. K., Hawkins, D. F., & Ring, M. K. (2005). Attitudes towards the police: The effects of direct and vicarious experience. *Police Quarterly*, *8*(3), 343–365.

Sampson, R. J., & Bartusch, D. J. (1998). Legal cynicism and (subcultural?) tolerance of deviance: The neighborhood context of racial differences. *Law & Society Review*, *32*(4), 777–804.

Sampson, R. J., & Laub, J. H. (1997). A life-course theory of cumulative disadvantage and the stability of delinquency. In T. Thornberry (Ed.), *Developing theories of crime and delinquency* (Vol. *7*, pp. 133–161). New Brunswick: Transaction.

Sargeant, E., & Bond, C. E. W. (2015). Keeping it in the family: Parental influences on young people's attitudes to police. *Journal of Sociology*, *51*(4), 917–932. https://doi.org/10.1177/1440783313482817

Scheuerman, H., & Matthews, S. K. (2014). The importance of perceptions in restorative justice conferences: The influence of offender personality traits on procedural justice and shaming. *Justice Quarterly*, *31*(5), 852–881. https://doi.org/10.1080/07418825.2012.690442

Schuck, A. M. (2013). A life-course perspective on adolescents' attitudes to police: DARE, delinquency, and residential segregation. *Journal of Research in Crime and Delinquency*, *50*(4), 579–607. https://doi.org/10.1177/0022427813481977

Shelton, K. K., Frick, P. J., & Wootton, J. (1996). Assessment of parenting practices in families of elementary school-age children. *Journal of Clinical Child Psychology*, *25*, 317–329.

Sindall, K., McCarthy, D. J., & Brunton-Smith, I. (2017). Young people and the formation of attitudes towards the police. *European Journal of Criminology*, *14*(3), 344–364.

Skogan, W. G. (2005). Citizen satisfaction with police encounters. *Police Quarterly*, *8*, 298–321.

Slocum, L. A., & Wiley, S. A. (2018). "Experience of the expected?" Race and ethnicity differences in the effects of police contact on youth. *Criminology*, *56*(2), 402–432. https://doi.org/10.1111/1745-9125.12174

Stattin, H., & Kerr, M. (2000). Parental monitoring: A reinterpretation. *Child Development*, *71*(4), 1072–1085.

Stewart, D. M., Morris, R. G., & Weir, H. (2014). Youth perceptions of police: Identifying trajectories. *Youth Violence and Juvenile Justice*, *12*(1), 22–39. https://doi.org/10.1177/1541204013480369

Sunshine, J., & Tyler, T. R. (2003). The role of procedural justice and legitimacy in shaping public support for policing. *Law & Society Review*, *37*(3), 513–548.

Sweeten, G. (2012). Scaling criminal offending. *Journal of Quantitative Criminology*, *28*, 533–557. https://doi.org/10.1007/s10940-011-9160-8

Sweeten, G., Piquero, A. R., & Steinberg, L. (2013). Age and the explanation of crime, revisited. *Journal of Youth and Adolescence*, *42*, 921–938. https://doi.org/10.1007/s10964-013-9926-4

Tankebe, J. (2013). Viewing things differently: The dimensions of public perceptions of police legitimacy. *Criminology*, *51*(1), 103–135.

Tapp, J. L., & Levine, F. J. (1977). *Law, justice, and the individual in society: Psychological and legal issues*. New York: Holt, Rinehart, and Winston.

Trinkner, R., & Cohn, E. S. (2014). Putting the "social" back in legal socialization: Procedural justice, legitimacy, and cynicism in legal and nonlegal authorities. *Law and Human Behavior*, *38*(6), 602–617. https://doi.org/10.1037/lhb0000107

Trinkner, R., Cohn, E. S., Rebellon, C. J., & Van Gundy, K. (2012). Don't trust anyone over 30: Parental legitimacy as a mediator between parenting style and changes in delinquent behavior over time. *Journal of Adolescence*, *35*, 119–132. https://doi.org/10.1016/j.adolescence.2011.05.003

Trinkner, R., Rodrigues, H., Piccirillo, D., Gifford, F. E., & Gomes, A. M. M. (2019). Legal socialization in Brazil: Examining the generalizability of the procedural justice model. *International Journal of Comparative and Applied Criminal Justice*, Epub ahead of print. https://doi.org/10.1080/01924036.2019.1587710

Trinkner, R., & Tyler, T. R. (2016). Legal socialization: Coercion versus consent in an era of mistrust. *Annual Review of Law and Social Science*, *12*, 417–439. https://doi.org/10.1146/annurev-lawsocsci-110615-085141

Tyler, T. R. (2006). *Why people obey the law* (2nd ed.). Princeton: Princeton University Press.

Tyler, T. R., & Huo, Y. J. (2002). *Trust in the law: Encouraging public cooperation with the police and courts*. New York: Russell-Sage Foundation.

Tyler, T. R., & Trinkner, R. (2017). *Why children follow rules: Legal socialization and the development of legitimacy*. Oxford, England: Oxford University Press.

Van Craen, M. (2013). Explaining majority and minority trust in the police. *Justice Quarterly*, *30*(6), 1042–1067. https://doi.org/10.1080/07418825.2011.649295

Van Craen, M., & Skogan, W. G. (2015). Differences and similarities in the explanation of ethnic minority groups' trust in the police. *European Journal of Criminology*, *12*(3), 300–323. https://doi.org/10.1177/1477370814535375

Walters, G. D. (2016). Are behavioral measures of self-control and the Grasmick self-control scale measuring the same construct? A meta-analysis. *American Journal of Criminal Justice*, *41*, 151–167. https://doi.org/10.1007/s12103-015-9317-3

Walters, G. D. (2018). Procedural justice, legitimacy beliefs, and moral disengagement in emerging adulthood: Explaining continuity and desistance in the moral model of criminal lifestyle development. *Law and Human Behavior*, *42*(1), 37–49.

Walters, G. D., & Bolger, P. C. (2018). Procedural justice perceptions, legitimacy beliefs, and compliance with the law: A meta-analysis. *Journal of Experimental Criminology*, Epub ahead of print. https://doi.org/10.1007/s11292-018-9338-2

Weerman, F. M. (2011). Delinquent peers in context: A longitudinal network analysis of selection and influence effects. *Criminology*, *49*, 253–286.

Wetzels, P., Enzmann, D., Mecklenburg, E., & Pfeiffer, C. (2001). *Jugend und Gewalt. Eine repräsentative Dunkelfeldanalyse in München und acht anderen deutschen Städten*. Baden-Baden: Nomos.

Wilmers, N., Enzmann, D., Schaefer, D., Herbers, K., Greve, W., & Wetzels, P. (2002). *Jugendliche in Deutschland zur Jahrtausendwende: Gefährlich oder gefährdet? Ergebnisse wiederholter, repräsentativer Dunkelfelduntersuchungen zu Gewalt und Kriminalität im Leben junger Menschen 1998-2000*. Baden-Baden: Nomos.

Wolfe, S. E. (2011). The effect of low self-control on perceived police legitimacy. *Journal of Criminal Justice*, *39*, 67–74. https://doi.org/10.1016/j.jcrimjus.2010.10.006

Wolfe, S. E., McLean, K., & Pratt, T. C. (2017). I learned it by watching you: Legal socialization and the intergenerational transmission of legitimacy attitudes. *British Journal of Criminology*, *57*, 1123–1143. https://doi.org/10.1093/bjc/azw038

Woolard, J. L., Harvell, S., & Graham, S. (2008). Anticipatory injustice among adolescents: Age and racial/ethnic differences in perceived unfairness of the justice system. *Behavioral Sciences and the Law*, *26*, 207–226.

Wu, Y., Lake, R., & Cao, L. (2015). Race, social bonds, and juvenile attitudes toward the police. *Justice Quarterly*, *32*(3), 445–470. https://doi.org/10.1080/07418825.2013.778325

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of the article.

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