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MOTIVATION AND COMMITMENT TO ACTIVISM:

A GROUP DIFFERENTIAL APPROACH TO INVESTIGATING MOTIVATION AND MOTIVATIONAL CHANGE AMONG BLACK AND LATINX ADOLESCENTS ACROSS HIGH SCHOOL

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Abstract

Motivation and Commitment to Activism:

A Group Differential Approach to Investigating Motivation and Motivational Change Among Black and Latinx Adolescents Across High School

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Engagement in sociopolitical activism, such as protesting, has important implications for youth of color and for the communities in which they live (Ballard & Ozer, 2016; Ginwright, 2010; Hope & Spencer, 2017). Critical Consciousness (CC; Freire, 1970/1998; Watts et al., 2011) and Youth Sociopolitical Development Theory (Youth SPD; Watts & Flanagan, 2007) are two prominent frameworks for investigating sociopolitical activism among youth of color. Although both frameworks position motivation as one of the key factors influencing youth activism, motivation is narrowly defined as a single construct—one's sense of efficacy to effect change.

Using motivation constructs from two established motivation frameworks, Self-Determination Theory (SDT; Deci & Ryan, 2008; Ryan & Deci, 2000) and Regulatory Focus Theory (RFT; Higgins, 1997), this dissertation investigated the multidimensional nature of motivation in relation to Black and Latinx adolescents' commitment to activism. Drawing from a longitudinal data set examining Black and Latinx adolescents' civic development over four years of high school (N = 733), I used group differential approaches (latent profile analysis, latent profile transition analysis, and latent profile moderation) to (a) identify distinct combinations of motivations among Black and Latinx high school students in ninth, tenth, and twelfth grade, (b) assess whether and the extent to which adolescents changed profile membership across high

school, (c) examine motivation profiles in tenth grade as predictors of commitment to activism in twelfth grade, and (d) examine motivation profiles in tenth grade as moderators of the relation between adolescents' analysis of social problems in tenth grade and their commitment to activism addressing these problems in twelfth grade (controlling for their initial commitment to activism).

I identified two motivation profiles in ninth grade, four motivation profiles in tenth grade, and four motivation profiles in twelfth grade. At both tenth and twelfth grade, I named the motivation profiles: "Low Motivation," "High Motivation," "Moderate Motivation, Low Autonomy," and "Moderate Motivation, High Autonomy." At both time points, the "Low Motivation" profile comprised the smallest proportion of the sample and the "Moderate Motivation, High Autonomy" profile comprised the largest proportion of the sample.

Most youth shifted to a different motivation profile over time. Adolescents in the "High Motivation" profile at the end of tenth grade reported the highest average commitment to activism at the end of twelfth grade; however, this number was only statistically significantly higher than the "Moderate Motivation, Low Autonomy" profile. Contrary to expectations, youths' social analysis in tenth grade was not predictive of their commitment to activism in twelfth grade; thus, there was no latent profile moderation in relation to social analysis and commitment to activism. Instead, I did find evidence that motivation profile membership moderated the relation between commitment to activism at the end of tenth grade on commitment to activism at the end of twelfth grade. Overall, results suggest that adolescents' motivation is multidimensional and incredibly dynamic. Future CC/Youth SPD research should consider investigating a more complete set of established motivation constructs in relation to youths' sociopolitical development.

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Chapter 1: Introduction

The 2019 Novel Coronavirus (COVID-19) pandemic, combined with publicized examples of anti-Black violence, catalyzed nationwide protests of racial injustice throughout the United States. Although the 2020 antiracism movement was perhaps unique due to its unprecedented number of White protestors and allies, Black and Latinx Americans have a rich and longstanding history of challenging oppressive systems and promoting more equitable policies and practices through sociopolitical activism (e.g., Carson, 1981; Christens & Dolan, 2011). Sociopolitical activism refers to forms of civic engagement such as protesting that are characterized by an explicit emphasis on "systems change" (Watts & Flanagan, 2007, p. 785).

Several recent interviews with Black activists in Boston highlight different factors motivating current activist efforts among youth of color (Dwyer, 2020). For instance, 21-year-old Amel Viaud explained that she is "trying to diminish as much as [she] can [future generations] having to go through these traumatic experiences over and over and over" (Dwyer, 2020). Whereas Amel seems to be motivated by a perceived responsibility to ensure that social conditions do not worsen, 18-year-old Vikiana Petit-Homme suggested that she is driven by aspirations of "defunding the police and bringing that money and those funds and those resources to [communities of color] to fund violence intervention programs, to fund our schools, to get more therapists, social workers, nurses into our schools instead of people with guns" (Dwyer, 2020). Despite these different underlying motivations, both Amel and Vikiana acknowledged that they will likely encounter setbacks as they work towards their goals. In the face of these challenges, are both young women equally likely to exhibit similar levels of long-term commitment to sociopolitical activism? Or, might their different motivational orientations relate

to variation in their commitment to activism over time? Moreover, what is the role of additional motivational constructs, such as intrinsic motivation and political self-efficacy, in this process?

These questions highlight an opportunity to bridge research and theory from two traditionally separate literatures—the civic development literature and the motivation literature—to address matters of social importance. As described in greater detail throughout my dissertation, civic development research has yet to address the complex and multidimensional nature of motivation in relation to sociopolitical activism because foundational civic frameworks such as Critical Consciousness (CC; Freire, 1970/1998; Watts et al., 2011) and Youth Sociopolitical Development Theory (Youth SPD; Watts & Flanagan, 2007) incorporate just one motivation construct—perceived efficacy to effect change (i.e., "political self-efficacy"). Although political self-efficacy is unquestionably a key motivational component associated with activism, from a motivation lens, it is likely just one of many motivation constructs related to youth commitment to activism.

Outcomes Associated With Sociopolitical Activism

Engagement in sociopolitical activism has important implications for youth of color and for the communities in which they live. At the individual level, research suggests that activism promotes positive mental and physical health outcomes, including higher self-esteem, a stronger sense of purpose, and lower levels of stress (for a review, see Ballard & Ozer, 2016). Engagement in sociopolitical activism has also been associated with a number of positive educational outcomes, including academic achievement in high school (Perez et al., 2009) and educational attainment (Chan et al., 2014). In considering why activism is associated with so many positive developmental outcomes among youth of color, some scholars have suggested that activism represents a powerful way for Black and Latinx youth to combat race-related stress and

heal from the traumas associated with racial oppression (Fernández et al., 2018; Ginwright, 2010; Ginwright & James, 2002; Hope & Spencer, 2017).

Beyond these individual-level impacts, sociopolitical activism can also promote positive community- and societal-level change. For instance, Christens and Dolan (2011) highlighted how youth organizing can result in important program and policy changes, including the implementation of antiviolence programs within local schools and the reallocation of city funds to schools and park spaces (Christens & Dolan, 2011). Sociopolitical activism can also lead to reform at the state and national levels. The 2020 antiracism movement has resulted in state-level bans of police chokeholds, the passing of the George Floyd Justice in Policing Act of 2021, and, in some cities, the reallocation of police funds to social services (Narea, 2020).

Despite the numerous positive outcomes associated with sociopolitical activism, engagement in activism can also be associated with significant emotional costs (e.g., Anyiwo et al., 2020; Bañales et al., 2019; Fernández et al., 2018; Gorski, 2019). Activist burnout, for instance, has been identified as "a chronic condition in which activism-related stress becomes so overwhelming it debilitates activists' abilities to perform their activism effectively or to remain engaged in activism" (Gorski, 2019, p. 668). Burnout not only threatens individual-level well-being, but also weakens the sustainability and momentum of crucial social movements (Gorski, 2019). Critically, Black and Latinx activists may be more likely than their White counterparts to experience burnout because they must simultaneously grapple with cumulative experiences of racism and racial trauma (Gorski, 2019).

On the whole, activism represents a powerful tool for challenging oppressive social forces. Activism may also play an important role in supporting Black and Latinx youths' ability to heal from racial trauma. However, the emotional costs sometimes associated with long-term

commitment to activism cannot be ignored. Given the range of possible outcomes associated with activism, both positive and negative, it is important to understand some of the factors underlying individual commitment to sociopolitical activism. Understanding why adolescents of color are committed to activism may help researchers promote the positive impacts associated with long-term engagement, while simultaneously supporting their ability to guard against negative experiences related to burnout.

Civic Frameworks

Two prominent frameworks for investigating sociopolitical activism among youth of color are Critical Consciousness (CC; Freire, 1970/1998; Watts et al., 2011) and Youth Sociopolitical Development Theory (Youth SPD; Watts & Flanagan, 2007). Given the conceptual and theoretical similarities between CC and Youth SPD, scholars sometimes utilize a combination of these frameworks to investigate youth sociopolitical development (e.g., Heberle et al., 2020; Seider et al., 2020b). Likewise, the current dissertation draws on both CC and Youth SPD to examine factors associated with Black and Latinx adolescents' commitment to activism.

Broadly, both CC and Youth SPD contain three main components—social analysis, political self-efficacy, and sociopolitical activism. Social analysis refers to one's critical analysis of systemic oppression and inequity. Political self-efficacy refers to one's perceived ability to challenge these oppressive forces. Sociopolitical activism refers to the actual engagement in actions aimed at dismantling these systems. CC and Youth SPD tend to conceptualize a bidirectional relation between social analysis and sociopolitical activism—deeper social analysis promotes greater activism, which in turn informs social analysis. Moreover, political self-efficacy is hypothesized to moderate this relation. For example, youth who are critically aware of

the systemic inequities that impact their lives may also be more likely to engage in activism challenging this injustice if they also feel personally capable of enacting positive social change.

Although CC/Youth SPD research has established a positive relation between social analysis and sociopolitical activism (e.g., Hope & Jagers, 2014), and between political self-efficacy and sociopolitical activism (e.g., Diemer & Li, 2011), only two known studies have actually tested the interaction between social analysis and political self-efficacy in relation to sociopolitical activism (Diemer & Rapa, 2016; Watts & Guessous, 2006). Whereas one study found support for efficacy as a moderator (Watts & Guessous, 2006), the other did not (Diemer & Rapa, 2016). Thus, there is a need for additional research around how the CC/Youth SPD subcomponents interact with one another.

Furthermore, from a motivation standpoint, there is a clear opportunity to unpack the complexity of motivation within the CC/Youth SPD framework. In other words, it seems likely that political self-efficacy is just one of several important motivation constructs related to social analysis and sociopolitical activism. In this dissertation, I utilized two established frameworks from the motivation literature to investigate several additional motivational factors that may underpin Black and Latinx adolescents' commitment to activism.

Motivation Frameworks

Motivation, broadly speaking, can be defined as the needs, desires, and reasons underlying goal pursuit (Ryan, 2019). Many CC/Youth SPD scholars position political self-efficacy as the primary motivational factor influencing youth commitment to activism (for a review, see Seider et al., 2020b). Yet, motivation research indicates that peoples' expectancies interact with their values and approaches to behavior regulation. In other words, motivation theorists argue that motivation varies both in quantity, or amount (e.g., high

levels of efficacy or low levels of efficacy), as well as in quality, or type (e.g., intrinsic motivation or extrinsic motivation). Examining political self-efficacy in the absence of other motivational constructs may be insufficient for explaining variation in adolescents' short- and long-term commitment to activism. Accordingly, the present dissertation utilized two prominent motivation frameworks, Self-Determination Theory (SDT; Deci & Ryan, 2008; Ryan & Deci, 2000) and Regulatory Focus Theory (RFT; Higgins, 1997), to examine Black and Latinx adolescents' motivations along a number of interrelated dimensions.

Self-Determination Theory

Self-Determination Theory (SDT) broadly argues that behavior can be regulated by two qualitatively distinct forms of motivation—autonomous motivation and controlled motivation (Deci & Ryan, 2008). Essentially, autonomous motivation is characterized by a sense of agency and self-determination, and controlled motivation is characterized by experiences of pressure and demand (Deci & Ryan, 2008). Autonomous and controlled forms of motivation stand in contrast to amotivation, which can be defined as a lack of motivation or intention to act. Decades of SDT research across different disciplines and cultures has associated autonomous motivation with more positive outcomes (e.g., greater long-term persistence, better psychological well-being, and lower levels of burnout), and controlled motivation and amotivation with more negative outcomes (e.g., weaker long-term persistence, worse psychological well-being, and higher levels of burnout; for a review, see Ryan & Deci, 2017).

Some civic engagement researchers have suggested that overall levels of autonomous motivation may be one of the most important predictors of prosocial behavior among youth (e.g., Hardy et al., 2015). Thus, from a CC/Youth SPD perspective, it is important to examine how different types of motivation (e.g., autonomous motivation) interact with political self-efficacy in

relation to commitment to activism. As described below, my dissertation examined these potential interactions using latent profile analysis.

Regulatory Focus Theory

Regulatory Focus Theory (RFT), like Self-Determination Theory (SDT), distinguishes between qualitatively distinct forms of motivation. Broadly, RFT distinguishes between prevention motivation and promotion motivation (Higgins, 1997). Whereas prevention motivation is motivation that is regulated by concerns for safety and security, promotion motivation is motivation regulated by concerns for growth and advancement (Higgins, 1997). Although prevention motivation has been associated with a stronger commitment to collective action in the short-term (e.g., Zaal et al., 2011), prolonged prevention motivation can be emotionally exhausting (Scholer et al., 2019). In considering factors underlying long-term commitment to activism, it seems valuable to examine the relation between chronic prevention motivation and commitment to activism over time. Moreover, given that prevention and promotion components of motivation are hypothesized to vary along the autonomy-control continuum specified by SDT (Miele & Scholer, 2018), it may be even more informative to examine how all of these qualitatively distinct motivational factors interact in relation to social analysis and commitment to activism. Again, I used latent profile analysis to investigate the multidimensional nature of motivation in relation to social analysis and commitment to activism.

Group Differential Approaches to Data Analysis

In this dissertation, I conducted latent profile analyses (LPAs) and latent profile transition analyses (LPTAs) to address my research questions. LPAs and LPTAs belong to a broad class of latent variable techniques called mixture models. Mixture models are sometimes referred to as "group differential" approaches to analysis because they consider subgroups of individuals who

are characterized by similarities in their patterns of responses, and/or in their patterns of change (Johnson, 2021; Masyn, 2013). In contrast to more traditional, "variable-centered" approaches (e.g., regression), which assume that the data come from a single population/group, group differential approaches (e.g., LPA and LPTA) assume that the data come from multiple, unobserved populations/groups (Johnson, 2021; Masyn, 2013). In other words, group differential approaches allow researchers to examine potential heterogeneity in some population with regard to a certain set of variables. Given the multidimensional nature of motivation, a group differential approach may facilitate a more nuanced understanding of motivation in the context of the CC/Youth SPD framework.

Chapter 2: Literature Review

The following literature review contains five main sections. First, I will define civic engagement and highlight the outcomes associated with sociopolitical activism (one form of civic engagement) among Black and Latinx adolescents. Next, I will review Critical Consciousness (CC; Freire, 1970/1998; Watts et al., 2011) and Youth Sociopolitical Development Theory (Youth SPD; Watts & Flanagan, 2007)—two key theoretical frameworks related to youth civic development. Following the review of CC and Youth SPD, I will describe the relevance of two prominent motivation frameworks, Self-Determination Theory (SDT; Deci & Ryan, 2008; Ryan & Deci, 2000) and Regulatory Focus Theory (RFT; Higgins, 1997). I will then review the small body of work that has examined civic engagement using SDT and RFT as guiding frameworks. Finally, I will briefly describe group differential approaches to data analysis and explain the rationale for using a group differential approach in the context of this dissertation. After reviewing the literature, I present the aims of my dissertation.

Defining Civic Engagement

Civic engagement is a broad construct with varying definitions across disciplines. Within the civic development literature, civic engagement has been described as "a range of human activities that strengthens social ties, builds collective responsibility and benefits society as a whole" (Portes, 1998; Saegert et al., 2001, as cited in Ginwright, 2010, p. 79). From this perspective, civic engagement can be conceptualized as a constellation of prosocial behaviors directed toward community and societal improvement. The types of activities encompassed by civic engagement can vary both in terms of their goals and their outcomes. For instance, Watts and Flanagan (2007) describe three forms of civic engagement—community service, civic activity, and sociopolitical activism. Community service refers to "activities that reduce stress by

providing aid to individuals" (Watts & Flanagan, 2007; p. 787). Civic activity refers to "conventional involvement in social and political institutions" such as voting (Watts & Flanagan, 2007; p. 787). Finally, sociopolitical activism refers to unconventional forms of civic engagement such as protesting that are characterized by an explicit emphasis on "systems change" (Watts & Flanagan, 2007, p. 785). The present dissertation study focused on the sociopolitical activism form of civic engagement, rather than on community service or conventional civic activity.

Outcomes Associated With Sociopolitical Activism

Sociopolitical activism is associated with benefits at the societal, community, and individual levels. The Civil Rights Movement of the 1950's and 1960's challenged the legalized discrimination, segregation, and disenfranchisement of Black Americans, and the related Chicano Movement of the 1960's and 1970's improved working conditions for Latinx workers and ensured voting rights protections and educational opportunities for non-native English speakers (Zinn, 1980). More recently, the 2020 antiracism movement has resulted in state-level bans of police chokeholds, the passing of the George Floyd Justice in Policing Act of 2021, and, in some cities, the reallocation of police funds to social services (Narea, 2020). Whereas the number of White allies and supporters has varied considerably across these racial justice movements, Black and Latinx Americans have consistently played instrumental roles in resisting oppressive systems and fighting for more equitable social conditions (e.g., Carson, 1981; Christens & Dolan, 2011).

Beyond the macro-level benefits associated with sociopolitical activism, engagement in activism has also been associated with a number of positive outcomes at the individual level. For instance, research suggests that youth activists have better mental and physical health

outcomes—including higher self-esteem, a stronger sense of purpose, and lower levels of stress—compared to their non-activist peers (for a review, see Ballard & Ozer, 2016). Although the youth civic engagement literature is disproportionately focused on adolescents with privileged identities (e.g., White and middle-class adolescents), a growing body of research conducted with youth of color has found similar positive associations among sociopolitical activism, psychological well-being, and academic achievement (e.g., Chan et al., 2014; Christens & Dolan, 2011; Perez et al., 2009; for a review, see Diemer et al., 2021). For instance, Black and Latinx adolescents who engage in youth organizing have been found to report higher levels of self-esteem and leadership confidence (Christens & Dolan, 2011), as well as higher levels of optimism about the future and greater life satisfaction as young adults (Chan et al., 2014). In addition to these important psychological outcomes, engagement in sociopolitical activism also has positive educational implications for Black and Latinx youth. For example, activism among Black and Latinx youth has been associated with academic achievement in high school (Perez et al., 2009), as well as with later educational attainment (Chan et al., 2014). One explanation for why sociopolitical activism is associated with so many positive developmental outcomes among Black and Latinx youth is that activism represents one way these youth can combat race-related stress and heal from the traumas associated with racial oppression (Fernández et al., 2018; Ginwright, 2010; Ginwright & James, 2002; Hope & Spencer, 2017).

Despite the numerous positive outcomes associated with sociopolitical activism, youth and adult engagement in activism can also be associated with significant emotional costs (e.g., Anyiwo et al., 2020; Bañales et al., 2019; Fernández et al., 2018; Gorski, 2019)—especially when the pace of social change is slow (Fernández et al., 2018; Gorski, 2019). Gorski (2019), for instance, conducted a qualitative study with adult activists examining activist burnout—"a

chronic condition in which activism-related stress becomes so overwhelming it debilitates activists' abilities to perform their activism effectively or to remain engaged in activism" (p. 668). According to Gorski (2019), activist burnout results from a combination of internal and external factors and has wide-ranging negative implications. At the individual level, burnout was associated with experiences of frustration, sadness, exhaustion, and guilt (Gorski, 2019). Notably, Gorski (2019) concluded that Black and Latinx activists were more "vulnerable" to emotional exhaustion than their White counterparts—likely owing to their cumulative lived experiences of racism (i.e., "racial battle fatigue;" p. 682). Beyond the individual level, activist burnout was also identified as a significant barrier to the sustainability and progress of these important and necessary social movements (Gorski, 2019).

Although long-term engagement in activism may result in burnout among some Black and Latinx activists (e.g., Gorski, 2019), activism nonetheless remains one powerful way that marginalized youth can combat, and heal from, racial trauma (Fernández et al., 2018; Ginwright, 2010; Ginwright & James, 2002; Hope & Spencer, 2017). Additionally, long-term engagement in sociopolitical activism is an essential component of challenging systemic oppression and promoting equity. Given the range of possible outcomes associated with activism, both positive and negative, it is important to understand the factors underlying Black and Latinx adolescents' commitment to sociopolitical activism. Understanding why adolescents of color are committed to activism may help to promote the positive impacts associated with long-term engagement, while simultaneously supporting an ability to guard against the negative experiences related to burnout.

Sociopolitical Frameworks

Two prominent frameworks for understanding sociopolitical activism among youth of color are Critical Consciousness (CC; Freire, 1970/1998; Watts et al., 2011) and Youth

Sociopolitical Development Theory (Youth SPD; Watts & Flanagan, 2007). CC and Youth SPD are conceptually and theoretically related; in fact, a recent meta-analysis of CC literature explicitly included studies that utilized either CC or Youth SPD "as a theoretical or analytic frame" (Heberle et al., 2020, p. 527). Some scholars have even used the terms "critical consciousness" and "sociopolitical development" interchangeably (e.g., Heberle et al., 2020; Seider et al., 2020b). Thus, given the conceptual and theoretical similarities between CC and Youth SPD, I drew on both frameworks in the current dissertation. In the following sections, I briefly describe the components of CC and Youth SPD, and then discuss the research findings associated with both frameworks.

Critical Consciousness

CC refers to the ability to critically reflect upon, analyze, and act against systems of inequity and oppression (Freire, 1970/1998; 1974). Brazilian philosopher-educator Paulo Freire popularized the concept of CC in the 1970's through his work with Brazilian laborers, who were motivated to liberate themselves from oppressive social conditions. According to Freire (1970/1998; 1974), the ability to pair critical reflection about systemic inequity with critical action against these marginalizing forces (i.e., "praxis") is crucial for addressing and dismantling oppression.

Building upon Freire's foundational work, contemporary CC scholars have differentiated among three related subcomponents of CC—critical reflection, political self-efficacy, and critical action (e.g., Watts et al., 2011). Critical reflection is conceptualized as the ability to critically reflect upon and analyze inequitable systems of oppression. Political self-efficacy is the belief that one is capable of challenging and dismantling these oppressive systems. Finally, critical action refers to the actual engagement in actions that challenge oppressive systems. The term

"critical motivation" (i.e., "the motivation or perceived capacity to effect sociopolitical change;" Diemer et al., 2017, p. 479) is sometimes substituted for political self-efficacy as the third arm of CC. A main distinction between Freire's (1970/1998; 1974) conceptualization of CC and more contemporary conceptualizations of CC is the addition of an efficacy, or a motivation, component. Whereas Freire (1974) suggested that critical reflection engendered a sense of efficacy—"[c]onscientisation implies then that when I realise that I am oppressed, *I also know I can liberate myself* [emphasis added] if I transform the concrete situation where I find myself oppressed" (p. 25)—contemporary CC frameworks position perceived efficacy as a distinct component of critical consciousness that may or may not proceed from critical reflection.

There is currently no formalized CC process model. Nonetheless, modern CC scholars often conceptualize critical reflection and critical action as functioning iteratively, in which critical reflection catalyzes critical action (and vice versa). Political self-efficacy is often hypothesized to moderate the relation between critical reflection and critical action (see Figure 1). According to this conceptualization, youth who are critically aware of the systemic inequities that impact their lives are more likely to engage in activism challenging this injustice if they also feel personally capable of bringing about change.

Youth Sociopolitical Development Theory

Sociopolitical development refers to "the evolving, critical understanding of the political, economic, cultural, and other systemic forces that shape society and one's status in it, and the associated process of growth in relevant knowledge, analytical skills, and emotional faculties" (Watts & Flanagan, 2007; p. 784). According to Watts and Flanagan (2007), youth sociopolitical development can be understood through a framework, Youth Sociopolitical Development Theory (Youth SPD), that includes four components—worldview and social analysis, sense of agency,

opportunity structure, and societal involvement behavior. Similar to the critical reflection component of CC, worldview and social analysis refer to one's critical analysis of inequitable and oppressive systems. Sense of agency refers to perceived personal, political, or collective efficacy to change these systems. Sense of agency, then, broadly maps onto the political self-efficacy component of CC. Opportunity structure, which has no analog in the CC framework, refers to the actual opportunities for meaningful societal involvement. That is, the Youth SPD model highlights how broader contextual factors can moderate individual-level processes (Watts & Flanagan, 2007). Finally, societal involvement behavior, the main outcome in the Youth SPD model, refers to three different types of civic engagement—community service, civic activity, and sociopolitical activism. The sociopolitical activism arm of civic engagement relates to CC's notion of critical action, in that both components refer to civic action aimed at systems change.

Unlike CC, there is an explicit developmental model associated with Youth SPD (see Figure 2). This Youth SPD model is very similar to the hypothesized CC processes described above. Specifically, Youth SPD hypothesizes a bidirectional relation between social analysis and sociopolitical activism—deeper social analysis promotes greater activism, which in turn informs social analysis. Moreover, sense of agency (i.e., political self-efficacy) is hypothesized to moderate this relation. Youth SPD further proposes that opportunity structures moderate this analysis-activism relation. In other words, youth who are critically aware of the systemic inequities that impact their lives are more likely to engage in activism challenging this injustice if they feel personally capable of bringing about change, and if they have meaningful opportunities to engage in sociopolitical activism.

In sum, CC and Youth SPD are two prominent frameworks for understanding why adolescents of color engage in sociopolitical activism. Both frameworks identify social analysis,

and to a lesser extent political self-efficacy, as key predictors of activism. In the next section, I will describe and evaluate CC/Youth SPD research that has tested these theoretical assumptions.

CC/Youth SPD Research Findings

The following subsections review the existing CC/Youth SPD literature to better understand how youth develop a commitment to activism. More specifically, from a CC/Youth SPD lens, I will examine how social analysis and political self-efficacy independently and jointly foster commitment to activism. In the first subsection, I discuss linear relations between social analysis and activism, and between political self-efficacy and activism. In the second subsection, I focus on potential reciprocal relations among social analysis, political self-efficacy, and activism. Next, I examine the comparatively smaller body of work assessing the moderating role of efficacy on the relation between analysis and activism. In the final subsection, I review group differential approaches to assessing CC/Youth SPD processes.

Unidirectional Relations Among Variables. One theme that emerges from the research examining relations among CC/Youth SPD subcomponents is that social analysis, political self-efficacy, and activism are positively, unidirectionally associated with one another (e.g., Bañales et al., 2020b; Diemer & Rapa, 2016; Hope & Jagers, 2014). For example, Hope and Jagers (2014) found positive associations between social analysis and civic engagement, as well as between political efficacy and civic engagement. Specifically, among Black youth, higher levels of analysis and efficacy were associated with higher levels of civic engagement. Diemer and Rapa (2016) similarly found that, among Black and Latinx ninth graders, higher levels of social analysis positively predicted expected protest participation. Finally, Bañales et al. (2020b) found that social analysis positively predicted sociopolitical activism among Black and Latinx young adults.

In a slightly different test of the CC/Youth SPD model, Diemer and Li (2011) examined political efficacy (rather than social analysis) as the key predictor of civic engagement among a racially diverse sample of poor and working class youth. Results of a structural equation model indicated that political efficacy significantly predicted voting behavior (a more traditional form of civic engagement) and sociopolitical activism (e.g., participating in protests, signing a petition, boycotting products). Moore et al. (2016) replicated these findings around political efficacy and traditional (e.g., community service) as well as non-traditional forms of civic engagement (e.g., protests, boycotts).

Taken together, this body of work suggests that higher levels of social analysis and efficacy are, on average, predictive of greater sociopolitical activism among Black and Latinx youth. However, a major limitation of this work is that the conclusions are grounded in cross-sectional analyses. Thus, longitudinal research is required to understand the extent to which these relations persist over time. The present dissertation addresses this gap in literature by examining Black and Latinx adolescents' social analysis in tenth grade as predictive of their commitment to activism in twelfth grade.

Bidirectional Relations Among Variables. Another theme within the CC/Youth SPD literature is that the subcomponents may be reciprocally, or bidirectionally related. For instance, one finding from Clark and Seider's (2020) longitudinal work suggests that adolescents' growth in social analysis is positively associated with their growth in commitment to sociopolitical activism across four years of high school. Given that Clark and Seider (2020) did not model a causal pathway between these two components, they concluded that the correlation between analysis and commitment to activism provides tentative support for the existence of a bidirectional relation. This bidirectionality is further supported by qualitative work conducted by

Christens and Dolan (2011), who concluded that analysis, efficacy, and activism were mutually reinforcing among youth organizers.

Efficacy as a Moderator. Thus far, none of the studies reviewed assessed the hypothesized moderating effect of political self-efficacy on the relation between social analysis and activism (Watts & Flanagan, 2007). To my knowledge, there are only two studies that have assessed this moderation hypothesis from a CC/Youth SPD framework (Diemer & Rapa, 2016; Watts & Guessous, 2006), and one study that tested a slightly different interaction using an alternative CC/Youth SPD model (Moore et al., 2016). Watts and Guessous (2006) conducted a study with predominantly Black (79%) adolescents, and measured belief in a just world (BJW) as a proxy for social analysis. They found both social analysis and political self-efficacy to be significant predictors of civic engagement. Moreover, efficacy moderated the relation between social analysis and civic engagement. That is, higher levels of social analysis (low BJW) were associated with higher levels of civic engagement only among those with high levels of efficacy; social analysis was negatively associated with civic engagement when efficacy was low.

Watts and Guessous' (2006) findings align with research conducted outside of the formal CC/Youth SPD literature (see Mohiyeddini & Montada, 1998). Although Mohiyeddini and Montada (1998) did not explicitly utilize the CC/Youth SPD framework, their constructs overlap with social analysis, political efficacy, and sociopolitical activism; specifically, they examined BJW, self-efficacy to promote justice in the world (SEJW), and willingness to fight against unemployment through sociopolitical activism (e.g., writing to politicians, signing a petition, joining a protest). Similar to Watts and Guessous (2006), Mohiyeddini and Montada (1998) found that efficacy (i.e., SEJW) moderated the relation between social analysis (i.e., BJW) and commitment to activism.

In an alternative test of the CC/Youth SPD model, Moore et al. (2016) examined whether social analysis moderated the relation between efficacy and civic engagement. Contrary to expectations, the relation between efficacy and civic engagement was found to be stronger among individuals with low levels of social analysis and weaker among individuals with high levels of social analysis. In other words, individuals who were highly critical of systemic inequity exhibited a relatively stable commitment to activism, regardless of their perceived political efficacy. However, individuals with high levels of social analysis and high levels of political efficacy reported lower overall levels of civic engagement compared to individuals with low levels of analysis and high levels of efficacy. Thus, Moore et al. (2016) suggested that high levels of social analysis, regardless of perceived political efficacy, may temporarily inhibit civic engagement as individuals grapple with intimidating systemic issues. Longitudinal research is needed to assess whether this relation persists over time.

More recent research with Black and Latinx youth has failed to replicate the significant interaction between social analysis and efficacy as identified by Watts and Guessous (2006) and Mohiyeddini and Montada (1998). For instance, Diemer and Rapa (2016) concluded that political efficacy neither moderated nor mediated the relation between social analysis and action among a sample of Black and Latinx adolescents. These findings contradict what would be expected based on the CC/Youth SPD model, and Diemer and Rapa (2016) in fact suggested that measurement error may have driven these nonsignificant findings. It is also possible, however, that Diemer and Rapa's (2016) variable-centered approach merely masked a significant interaction that occurred within a subset of the sample. In other words, group differential approaches may be required to investigate the moderating role of efficacy.

Latent Groups. Group differential approaches to investigating CC/Youth SPD highlight the value of examining how distinct combinations of the social analysis, efficacy, and activism components cluster within latent (i.e., not directly observable) subgroups (e.g., Christens et al., 2018; Godfrey et al., 2019). Godfrey et al. (2019) conducted a latent class analysis (LCA) with six indicators of CC and identified four latent CC groups among adolescents of color—acritical but partially discontented and inefficacious (30%), acritical, contented, and efficacious (27%), critical but contended and efficacious (11%), and critical and discontented but efficacious (33%). Notably, the acritical, contented, and efficacious group and both of the critical groups were all characterized by similar levels of commitment to activism. This finding suggests that helping youth become more critical of systemic inequity may not necessarily result in them developing a stronger commitment to sociopolitical activism. Another noteworthy finding from Godfrey et al.'s (2019) study was that groups characterized by high levels of social analysis also had high levels of political efficacy. This finding seems to align with Freire's (1970/1998) suggestion that critical reflection engenders a sense of efficacy. Work by Christens et al. (2018), however, challenges this notion.

Christens et al. (2018) conducted a latent profile analysis (LPA) with four indicators of cognitive and emotional empowerment, constructs that largely map onto social analysis and political efficacy, and identified seven latent profiles among adolescents. Notably, in contrast to Godfrey et al. (2019), Christens et al. (2018) identified a group, "critical but alienated" (3.9%), in which individuals had high scores on social analysis and low scores on political efficacy. In fact, a similar profile was identified in qualitative work regarding civic identity development among adolescents of color (Rubin, 2007). Specifically, Rubin (2007) identified a subgroup of

"discouraged" students characterized by high levels of social analysis and low levels of political efficacy.

Conclusion. Overall, this research indicates that there is a complex relation among the analysis, efficacy, and activism components of CC. Whereas some work suggests that the components are positively, unidirectionally associated with each other (e.g., Bañales et al., 2020b; Hope & Jagers, 2014), more complex statistical models, as well as qualitative findings, indicate possible bidirectionality (e.g., Clark & Seider, 2020). Although political efficacy is hypothesized to moderate the relation between social analysis and activism, only two known studies have tested this interaction using the traditional CC/Youth SPD framework (Diemer & Rapa, 2016; Watts & Guessous, 2006), and only one of these studies found support for this pathway (Watts & Guessous, 2006). Despite this mixed evidence, group differential approaches to CC/Youth SPD indicate that variable-centered analyses may mask significant interactions that occur within a subset of the sample (e.g., Christens et al., 2018; Godfrey et al., 2019). In other words, it is possible that the interaction between social analysis and political self-efficacy does exist among some groups and is simply better modeled through LCAs/LPAs (e.g., Christens et al., 2018; Godfrey et al., 2019).

Beyond the need for additional research around how social analysis and political self-efficacy interact to predict activism among youth of color, there is also a clear opportunity to unpack the complexity of motivation within the CC/Youth SPD framework. Although efficacy is unquestionably a key motivational component associated with activism, from a motivation lens, it is likely just one of many motivation constructs related to youth activism. In fact, Clark and Seider (2020) recently urged researchers to consider "widening the bucket of motivational constructs considered as potential catalytic or limiting factors within the youth sociopolitical

development framework" (p. 198). Yet, in the absence of established frameworks from the motivation literature, individual-level motivational constructs and processes are at-risk for being oversimplified. Accordingly, the present dissertation utilized two prominent motivation frameworks, Self-Determination Theory and Regulatory Focus Theory, to examine Black and Latinx adolescents' motivations along a number of interrelated dimensions.

Motivation Frameworks

Motivation, broadly speaking, can be defined as the needs, desires, and reasons underlying goal pursuit (Ryan, 2019). Currently, many CC/Youth SPD scholars position political self-efficacy as the primary motivational factor influencing youth commitment to activism (for a review, see Seider et al., 2020b). Motivation theorists, however, would argue that peoples' expectancies must be considered in conjunction with their values and the extent to which the values have been internalized. That is, just because an individual feels capable of challenging systemic forces (i.e., has high levels of efficacy) does necessarily mean they have a compelling reason to act. Within the motivation literature, there are two needs-based frameworks that are useful for understanding the reasons underlying action and commitment to action—Self-Determination Theory (SDT; Deci & Ryan, 2008; Ryan & Deci, 2000) and Regulatory Focus Theory (RFT; Higgins, 1997).

Self-Determination Theory

SDT (Deci & Ryan, 2008; Ryan & Deci, 2000) highlights the importance of considering the quality, or type, of motivation underlying behavior in addition to the quantity, or amount. SDT is a broad framework for studying human motivation and well-being which argues that individuals have basic psychological needs around autonomy, competence, and relatedness (Deci

& Ryan, 2008; Ryan & Deci, 2000). According to SDT, the quality and quantity of one's motivation depends on the extent to which these basic needs are supported or undermined.

The broader SDT framework is comprised of six sub-theories, which were developed following decades of research around the nature of intrinsic and extrinsic motivation. According to one of SDT's sub-theories, Organismic Integration Theory (OIT), behavior can be regulated by two qualitatively different forms of motivation—autonomous motivation and controlled motivation. As described in greater detail below, autonomous motivation is characterized by a sense of agency and self-determination, and controlled motivation is characterized by experiences of pressure and demand (Deci & Ryan, 2008). Autonomous and controlled forms of motivation stand in contrast to amotivation, which can simply be defined as a lack of motivation or intention to act. According to Ryan and Deci (2000), amotivation may occur when individuals do not value an activity, when they do not feel a sense of efficacy to complete the activity, or when they fail to perceive a relation between their actions and certain outcomes of interest. From a CC/Youth SPD perspective, it will be interesting to examine whether there is a motivation profile characterized by low levels of efficacy and high levels of amotivation.

Autonomous motivation is comprised of both intrinsic motivation and internalized forms of extrinsic motivation (see Figure 3). Intrinsic motivation is motivation that stems from factors that are inherent to the task or activity, such as interest or the inherent satisfaction one experiences when engaging in the behavior (Deci & Ryan, 2008). In other words, intrinsically motivated individuals experience the process of engaging in a particular task as rewarding in and of itself (Ryan et al., 2019). For instance, in an education context, a student might choose to participate in class because they derive genuine pleasure and satisfaction from the process of learning. According to Ryan et al. (2019), individuals are more likely to experience intrinsic

motivation when their needs for autonomy, competence, and relatedness are being satisfied. Actions regulated by intrinsic motivation are hypothesized to have an internal perceived locus of control; that is, individuals perceive their actions as being controlled by internal forces (Ryan & Deci, 2000).

Although intrinsic motivation has often been measured in the context of specific tasks or activities, research suggests that intrinsic motivation can also be measured more generally as a stable motivational orientation (for a review, see Eccles & Wigfield, 2002). This body of work suggests that, among individuals characterized by an "intrinsic motivational orientation," curiosity and interest play a key role in behavior initiation and regulation (Eccles & Wigfield, 2002, p. 114). Evidence also suggests that intrinsic motivational orientations are associated with positive emotional experiences and persistence in the face of failure (Eccles & Wigfield, 2002). In terms of measurement, items around curiosity or interest are considered valid measures of intrinsic motivation, both at the task-level (Ryan, 1982; Ryan et al., 1991) and at an orientation level (Finkelstein, 2012). Thus, as noted in the Method section, I used Park and Peterson's (2006) Curiosity Scale as a proxy for adolescents' intrinsic motivational orientations.

In contrast to intrinsic motivation, extrinsic motivation is hypothesized to exist along a continuum). Broadly speaking, extrinsic motivation can be defined as motivation that stems from factors that are external to the task or activity (Ryan & Deci, 2000). At one end of the extrinsic motivation continuum, behavior can be regulated by more controlled forms of motivation referred to as external regulation and introjected regulation (Ryan & Deci, 2000; see Figure 3). According to SDT, external and introjected regulation are more likely to occur when needs for autonomy, competence, and relatedness are undermined (Ryan & Deci, 2000). Moreover, external and introjected regulation are associated with more of an external perceived locus of

control (Ryan & Deci, 2000). Specifically, external regulation refers to behavior guided by external contingencies, such as anticipated rewards or punishments that are controlled by other people. Introjected regulation refers to behavior guided by self-administered contingencies, such as anticipated feelings of approval or shame. Drawing on the class participation example, a student might participate mainly because they want to earn participation credit (external), or because they want the teacher to think highly of them (introjected). A defining characteristic of both of these sub-types of controlled motivation is the degree to which the behavior associated with some activity has been internalized. From an SDT perspective, internalization essentially refers to a transformation process in which some behavior that was once associated with more of an external perceived locus of control becomes associated with more of an internal perceived locus of control (Koestner et al., 1996; Ryan & Deci, 2000). Both external and introjected regulation are associated with weak internalization.

On the other end of the extrinsic motivation continuum, behavior can be regulated by more autonomous forms of motivation referred to as identified regulation and integrated regulation. Identified regulation can refer to behavior motivated by the value one places on some outcome associated with an activity, and integrated regulation can refer to behavior motivated by a desire to be self-congruent (i.e., to act in ways that are consistent with one's identity). Again, in terms of classroom participation, a student may choose to ask questions in class because they have internalized the value of being well-informed (identified). Taking it one step further, a student may ask questions in class because being well-informed is consistent with how they view themselves as a person (integrated). Whereas the identified student chooses to participate because they consciously recognize the value of being an informed person, the integrated student chooses to participate because they have fully integrated the perceived value of their behavior

(participating in class) into their identity of being a well-informed person. In practice, it can be difficult to distinguish between identified and integrated regulation because of the conceptual overlap between the two constructs (e.g., Lonsdale et al., 2014). As a result, SDT measures often assess identified and integrated regulation as a single "identified/integrated" construct (e.g., Ryan & Connell, 1989). Similarly, in my dissertation, I assessed adolescents' identified/integrated (autonomous) motivation for sociopolitical activism.

Autonomous motivation, controlled motivation, and amotivation, can all be measured at the task-level under certain environmental conditions, and assessed as more stable motivational orientations (Deci & Ryan, 2008). For instance, according to another one of SDT's sub-theories, Causality Orientations Theory (COT), there are individual differences with regard to how individuals orient themselves to situations or events (Deci & Ryan, 1985). Individuals with an autonomous orientation tend to be more sensitive to information in the environment that helps them initiate and regulate their behavior in ways that support experiences of choice and self-determination (Deci & Ryan, 1985). On the other hand, individuals with a controlled orientation are thought to be more sensitive to information that promotes external behavior regulation (Deci & Ryan, 1985). Finally, individuals with an impersonal (i.e., amotivated) orientation are hypothesized to be sensitive to information that undermines their sense of autonomy, competence, and relatedness (Deci & Ryan, 1985). Given the lack of a perceived relation between their actions and desired outcomes, individuals characterized by an impersonal (amotivated) orientation may experience a range of events as discouraging, or amotivating.

It is important to note that SDT constructs can be measured at different levels of specificity because I used a combination of task-specific and general motivational orientation measures. As described in more detail in the Method section, I assessed adolescents' general

intrinsic motivational orientations. I also assessed adolescents' general impersonal (amotivated) orientations. Both of these measures focus more on how adolescents generally tend to orient themselves to situations. At the task-level, I assessed adolescents' identified/integrated (autonomous) motivation for sociopolitical activism. In sum, the measures of intrinsic motivation and amotivation that I used tap into more general motivational orientations, and the measure of autonomous motivation is specific to a certain task or activity (sociopolitical activism).

Consequences of Autonomous and Controlled Motivation. Autonomous forms of motivation (defined by intrinsic, identified, and integrated regulation) and controlled forms of motivation (defined by external and introjected regulation) can both "energize and direct behavior" (Deci & Ryan, 2008, p. 182); however, the outcomes associated with each form of motivation can be very different. For instance, a broad body of work has demonstrated that autonomously-motivated behavior predicts greater long-term persistence, better psychological well-being, and lower levels of burnout (e.g., Burton et al., 2006; Evans & Bonneville-Roussy, 2016; Fernet et al., 2004; Vallerand & Bissonnette, 1992; Villarreal & García, 2016; Wang et al., 2016; for a review, see Ryan & Deci, 2017). These associations have been demonstrated across a number of domains, including education (Burton et al., 2006; Evans & Bonneville-Roussy, 2016; Vallerand & Bissonnette, 1992), work environments (Fernet et al., 2004), and health (Wang et al., 2016).

In the education domain, Vallerand and Bissonnette (1992) used the SDT framework to study first-year community college students' course persistence. More specifically, the researchers measured students' regulatory styles (intrinsic, external, introjected, identified, integrated), as well as their amotivation, at the beginning of a required college course and subsequently tracked student persistence in the course. Compared to students who dropped out of

the course, students who persisted were less amotivated and more likely to report intrinsic, integrated, and identified orientations toward academic activities (Vallerand & Bissonnette, 1992). There were no statistically significant differences between students who persisted and students who dropped out in terms of introjected and external regulation.

Next, Vallerand and Bissonnette (1992) calculated a "relative autonomy index" (RAI), which is a weighted sum of an individual's scores on each SDT subscale. For instance, amotivation, external regulation, and introjected regulation were negatively weighted as -3, -2, and -1, respectively. Identified regulation, integrated regulation, and intrinsic motivation were positively weighted as +1, +2, and +3, respectively. Controlled forms of motivation were then subtracted from autonomous forms of motivation. Thus, higher scores on the RAI represented greater autonomous motivation relative to controlled motivation. Results of an ANOVA using the RAI indicated that students who persisted in the course were more likely to report being autonomously motivated for academics at the start of the semester compared to students who dropped out.

The study by Vallerand and Bissonnette (1992) highlights the importance of considering the quality, or type, of motivation in relation to behavioral persistence. Although behavioral persistence is a slightly different outcome than I assessed in my dissertation (commitment to activism), it seems plausible that autonomous motivation has similarly positive implications for behavioral commitment. Importantly, qualitative work with Black and Latinx male community college students suggests that the relation Vallerand and Bissonnette (1992) identified between autonomous motivation and persistence among White students may generalize to students of color (Villarreal & García, 2016). For my dissertation, I was interested in examining whether the relation between social analysis and commitment to activism might be stronger for youth with

motivation profiles characterized by high levels of autonomous motivation for sociopolitical activism.

It is important to note that, according to SDT, any given behavior can be characterized by a combination of motivations. For example, a student may choose to study for an exam because being a high achiever is congruent with their sense of self, experiencing internalized extrinsic motivation, while simultaneously experiencing intrinsic motivation during certain parts of the studying process. In other words, from an SDT perspective, it is possible that an individual's motivation may be defined by multiple "locations" within some motivational space (Chemolli & Gagné, 2014). Given this hypothesized motivational multidimensionality, some scholars have argued against calculating a single relative autonomy index (Burton et al., 2006; Chemolli & Gagné, 2014). For instance, Chemolli and Gagné (2014) point out several inconsistencies regarding the conceptualization of SDT and how SDT is often measured. First, they explain that the RAI essentially conceptualizes one's motivation as being located in a single position along the SDT continuum. According to Chemolli and Gagné (2014), however, this conceptualization is problematic given that the RAI derives this single position from multiple qualitatively distinct locations within some motivational space (i.e., by subtracting controlled forms of motivation from autonomous forms of motivation). Another issue with the RAI is that it is calculated as a difference score in which individuals can end up with the same composite RAI even though their scores on individual regulatory subscales may be very different. Thus, Chemolli and Gagné (2014) argue that the RAI, similar to other difference scores, likely masks valuable information about how different motivational profiles are related to distinct patterns of behavior. Finally, Chemolli and Gagné (2014) argue that the RAI weights (e.g., -3, -2, -1, +1, +2, +3) are arbitrary and do not reflect the true "distance" between different regulatory styles.

In light of the RAI's limitations, Chemolli and Gagné (2014) conducted a Rasch analysis on two SDT-based scales to examine whether SDT should be assessed as a unidimensional continuum where individuals are located at a single motivational point, or as a multidimensional contiguum in which individuals can simultaneously hold multiple motivational locations. Results suggested that both scales, which were composed of all five SDT regulatory styles, were best represented through a five-dimensional structure. Thus, Chemolli and Gagné (2014) concluded that researchers should avoid using the RAI and instead examine SDT multidimensionally.

Recent SDT research across different domains has addressed this issue by utilizing latent profile analysis (LPA) to investigate how combinations of regulatory styles interact within individuals (Howard et al., 2016; Gillet et al., 2017; Wang et al., 2016; Xie et al., 2020). This approach extends earlier group differential SDT work (e.g., Vansteenkiste et al., 2009), which used cluster analysis to categorize the different regulatory styles as representing either autonomous or controlled motivation. Although the work by Vansteenkiste et al. (2009) was invaluable for demonstrating that, at least in the education domain, high levels of controlled motivation may undermine the benefits associate with high levels of autonomous motivation, dichotomizing qualitatively unique motivations into broad autonomy-control categories potentially masks important motivation profiles.

In a work context, for example, Howard et al. (2016) measured amotivation, external regulation, introjected regulation, identified regulation, and intrinsic motivation among a sample of Canadian adults and identified four employee profiles. The amotivated profile was characterized by high levels of amotivation and low levels of the remaining motivation factors. The moderately autonomous profile was characterized by low levels of external regulation, amotivation, and introjection but average-to-moderate levels of identified regulation and intrinsic

motivation. The highly motivated profile was characterized by low levels of amotivation and moderate-to-high levels of the other motivation factors that appeared to increase relative to their level of self-determination. For instance, in this profile, external regulation was lower than introjected regulation, which itself was lower than identified regulation and intrinsic motivation. Finally, the balanced profile was characterized by average levels of all the regulations. The balanced profile characterized the largest proportion of the sample (35.3%), followed by amotivated (27.6%), highly motivated (25.6%), and moderately autonomous (11.5%).

With respect to outcomes associated with each profile, the highly motivated profile was characterized by the highest levels of work engagement, followed by the moderately autonomous profile, the balanced profile, and finally the amotivated profile (Howard et al., 2016). Moreover, the highly motivated and moderately autonomous profiles were characterized by statistically equivalent low levels of burnout. The reason that burnout, but not engagement, was similar between these two profiles may have been driven by the relatively high levels of intrinsic motivation, which has been found to serve a buffering effect against burnout (Sheldon et al., 2016). Notably, despite having higher levels of work engagement (as well as intrinsic motivation) relative to the amotivated profile, the balanced profile was characterized by higher levels of burnout. One interpretation of this finding is that amotivated employees, who may be unlikely to experience intrinsic enjoyment in their work, may also be unlikely to experience guilt or shame (unlike their "balanced" colleagues) and were therefore less likely to burn out. Thus, despite being characterized by relatively equal levels of autonomous and controlled forms of motivation, the balanced profile was associated with somewhat poorer outcomes compared to the amotivated profile. Practically, these findings underscore the importance of measuring SDT constructs multidimensionally. Had Howard et al. (2016) simply calculated a relative autonomy

index (RAI), it is possible that the differences between amotivated and balanced employees would have been masked.

SDT profiles have also been found to predict intentions to exercise (Wang et al., 2016)—a variable that is perhaps more closely aligned with my own outcome of interest (commitment to sociopolitical activism) than variables like behavioral engagement and burnout. Whereas measures of engagement and burnout tend to be associated with present behavior, measures of intentions and commitment are more associated with future behavior. Thus, results from studies like Wang et al. (2016) may be even more relevant to my dissertation than results from studies like Howard et al. (2016).

Using slightly different measures of SDT than Howard et al. (2016), who identified four SDT profiles, Wang et al. (2016) identified five SDT profiles among a sample of Singaporean students ranging in age from 10 years to 21 years. The strong controlled motivation profile (4.82%) was characterized by very high levels of external regulation, lower-than-average levels of introjected regulation, and very low levels of identified regulation and intrinsic motivation (amotivation was not measured). The moderate controlled motivation profile (19.9%) was characterized by higher-than-average levels of external regulation, average levels of introjected regulation, and lower-than-average levels of identified regulation and intrinsic motivation. The introjected regulation profile (14.14%) was characterized by very high levels of introjected regulation and higher-than-average levels of external regulation, identified regulation, and intrinsic motivation. The autonomous motivation profile (34.56%) was characterized by low levels of external regulation, average levels of introjected regulation, and high levels of identified regulation and intrinsic motivation. Finally, the balanced motivation profile (26.58%) was characterized by average levels of all four motivation factors.

Intentions to exercise (e.g., intentions to engage in vigorous physical activities for at least 30 minutes, three times per week) were highest in the introjected and autonomous profiles (Wang et al., 2016). Although average intentions to exercise were slightly higher in the introjected profile compared to the autonomous profile, this difference was not statistically significant. This outcome is somewhat unexpected, given that the introjected profile was characterized by higher levels of controlled motivation (external regulation and introjected regulation) than the autonomous profile. Notably, however, both of these profiles were characterized by similarly high levels of identified regulation and intrinsic motivation. One potential interpretation of this finding is that overall levels of autonomous motivation may be a better predictor of exercise intentions than relative levels of autonomous motivation. Although this interpretation somewhat contradicts the conclusions of Vansteenkiste et al. (2009), it aligns with work by Hardy et al. (2015) in the civic engagement domain (the results of which I will describe in a later section focused on civic engagement and motivation).

Finally, Wang et al. (2016) found that intentions to exercise were the lowest in the strong controlled profile and the moderate controlled profile. Although the moderate controlled profile was characterized by relatively more autonomous motivation than the strong controlled profile, average intentions to exercise were statistically equivalent between the profiles. Both of these profiles had lower exercise intentions than the balanced profile. Again, these findings suggest the possibility that overall levels of autonomous motivation matter more with regard to exercise intentions than do relative levels of autonomous motivation.

Taken together, findings from the SDT literature underscore the importance of examining the quality or type of motivation underlying behavior (or commitment to behavior), in addition to the quantity or amount. Across domains (e.g., education, employment, physical activity),

autonomous motivation has been associated with increased engagement, reduced burnout, and stronger behavioral intentions (e.g., Howard et al., 2016; Vansteenkiste et al., 2009; Wang et al., 2016). Furthermore, research using latent profile analysis has highlighted the value of examining combinations of different SDT constructs within individuals, rather than broadly categorizing the different regulatory styles according to a simple autonomy-control dichotomy (e.g., Howard et al., 2016; Wang et al., 2016). This approach has highlighted rich motivational profiles and revealed important differences between autonomous forms of extrinsic motivation and intrinsic motivation in relation to behavioral engagement and burnout, respectively (Howard et al., 2016).

Whereas some work in the education domain suggests that controlled forms of motivation can undermine autonomous forms of motivation, even when levels of autonomous motivation are high (e.g., Vansteenkiste et al., 2009), research around exercise intentions suggests that overall levels of autonomous motivation (defined by identified regulation and intrinsic motivation) may be more important than relative levels of autonomous motivation. In fact, as explained in greater detail in a subsequent section, SDT research within the civic engagement domain similarly concludes that overall levels of autonomous motivation are more important than relative levels of autonomous motivation in predicting civic action (Hardy et al., 2015). These findings are particularly relevant for my dissertation because I was unable to contrast autonomous motivation with controlled motivation (measures of controlled motivation were not included as part of the original study from which these dissertation data derive). Instead, as described in greater detail in my Method section, I measured adolescents' intrinsic motivational orientations, impersonal (amotivated) orientations, and their identified/integrated (autonomous) motivation for sociopolitical activism.

Regulatory Focus Theory

Regulatory Focus Theory (RFT), like Self-Determination Theory (SDT), distinguishes between qualitatively distinct forms of motivation that are related to certain fundamental needs. Whereas SDT suggests that motivational quality and quantity are associated with basic needs around autonomy, competence, and relatedness, RFT argues that motivation can be understood through the lens of fundamental survival needs for safety and growth (Higgins, 1997). More specifically, RFT suggests that individuals have two distinct yet complementary self-regulatory systems, which primarily differ in terms of what motivates goal pursuit (safety and security versus growth and advancement) and in terms of the regulatory strategies associated with goal pursuit (vigilance versus eagerness; Higgins, 1997; Scholer et al., 2019). Broadly, motivation regulated by concerns for safety and security is referred to as prevention motivation, and motivation regulated by concerns for growth and advancement is referred to as promotion motivation (Higgins, 1997). Although both regulatory systems can be involved in pursuit of the same goal, research suggests that individual differences and situational cues influence the extent to which individuals adopt more of a prevention or promotion focus during certain activities (Scholer et al., 2019). Consequently, regulatory focus can be measured as a more stable motivational orientation or induced as a temporary motivational state.

According to RFT, individuals with a prevention focus interpret their goals as responsibilities, which leads them to focus on potential losses (i.e., threats; Higgins, 1997). In other words, under a prevention focus, the potential of failed goal pursuit is a stronger motivator of behavior than successful goal pursuit; the sensitivity is to losses versus nonlosses (Scholer et al., 2019). Prevention-focused individuals tend to engage in vigilant behavior to protect against losses and maintain the "neutral state" (Scholer et al., 2019, p. 48). Conversely, individuals with

a promotion focus interpret their goals as ideals or aspirations, which leads them to focus on potential gains (Higgins, 1997). Under a promotion focus, the potential of successful goal pursuit is a stronger motivator than failed goal pursuit; the sensitivity is to gains versus nongains (Scholer et al., 2019). Promotion-focused individuals tend to engage in eager behaviors to achieve gains and move away from the neutral state (Scholer et al., 2019).

Given the different sensitivity to loss and gain associated with prevention and promotion motivation, respectively, research has examined the role of feedback in bolstering and undermining the strength of one's motivation (e.g., Förster et al., 2001; Idson & Higgins, 2000; van-Dijk & Kluger, 2004). Results from this body of work generally suggest that failure feedback engages prevention-focused individuals (but not promotion-focused individuals), and success feedback engages promotion-focused individuals (but not prevention-focused individuals). One explanation for this finding is that failure feedback signals losses, which prevention-focused individuals are particularly sensitive to; on the other hand, success feedback signals gains, which promotion-focused individuals are attuned to. This interaction between regulatory focus and type of feedback in predicting motivational strength has been found when regulatory focus is measured as a temporary motivational state, as well as when regulatory focus is measured as a more stable motivational orientation (van-Dijk & Kluger, 2004). Work by Scholer et al. (2010) further suggests that, for prevention-focused individuals, a state of loss (perhaps triggered by failure feedback) predicts engagement in "risky" behaviors to return to a neutral state (at least in the absence of more "conservative" options).

In thinking about youth commitment to activism, it is possible that an adolescent's regulatory focus may interact with whether they perceive (via feedback from news, social media, or other sources) social conditions to be typical, worse than typical, or better than typical. For

instance, a chronically prevention-focused adolescent who perceives conditions to be typical may exhibit a relatively low (or at least average) level of commitment to sociopolitical activism. In contrast, if social conditions are perceived to be worse than typical, prevention-focused adolescents may report high levels of commitment to sociopolitical activism. Moreover, Scholer et al.'s (2010) work suggests that prevention-oriented adolescents who perceive actively worsening social conditions may be even more likely to engage in "risky" activist efforts (e.g., protesting) when more "conservative" efforts (e.g., signing a petition) seem unlikely to produce change. To complicate matters further, perceived efficacy may interact with regulatory focus in predicting commitment to activism (Tudoran et al., 2012). For instance, Tudoran et al. (2012) found that prevention-focused (but not promotion-focused) individuals' intentions to adopt healthy behaviors were stronger at higher levels of perceived efficacy and lower at lower levels of perceived efficacy.

Although I was unable to assess whether adolescents in my study perceived social conditions to be typical, worse than typical, or better than typical, it is noteworthy that the data I used were collected at the rise of the Black Lives Matter (BLM) movement, which began in 2013 after George Zimmerman was acquitted of the extrajudicial killing of 17-year-old Trayvon Martin (Buchanan et al., 2020). Over the next four years, there were many more publicized extrajudicial police killings of Black people, including Michael Brown (2014), Freddie Gray (2015), Sandra Bland (2015), and Philando Castile (2016). According to RFT, such events may activate needs around safety and security and induce more of a prevention focus among individuals (van-Dijk & Kluger, 2004). Thus, it is possible that the adolescents in this study were acutely aware of racial injustice throughout their four years of high school, potentially priming a stronger prevention focus during this time. Accordingly, this dissertation provided an

opportunity to examine how adolescents' prevention focus was associated with commitment to activism within this sociohistorical context.

In contrast to SDT, which identifies autonomous motivation as being more adaptive than amotivation and controlled motivation, RFT does not generally consider prevention or promotion motivation to be superior. Instead, RFT suggests that the effectiveness and functionality of each form of motivation, and their associated strategies and tactics, depends on the demands of the given situation (Scholer et al., 2019). However, it should be noted that some scholars (e.g., van-Dijk & Kluger, 2004) have suggested that extrinsic motivation is highly related to prevention motivation whereas intrinsic motivation is highly related to promotion motivation. From this perspective, one could argue that promotion motivation is perhaps more adaptive than prevention motivation. In fact, Scholer et al. (2019) suggest that chronic prevention motivation can be emotionally exhausting.

Regardless, both SDT and RFT conceptualize motivation as being multidimensional, and a handful of scholars have suggested that the frameworks are complementary (e.g., Meyer et al., 2004; Miele & Scholer, 2018; Vaughn, 2017). For instance, Vaughn (2017) argues that SDT and RFT can be conceptualized within a "need-support model." According to Vaughn (2017), promotion motivation is strengthened when needs for autonomy, competence, and relatedness are supported; prevention motivation is strengthened when needs for autonomy, competence, and relatedness are undermined. Conversely, a promotion focus is hypothesized to lead individuals to perceive an abundance of "need support" (i.e., that needs for autonomy, competence, and relatedness have been met) and a prevention focus is hypothesized to lead individuals to perceive little need support (Vaughn, 2017). In line with the notion that prevention and promotion motivation are adaptive for different situations, Vaughn (2017) suggests that individuals may

deflate or inflate subjective need support depending on the type of motivation (prevention or promotion) they want to enhance.

Miele and Scholer (2018) propose a slightly different conceptualization of the relation between SDT and RFT, which is perhaps more relevant to my dissertation given that I did not assess adolescents' need support. Specifically, Miele and Scholer's (2018) model of motivation regulation suggests that prevention and promotion components of RFT can vary along the autonomy-control continuum specified by SDT. Take, for example, a prevention-focused group of individuals engaged in social change efforts because they are motivated to ensure that social conditions do not worsen. Within this group, there may be variation around the extent to which individuals have internalized the value of their actions. Whereas one person may commit to sociopolitical activism because being an activist is an integral part of their identity (experiencing autonomous motivation), another person may engage in action because of perceived social pressures (experiencing controlled motivation).

Despite the theoretical link between SDT and RFT, there are only a handful of studies that I know of that have explicitly utilized both SDT and RFT to examine individuals' behavior (Lalot et al., 2019; Laroche et al., 2019; Vaughn, 2017; Vaughn et al., 2020). Given that I did not assess adolescents' need support, a key factor in studies by Vaughn and colleagues (2017; 2020), I focus my review on the two studies that examined quality of motivation from an SDT perspective (Lalot et al., 2019; Laroche et al., 2019).

Lalot et al. (2019) examined the interaction between college students' nutrition motives (intrinsic versus extrinsic) and a health intervention framed in terms of either prevention (being vigilant against poor habits that will result in chronic illness) or promotion (seeking opportunities to develop healthy habits that promote future health) in predicting students' commitment to

healthy behavior. Although students with intrinsic motivations for nutrition were committed to healthy behavior regardless of regulatory focus framing, students with extrinsic motives for nutrition exhibited greater commitment to health in the prevention condition than in the promotion condition. These findings indicate the importance of considering the interaction between SDT and RFT components when considering commitment to behavior.

Whereas Lalot et al. (2019) only focused on two types of motivation from an SDT perspective, Laroche et al. (2019) examined all six forms of motivation outlined by SDT (amotivation, external regulation, introjected regulation, identified regulation, integrated regulation, and intrinsic motivation). More specifically, Laroche et al. (2019) assessed the relation between these six different SDT motivational factors and individuals' chronic regulatory focus orientations in predicting physical activity. Results indicated that the relation between health prevention focus and physical activity was exclusively mediated by external regulation. The relation between health promotion focus and physical activity was mediated by intrinsic motivation, integrated regulation, identified regulation, and introjected regulation. Amotivation was not a significant mediator of physical activity. These findings suggest that, in the health domain, prevention-focused individuals tend to regulate their physical activity behavior through more controlled forms of motivation and promotion-focused individuals tend to regulate their physical activity behavior through more autonomous forms of motivation (except for introjected regulation, which is often considered a more controlled form of motivation). Importantly, prevention- and promotion-focused individuals reported similar levels of physical activity, indicating that both orientations support health-promoting behavior. However, these results were cross-sectional and longitudinal work is necessary to understand the long-term consequences of different chronic regulatory focus orientations—particularly given that SDT research has linked

controlled motivation to lower levels of persistence and diminished well-being (for a review, see Ryan & Deci, 2017).

In sum, findings from the RFT literature highlight the value of considering prevention and promotion motivation in relation to efficacy and SDT motivation constructs. Thus, in addition to measuring three SDT constructs (intrinsic motivational orientation, impersonal/amotivated orientation, and identified/integrated motivation for sociopolitical activism), I also measured adolescents' chronic prevention focus with regard to sociopolitical activism. This approach allowed me to examine how qualitatively unique forms of motivation interacted in relation to adolescents' commitment to activism. Unfortunately, the original study from which these data originate did not include measures that could be used to assess adolescents' chronic promotion focus. Despite this limitation, some work (described in detail below) suggests that, when researchers are faced with the choice, it may be more important to assess individuals' prevention focus in relation to civic engagement (Dolinski & Drogosz, 2011; Sassenberg & Hansen, 2007; Szekeres et al., 2019; Zaal et al., 2011; Zaal et al., 2012).

Civic Engagement Research Using Self-Determination Theory or Regulatory Focus Theory

A small but notable body of work has applied SDT (Finkelstein, 2012; Hardy et al., 2015; Koestner et al., 1996; Morris, 2018; Sheldon et al., 2016; Stattin et al., 2017) and RFT (Dolinski & Drogosz, 2011; Sassenberg & Hansen, 2007; Szekeres et al., 2019; Zaal et al., 2011; Zaal et al., 2012) to understand and predict individual engagement in different types of civic engagement. To my knowledge, no research to date has combined both SDT and RFT to examine sociopolitical activism among youth of color. Thus, this section of the literature review contains two main subsections—one focused around civic engagement from an SDT lens, and a second around civic engagement from an RFT lens.

Self-Determination Theory and Civic Engagement

Stattin et al. (2017) utilized the SDT framework to examine the relation between adolescents' initial intrinsic motivation for political issues and their later civic engagement (broadly conceptualized as initiating political or civic discussions with parents and/or with people on the Internet). Results indicated that early interest in politics, which Stattin et al. (2017) defined as intrinsic motivation for political issues, was associated with higher levels of civic engagement three years later. Somewhat relatedly, Finkelstein (2012) examined correlations between individuals' intrinsic and extrinsic motivational orientations and their engagement in community volunteering. In contrast to Stattin et al. (2017), whose measure of intrinsic motivation was more state-focused, Finkelstein (2012) utilized a dispositional measure of intrinsic motivation that contained items such as, "Curiosity is the driving force behind much of what I do" (p. 63). Their measure of extrinsic motivation also assessed a more stable motivational orientation (e.g., "I'm less concerned with what work I do than what I get for it"). Whereas an intrinsic motivational orientation was significantly positively correlated with volunteering, an extrinsic motivational orientation was unrelated to volunteering. Results from both Stattin et al. (2017) and Finkelstein (2012) suggest that intrinsic motivation is an important predictor of civic engagement. Finkelstein's (2012) study is particularly relevant for my dissertation, as I also assessed individuals' intrinsic motivational orientations (rather than their intrinsic motivation for sociopolitical activism, specifically). Although both sets of results highlight the value of examining civic engagement from an SDT lens, Stattin et al.'s (2017) study was limited by its sole focus on intrinsic motivation. In reality, it is likely that multiple constructs within the SDT framework interact to influence civic engagement. Finkelstein (2012) attempted to associate more than one SDT construct with civic engagement; however, their use

of correlations did not indicate how changes in these constructs may be associated with changes in civic engagement.

Qualitative work by Morris (2018) suggests that motivation for civic engagement can be regulated by autonomous and controlled motivation. Specifically, Morris (2018) used the SDT framework to investigate adolescent girls' motivation for contribution, which was defined as contributions to community and society. After conducting interviews with nine high school girls, Morris (2018) concluded that these adolescents were motivated to contribute for both autonomous and controlled reasons, and that controlled motivation does not necessarily undermine autonomous motivation—at least in the contribution domain. This conclusion somewhat contradicts quantitative work by Vansteenkiste et al. (2009), who found that students characterized by high levels of autonomous motivation and low levels of controlled motivation had better learning outcomes compared to individuals characterized by high levels of autonomous and controlled motivation. On the other hand, Morris' (2018) findings align with work by Hardy et al. (2015), which concluded that overall levels of autonomous motivation for civic engagement matter more than relative levels of autonomous motivation.

Hardy et al. (2015) conducted variable-centered and group differential analyses to examine adolescents' autonomous and controlled motivations for charitable donating and volunteering. Results of a path analysis indicated that autonomous motivation, but not controlled motivation, predicted donating and volunteering. These results support Koestner et al.'s (1996) finding that voting behavior among a sample of Canadian college students was predicted by identified (autonomous) reasons for following current events (e.g., "Because I choose to do it for my own good"), but not by introjected (controlled) reasons for following current events (e.g., "Because I am supposed to do it").

In addition to these variable-centered analyses, Hardy et al. (2015) also conducted a cluster analysis (a type of group differential analysis) and identified four motivation clusters—low controlled and low autonomous, medium controlled and medium autonomous, high controlled and high autonomous, and low controlled and high autonomous. Across clusters, the low controlled and low autonomous group was characterized by the lowest rates of civic engagement (donating and volunteering), and the high controlled and high autonomous group was characterized by the highest rates. Rates of donating and volunteering were not significantly different between the high controlled and high autonomous group and the low controlled and high autonomous group, both of which had equally high levels of autonomous motivation. One explanation for this finding is that these prosocial behaviors may be primarily driven by one's overall level of autonomous motivation, rather than by their relative level of autonomous motivation. This conclusion is further supported by Hardy et al.'s (2015) finding that the medium controlled and medium autonomous group had higher rates of civic engagement than the low controlled and low autonomous group, but lower rates of civic engagement compared to the high controlled and high autonomous group. These findings are particularly relevant for my dissertation, as I was only able to measure adolescents' autonomous motivation for sociopolitical activism. Although a limitation of this dissertation is that I was unable to investigate adolescents' autonomous motivation relative to their controlled motivation with regard to sociopolitical activism, work by Hardy et al. (2015) suggests that there is still great value in being able to assess overall levels of autonomous motivation in the civic engagement domain.

Thus far, all of the studies reviewed have investigated SDT in relation to more normative forms of societal involvement behavior (e.g., community service, donating volunteering). However, my dissertation study focused on exploring the potential relation between SDT and

sociopolitical activism—a more specific form of civic engagement focused on systems-level change (Watts & Flanagan, 2007). There is only one study I know of that has used the SDT framework to examine activists' commitment to, and burnout around, activism (Sheldon et al., 2016). Sheldon et al. (2016) measured adult environmental activists' autonomous (intrinsic, identified, and integrated) and controlled (introjected and external) motivations for environmental activism. According to their results, integrated regulation was the only significant predictor of commitment to activism. However, integrated regulation was not associated with burnout; instead, intrinsic motivation was negatively associated with burnout while external regulation was positively associated with burnout. These results align with Koestner et al.'s (1996) findings that identified reasons (but not introjected reasons) were associated with voting behavior, and suggest that autonomous motivation for civic engagement may energize greater behavioral engagement than more controlled forms of motivation. These results also highlight the value of measuring autonomous forms of extrinsic motivation in conjunction with intrinsic motivation, which is exactly what I did in my dissertation. Whereas integrated regulation (i.e., autonomous extrinsic motivation) was a better predictor of commitment to activism than intrinsic motivation, intrinsic motivation may play a critical role in buffering against activist burnout. One interpretation of this finding is that long-term, sustained commitment to activism requires high levels of internalized forms of extrinsic motivation as well as high levels of intrinsic motivation.

Regulatory Focus Theory and Civic Engagement

A distinct, yet related, body of work has examined the relation between RFT and civic engagement (Dolinski & Drogosz, 2011; Sassenberg & Hansen, 2007; Szekeres et al., 2019; Zaal et al., 2011; Zaal et al., 2012). For instance, Dolinski and Drogosz (2011) examined Polish college students' chronic regulatory focus orientations in relation to voting behavior. Results

indicated that voters were more likely to be prevention-oriented compared to non-voters; there was no statistically significant difference between voters and non-voters in levels of promotion orientation. These findings suggest that voting behavior may be predominantly driven by a desire to ensure social conditions do not worsen (i.e., a prevention orientation). In fact, a follow-up study found that prevention-oriented students indicated that they would be more likely than promotion-oriented students to vote in elections that allowed people to vote against a party candidate. Based on their findings, Dolinski and Drogosz (2011) concluded that prevention motivation is more important than promotion motivation with regard to predicting voting behavior.

Dolinski and Drogosz's (2011) conclusions around prevention motivation and more normative forms of civic engagement (voting) may also extend to sociopolitical activism. For instance, Sassenberg and Hansen (2007) conducted three studies to investigate the relation between regulatory focus and commitment to action against social discrimination. In one study, Sassenberg and Hansen (2007) measured East German college students' chronic regulatory focus orientations and then randomly assigned them to a discrimination condition or a no-discrimination condition. In the discrimination condition, participants were told that the researchers had conducted a survey with West German students and that these West German students held negative opinions about East Germans. Within the discrimination condition, prevention-oriented students were more likely to commit to action against the social discrimination directed at their group than their promotion-oriented peers. This finding is perhaps due to the notion that social discrimination is perceived as a loss, which may motivate prevention-, but not promotion-, oriented individuals to commit to action that would move them from a state of "loss" to "nonloss."

Work by Zaal et al. (2011) supports and extends Sassenberg and Hansen's (2007) findings. Zaal et al. (2011) used the RFT framework to investigate why members of "low-status" groups engage in "benevolent" versus "hostile" forms of collective action. The authors defined benevolent collective action in terms of more normative forms of sociopolitical activism like signing petitions or participating in peaceful protests. In contrast, hostile collective action was defined as non-normative forms of sociopolitical activism "explicitly aimed at harming the interests of those held responsible for the group's disadvantage" (Zaal et al., 2011, p. 671). According to the authors, hostile forms of collective action might include vandalism or rioting.

Results from one of Zaal et al.'s (2011) studies found that making gender-based workplace discrimination salient among a sample of female participants prompted prevention-oriented individuals (but not promotion-oriented individuals) to support collective action against this discrimination. Moreover, when prevention-oriented individuals also held strong moral convictions about gender equality, they were more likely to support hostile forms of collective action.

In a second study, Zaal et al. (2011) experimentally manipulated participants' regulatory focus. Among individuals with strong moral convictions, only those in the prevention condition indicated support for both benevolent and hostile forms of collective action. Moreover, in the prevention condition, individuals with strong moral objections to hostile collective action still supported hostile collective action when they held strong moral convictions about gender equity. In other words, even when individuals held moral objections to hostile collective action, they were still willing to engage in hostile action if they held strong moral convictions about equity and were prevention-oriented. These findings align with Sassenberg and Hansen's (2007) conclusion that discrimination is perceived as a loss, and that prevention-oriented individuals are

particularly sensitive to this loss/discrimination. Zaal et al.'s (2011) findings also extend work by Scholer et al. (2010), suggesting that prevention-oriented individuals may be willing to engage in "risky" behaviors to reduce discrimination (i.e., to move them closer to a state of nonloss).

In a set of follow-up studies to Zaal et al. (2011), Zaal et al. (2012) examined interactions among regulatory focus, goal importance, and outcome expectancies in predicting individuals' commitment to collective action for social change. Zaal et al. (2012) utilized the same "women in the workplace" paradigm used by Zaal et al. (2011) in which they made female participants aware of workplace gender discrimination. In contrast to Zaal et al. (2011), the dependent variable in this set of studies was participants' actual commitment to collective action (e.g., by actually signing a petition or by signing up to become a member of a collective action group). In one of their three studies, Zaal et al. (2012) measured participants' chronic regulatory focus orientations, naturally-occurring differences in goal importance, and manipulated likelihood of goal success. They found a three-way interaction between regulatory focus, goal importance, and likelihood of success. Simple slopes revealed that promotion-oriented individuals were only willing to engage in collective action when they valued the goal as important and when they believed that their actions would lead to social change. In contrast, prevention-oriented individuals were willing to engage in collective action regardless of the perceived likelihood of social change, and regardless of the importance of the goal. These findings further support the notion that prevention-oriented individuals experience discrimination as an intense loss, which drives behavior to mitigate this loss. Interestingly, these findings also suggest that levels of perceived efficacy may be relatively unrelated to peoples' commitment to activism if they have high levels of prevention motivation. This notion may perhaps explain one of the reasons underlying the mixed findings regarding the moderating role of political self-efficacy within the

CC/Youth SPD framework (Diemer & Rapa, 2016; Watts & Guessous, 2006). For instance, perhaps Diemer and Rapa (2016) failed to find a significant interaction between social analysis and political self-efficacy in predicting commitment to activism because the majority of their participants were, on average, characterized by high levels of prevention motivation.

Finally, work by Szekeres et al. (2019) comes the closest to all of the studies reviewed thus far in combining SDT and RFT in relation to civic engagement. Szekeres et al. (2019) conducted two studies to examine the interaction between moral mindsets and moral identity on adults' tendency to confront racism. In Study 1, Szekeres et al. (2019) drew upon the RFT framework to induce a moral loss (prevention) mindset, a moral gain (promotion mindset), or no mindset (i.e., the control condition). In all three conditions, participants were presented with hypothetical vignettes describing a racist scenario. In the moral loss condition, participants were exposed to language such as "moral obligation" and "feel like a worse person morally" (Szekeres et al., 2019, p. 4). In the moral gain condition, participants were exposed to language such as "moral aspiration" and "feel like a better person morally" (Szekeres et al., 2019, p. 4).

Although Szekeres et al. (2019) did not explicitly utilize the SDT framework, their measures of moral identity aligned with SDT's notions of integrated regulation and introjected regulation. Specifically, the internalized (i.e., integrated) moral identity subscale included items such as, "Being someone who has these views and beliefs [being non-prejudiced] is an important part of who I am" (Szekeres et al., 2019, p. 3). The symbolic (i.e., introjected) subscale included items such as, "The fact that I have these views and beliefs [being non-prejudiced] is communicated to others by my membership in certain organizations" (Szekeres et al., 2019, p. 3). Thus, another way of framing the work by Szekeres et al. (2019) is that they examined

integrated and introjected regulation as moderators of the relation between regulatory focus and likelihood of confronting racism.

The results of Study 1 indicated that neither of the moral identity subscales (internalization and symbolic) moderated the relation between moral mindset and intentions to confront racism. Study 2 was similar to Study 1, except that the outcome in Study 2 was actual confronting behavior during a simulated online racist incident. Results indicated that individuals with a moral loss mindset were more likely to confront racism when they were high on symbolic (i.e., introjected) moral identity. Internalized (i.e., integrated) moral identity did not moderate the relation between moral mindset and confronting behavior. There was no interaction between moral gain mindset and moral identity. It is possible that confronting behavior was higher among prevention-oriented individuals with strong symbolic (introjected) motivation because they wanted to avoid experiencing a sense of guilt had they not confronted racism in this "public" online forum.

Overall, results from the body of work examining civic engagement from an RFT lens suggests that prevention motivation is a stronger predictor of civic engagement than promotion motivation. This conclusion is relevant for my dissertation because I was unable to assess adolescents' promotion motivation. From a practical standpoint, it is important to measure adolescents' prevention motivation with regard to activism because activists of color sometimes experience emotional exhaustion from "the constant *responsibility* [emphasis added] to be an activist" (Anyiwo et al., 2020, p. 88). Nonetheless, it should be noted that just because an individual is high (or low) on prevention motivation does not mean that they are low (or high) on promotion motivation; prevention and promotion are independent.

Another potential conclusion from this body of work is that efficacy may be less predictive of commitment to activism among prevention-focused individuals (Zaal et al. (2012); however, this research technically examined outcome expectations and additional research examining the relation between perceived self-efficacy and regulatory focus is needed. My dissertation represents a first attempt at examining this interaction.

Group Differential Approaches to Data Analysis

To address my research questions, I conducted latent profile analyses (LPAs), latent profile transition analyses (LPTAs), and an LPA moderation. Rather than conducting more traditional variable-centered approaches (e.g., multiple regression), I chose a statistical approach that allowed me to examine potential heterogeneity among a sample of Black and Latinx youth with regard to a set of motivational variables. Given the multidimensional nature of motivation, this group differential approach may facilitate a more nuanced understanding of motivation in the context of the CC/Youth SPD framework.

LPAs and LPTAs belong to a broad class of latent variable techniques called mixture models. Mixture models are often described as "focus[ing] on relationships between variables within people" (Johnson, 2021, p. 113), and are sometimes referred to as "person-centered" approaches to data analysis. However, as Johnson (2021) notes, this term is misleading because it implies that mixture modeling is idiographic (i.e., that the results apply to the individual, rather than to groups in a population). Instead, Johnson (2021) argues that the term "group differential" more accurately represents the nature of mixture models because they consider subgroups of individuals who are characterized by similarities in their patterns of responses, and/or in their patterns of change. Thus, I have chosen to use the term, "group differential," to refer to the

analyses I conducted in this dissertation. In the following subsection, I briefly review latent profile analysis, latent profile transition analysis, and latent profile moderation analysis.

Mixture Models: LPAs and LPTAs

Mixture models, including the latent profile analyses (LPAs) and latent profile transition analyses (LPTAs) that I conducted in the present dissertation, belong to a larger class of latent variable techniques (Masyn, 2013; Muthén, 2009). Latent variable modeling is a broad class of statistical techniques that draws on measured (i.e., observed) indicators to estimate scores on an unobserved, latent construct (Little, 2013). Latent variable models assume that this underlying latent construct accounts for the relationships among a set of observed indicators (Muthén, 2009).

Mixture models are predicated on the assumption that data come from a "mixture" of multiple, unobserved populations (Johnson, 2021; Masyn, 2013). As Masyn (2013) explains, "[i]t is the unknown nature of the mixing components—in number, proportion, and form—that situates finite mixture models in the broader category of latent variable models" (p. 552). In other words, an individual's response pattern along a number of measured indicator variables is hypothesized to reflect membership in an unobserved latent profile. For my dissertation, as described in greater detail later on, adolescents' response patterns along a number of measured motivation variables were used to determine profile membership.

It is important to note that group membership is probabilistic, rather than definite. For example, in LPA, each latent profile is characterized by "a prototypical response pattern" (Johnson, 2021, p.115). Posterior probabilities are estimated for each individual based on their pattern of responses to a set of items (Nylund, 2007). These posterior probabilities are used to assign membership to certain latent profiles. Individuals are assigned to profiles based on the

highest posterior probability of membership; this process is referred to as "modal class assignment" (Nylund, 2007, p. 36). Profile size is determined by "the proportion of participants most likely to be classified into each profile based on their response pattern" (Johnson, 2021, p.115). Because membership is probabilistic, it is necessary to attend to (and aim to minimize) distortions of the latent profile structure (Bauer & Steinley, 2020). Changing parameters in the model can result in distortion, which may result in biased estimates and lead us to make incorrect conclusions about the data. Distortion can be evidenced by large changes in class proportions. For instance, large changes in class proportions when linking profiles identified with single time point models (LPAs) in a multiple time point model (LPTAs) is evidence of distortion, which reduces confidence in interpreting the results (Collins & Lanza, 2010).

Latent profile transition analysis (LPTA) can be thought of as a longitudinal extension of latent profile analysis (LPA). Whereas LPAs can be used to investigate the number and nature of latent profiles in a sample, LPTAs enable researchers to examine whether there is change between latent profiles over time (Collins & Lanza, 2010). In other words, LPTAs "can be used to identify subgroups of individuals who are similar in patterns of *change*" (Johnson, 2021, p. 112). Conceptually, LPTAs "link" latent profiles together from different time points (Johnson, 2021). Statistically, LPTA models include an additional set of parameters that allow researchers to examine the potential transitions individuals make between profiles (Collins & Lanza, 2010). In LPTAs, the probabilities of transitioning to different profiles over time are estimated.

LPTAs can be fully unconstrained, partially constrained, or fully constrained. In a fully unconstrained model, all means are freely estimated. Conceptually, this model does not assume that the meaning of the latent profiles remains consistent across time. In other words, interpreting results requires considering changes between qualitatively different profiles. Depending on the

research questions, allowing qualitative differences across time may be of substantive interest (Collins & Lanza, 2010). In a partially constrained model, some of the profile means at one time point are constrained to be the same as others at a different time point. In a fully constrained model, profiles across time points are constrained to be constant in both number and mean scores for each variable. This restriction ensures that the meaning of the latent profiles remains consistent across time and "any observed group differences in latent [profile] prevalences can be interpreted simply as quantitative differences" (Collins & Lanza, 2010, p. 212).

It is important to note that the number and nature of profiles identified in a cross-sectional LPA may differ from the number and nature of profiles identified in the longitudinal LPTA. That is, "the best-fitting latent [profile] model at any given time may not correspond to the best-fitting latent transition model fit to all occasions of measurement" (Collins & Lanza, 2010, p. 190). One reason for this discrepancy is that longitudinal models may increase the power to detect additional latent profiles (Collins & Lanza, 2010). Another reason that discrepancies between LPA and LPTA results can emerge has to do with differential rates of missingness. For instance, a common method of addressing missing data in LPA and LPTA is full information maximum likelihood (FIML). FIML uses all available observed data to estimate parameter values that provide the best fit to the data (Enders, 2010). If there are different rates of missingness at different time points, the number and nature of profiles that best characterize the data in a single time point model (LPA) may differ from the number and nature of profiles that best characterize the data in a multiple time point model (LPTA). Thus, LPAs can be conducted at each time point as a "preliminary step to inform model selection in LTA," but the final LPTA model that takes into account all measurement occasions may differ substantively from the cross-sectional LPA models (Collins & Lanza, 2010, p. 190).

Finally, LPA can be incorporated within a moderation framework to assess whether the relation between a predictor and an outcome varies according to profile membership (Bauer & Steinley, 2020). More specifically, the relation between a predictor and an outcome is estimated separately for each latent profile (Bauer & Steinley, 2020). Simply put, an LPA moderation consists of a series of regressions conducted for each of the latent profiles. Notably, this LPA moderation process does not position latent profiles as direct predictors of distal outcomes. However, as noted by Nylund-Gibson et al. (2021), LPA moderation results can be presented in tandem with an analysis of distal outcomes. More specifically, Nylund-Gibson et al. (2021) suggest first specifying a model with latent profiles as predictors of distal outcomes, followed by the full LPA moderation. Although this two-stage approach to LPA moderation isn't statistically necessary, Nylund-Gibson et al. (2021) argue that it can facilitate understanding of the LPA moderation results. Accordingly, as described in greater detail in the Analysis Plan section, I first examined latent motivation profiles as direct predictors of adolescents' commitment to activism. I then conducted a cross-time LPA moderation to investigate the extent to which social analysis differentially predicted commitment to activism across groups of adolescents defined by different motivation profiles (Research Question 3).

The Present Study

This dissertation study seeks to extend the Critical Consciousness and Youth Sociopolitical Development frameworks by using motivation theory and group differential statistical approaches to address the following three research questions:

1. Do latent motivation profiles exist in this sample of Black and Latinx adolescents? What is the number and nature of these profiles at each of the three time points (beginning of ninth grade, end of tenth grade, end of twelfth grade)?

2. Do adolescents change motivation profile membership across high school? If so, which profile transitions are most likely?
3. Does motivation profile membership at the beginning of high school moderate the relation between social analysis at the beginning of high school and commitment to activism at the end of high school, controlling for initial commitment to activism?

These research questions are largely exploratory in nature. Although I expected latent motivation profiles to exist within this sample of Black and Latinx adolescents, I do not know of any studies providing theoretical guidance around the exact number and nature of these profiles. Nonetheless, I did have some general expectations based on theory (i.e., CC/Youth SPD, SDT, and RFT). First, given that previous SDT research has identified "highly motivated" profiles of individuals (e.g., Howard et al., 2016; Xie et al., 2020), I also expected to identify a profile, at all three time points, with high levels of autonomous motivation, intrinsic motivation, political self-efficacy, and prevention focus, but low levels of amotivation. Conversely, across time points, I expected to find a profile characterized by low levels along all four of these motivation constructs, but higher levels of amotivation. In between the "highly motivated" profile and the "low motivation" profile, I also expected to find a profile characterized by moderate levels of motivation. Finally, I expected to find one or more profiles characterized by variation along the SDT and RFT components. That is, I expected that some individuals would have high levels of autonomous and intrinsic motivation, but low levels of prevention focus (and vice versa).

In terms of transitions between profiles across high school, I expected adolescents to transition from profiles characterized by low or moderate levels of motivation to profiles characterized by high levels of motivation. This hypothesis was based on the notion that the transition from early to later adolescence can sometimes be marked by increased feelings of

autonomy and idealism (Arnett, 2007). I also expected that adolescents with high levels of motivation would remain in this profile across high school (i.e., I expected that highly motivated adolescents would remain motivated throughout high school). Finally, I expected that latent motivation profiles would moderate the relation between social analysis and commitment to activism. More specifically, I expected that the relation between social analysis at the beginning of high school and commitment to activism at the end of high school would be stronger in motivation profiles characterized by high levels of autonomous motivation, intrinsic motivation, and efficacy as compared to motivation profiles characterized by low levels of these motivational factors (but high levels of amotivation). I also expected that the relation between social analysis and activism may be stronger among youth with motivation profiles characterized by higher levels of prevention motivation and high levels of intrinsic motivation, as compared to youth in profiles with high prevention motivation but weak intrinsic motivation. This hypothesis is rooted in RFT and SDT research suggesting that chronic prevention motivation can be exhausting (Scholer et al., 2019), but that intrinsic motivation can buffer against emotional burnout (Sheldon et al., 2016).

Chapter 3: Method

Sampling and Data Collection

The present dissertation used longitudinal data collected as part of a larger study examining adolescents' civic development over four years of high school (see Seider et al., 2020a). Data were originally collected from a total of 942 high school students from the Class of 2017 attending ten public schools and public charter high schools in the Northeastern United States. Adolescents were purposefully recruited from majority-minority high schools (i.e., schools serving predominantly racial and ethnic minority students) and were mostly low-income. Information about the exact number of low-income students was not collected as part of the original study, nor were participating adolescents' ages. Although previous studies utilizing this data have tended to focus on a subset of adolescents attending six schools with explicit mission statements around civic development (e.g., Clark & Seider, 2020; Seider et al., 2020a; Seider et al., 2021a), the present dissertation included these adolescents as well as those attending four public schools without civic development mission statements.

Participating adolescents were asked to complete surveys at five time points: the fall of ninth grade (September 2013), the spring of ninth grade (May 2014), the spring of tenth grade (May 2015), the spring of eleventh grade (May 2016), and the spring of twelfth grade (May 2017). For my dissertation, I focused on the subset of adolescents who identified as Black or Latinx (n = 733; see Table 1). Additionally, I focused my analyses on three of these five time points—the fall of ninth grade (i.e., "Time 1"), the spring of tenth grade (i.e., "Time 3"), and the spring of twelfth grade (i.e., "Time 5"). Using these three time points instead of the full five time points, I was able to capture adolescents' responses at the beginning, middle, and end of high school while simultaneously reducing overall model complexity.

Measures

In this section, I present the constructs of interest based on two bodies of literature—the CC/Youth SPD literature and the motivation literature. All of the measures described below utilized 5-point Likert-type response scales. For a full list of the items and the constructs they map onto, see Table 2.

CC/Youth SPD Constructs

Social Analysis. Social analysis was assessed via five items from Gurin et al.'s (2013) Structural Thinking about Racial Inequality Scale. Items include statements such as, "Racism in the educational system can limit the success of Black, Latino and other racial minorities" and "Many White people discriminate against Black, Latino and other racial minorities". Participants responded using a Likert-type response scale ranging from 1 (*No way!*) to 5 (*Definitely!*).

Commitment to Sociopolitical Activism. Commitment to sociopolitical activism was assessed via six items from Corning and Myers' (2002) Activism Orientation Scale. This scale assesses participants' commitment to civic engagement—both presently and in the future. Out of the nine items included in this scale, I identified six of them as being more closely aligned with the sociopolitical activism form of civic engagement than with more conventional forms of civic activity (e.g., voting). These items were introduced with a prompt: "Please tell us honestly how likely it is that as either a teenager or an adult you will…". Items include, "Participate in a protest or demonstration" and "Sign a petition about a social or political issue". Participants responded using a Likert-type response scale ranging from 1 (No way!) to 5 (Definitely!).

Political Self-Efficacy. Political self-efficacy is the sole motivation construct defined in the CC/Youth SPD frameworks, and is therefore included in this CC/Youth SPD section. Political self-efficacy was assessed via three items from Peterson et al.'s (2011) Sociopolitical

Control Scale for Youth – Policy Control subscale. Items include, "Youth like me have the ability to participate effectively in community or school activities and decision making" and "Most community leaders would listen to me" (Peterson et al., 2011). Participants responded using a Likert-type response scale ranging from 1 (*No way!*) to 5 (*Definitely!*).

Motivation Constructs

The study from which I drew my data did not include any typical measures of motivation. To identify measures and items within measures included on the administered survey relevant to my motivation constructs of interest, I utilized theory-driven inference and referenced established Self-Determination Theory scales (Prosocial Self-Regulation Questionnaire; Ryan & Connell, 1989) and Regulatory Focus Theory scales (Relational Identity-Specific Motivation; Browman et al., 2017).

Identified/Integrated (Autonomous) Motivation for Sociopolitical Activism.

Participants' identified/integrated (autonomous) motivation for sociopolitical activism was assessed via three items. These three items were selected to represent identified/integrated motivation because they seem to tap behaviors that adolescents have internalized as being personally important or valuable. Two of these items are from Pancer et al.'s (2007) Youth Social Responsibility Measure: "It's important for teenagers to know what's going on in the world" and "It is important for young people to know what's going on in their communities". The third item is from Peterson et al.'s (2011) Sociopolitical Control Scale for Youth – Policy Control subscale: "It is important to me that I actively participate in local teen issues". Participants responded to all items using a Likert-type response scale ranging from 1 (*No way!*) to 5 (*Definitely!*).

Intrinsic Motivational Orientation. I assessed participants' general intrinsic motivational orientations using five items from Park and Peterson's (2006) Curiosity Scale. Items include statements such as, "I always want to know more about things" and "I am interested in all kinds of things". Participants responded using a Likert-type response scale ranging from 1 (*Not true at all for me*) to 5 (*Very true for me*).

Impersonal (Amotivated) Orientation. Adolescents' impersonal (amotivated) orientations were assessed via five items from Ryff's (1989) Purpose in Life subscale. Items include, "I think it's a waste of time to set goals for myself" and "The things I do every day often feel boring and unimportant". Participants responded using a Likert-type response scale ranging from 1 (*Not true at all for me*) to 5 (*Very true for me*).

Prevention Focus. I assessed participants' prevention focus with regard to civic engagement via three items from Pancer et al.'s (2007) Youth Social Responsibility Measure. These three items were selected to represent prevention motivation because they seem to tap behaviors regulated by a sense of responsibility or obligation. Items include, "Everybody should volunteer some time for the good of their community", "People should help one another without expecting to get paid or rewarded for it", and "Teenagers should just enjoy themselves and not worry about things like poverty and the environment" (reverse-coded). Participants responded using a Likert-type response scale ranging from 1 (*No way!*) to 5 (*Definitely!*).

Analysis Plan

I used R and M*Plus* Version 8.6 (Muthén & Muthén, 1998-2017) to conduct my dissertation analyses. Whereas I used R to conduct some preliminary analyses (e.g., assessing item-level missing data, conducting item-level descriptive analyses, and conducting scale-level descriptive analyses), I used M*Plus* to conduct LPAs, LPTAs, and the LPA moderation. My

analysis plan included eight main steps, as follows: 1. missing data diagnostics, 2. item-level data screening, 3. conducting confirmatory factor analyses of the multiple-item scales described above, 4. investigating longitudinal measurement invariance of those multi-item scales, 5. scale-level data screening, 6. latent profile analyses, 7. latent profile transition analyses, and 8. latent profile moderation analysis. The latent profile analyses served to identify distinct motivation profiles among a sample of Black and Latinx adolescents (Research Question 1); the latent profile transition analyses allowed me to examine whether adolescents changed profile membership over time (Research Question 2); the latent profile moderation analysis allowed me to examine whether motivation profile membership moderated the relation between social analysis and commitment to activism (Research Question 3).

Missing Data

For all 30 items, at each of the three time points, I examined item-level missing data. Addressing missing data involves identifying the extent of missing data and the nature of the missing data mechanism and choosing a missing data treatment (Lang & Little, 2018). Following Lang and Little's (2018) recommendations around missing data diagnostics, I examined patterns for 1. univariate nonresponse (missingness that occurs on specific variables), 2. monotone nonresponse (missingness that increases across time, or entire rows of data for participants are missing), and 3. arbitrary nonresponse (missingness that appears to occur at random). To quantify nonresponse rates, I calculated the percentage of missing data for each item, across the three time points. Although examining missing data patterns is useful for determining the severity of missingness, it does not highlight why data are missing (i.e., missing data mechanisms; Enders, 2010). It is important to understand missing data mechanisms because

missing data treatment approaches rest on different assumptions about the mechanisms of missingness.

Three common missing data mechanisms are: missing completely at random (MCAR), missing at random (MAR), and missing not at random (MNAR) (Enders, 2010). Data are MCAR when the probability of missingness is unrelated to observed and unobserved variables; MCAR is considered "ignorable" missingness (Enders, 2010, p. 13). The MCAR mechanism can be tested using a number of different methods, including Little's MCAR Test (Enders, 2010). I assessed the MCAR mechanism in my data using Little's MCAR Test in R. It is important to note that this test is an omnibus test, meaning that it can only highlight whether or not the data are MCAR; it cannot be used to identify variables that violate the MCAR mechanism.

If the data are not MCAR, as is often the case in social science research (Little & Rubin, 1989), it is possible that they are MAR or MNAR. Data are MAR when the probability of missingness is related to one or more observed variables (i.e., variables included in the study), but is not related to unobserved variables. In other words, data are MAR when the probability of missingness can be accounted for by one or more observed variables in the data set. Like MCAR, MAR is often considered an ignorable missing data mechanism (Enders, 2010). Unfortunately, unlike MCAR, "there is no way to test the MAR mechanism or to verify that scores are MAR" (Enders, 2010, p. 6). This is problematic because full information maximum likelihood (FIML), the missing data treatment approach I planned to use for my analyses, assume that data are MAR. Nonetheless, MAR can be approximated by identifying cases with missing data and comparing them to cases with full data along a number of observed variables (Kline, 2016). Finally, data are MNAR when the probability of missingness is related to one or more unobserved variables, even after controlling for observed variables. Unlike MCAR and MAR, the MNAR mechanism is

non-ignorable missingness (Enders, 2010). However, like the MAR mechanism, there are no formal tests to assess MNAR (Enders, 2010).

Violations of MAR, suggesting MNAR, may produce biased estimates and reduce confidence in the validity of the results. However, Enders (2010) notes that "researchers have argued that serious violations of MAR are relatively rare" (p. 16). Even if data are MNAR, FIML tends to be associated with less bias than "classical" missing data techniques such as pairwise deletion (Kline, 2016, p. 87). This is because FIML uses all available observed data to estimate parameter values that provide the best fit to the data (Enders, 2010). For my dissertation, I created scale scores based on measurement models (described below) and used scale-level FIML to treat missing data. Software programs like M*Plus*, which I used to examine measurement properties and conduct LPAs and LPTAs, automatically utilize FIML to treat missing data.

Item-Level Descriptive Analyses

For all 30 items, at each of the three time points, I conducted item-level data screening. Specifically, I computed and interpreted the descriptive statistics for all continuous variables, at each of the three time points. In addition to examining the distributional properties of these items, I also conducted inter-item correlations for each set of construct indicators at each of the three time points. Finally, I computed Mahalanobis Distance measures for the 30 items at each of the three time points using the "mahad" function in the "careless" package in R. R flags potential outliers using the confidence level specified (the default is 0.99).

Measurement Models

After assessing item-level missing data and conducting item-level descriptive analyses, I used M*Plus* to examine the measurement properties of the items and constructs via multifactor confirmatory factor analyses (CFAs) at each of the three time points. I evaluated the

measurement properties of the item sets using pattern loadings, global model fit statistics (e.g., RMSEA, SRMR, CFI), and local model fit statistics (standardized residuals and modification indices). Recommended benchmarks for global model fit indices are as follows: RMSEA ≤ 0.05 indicates good fit and < 0.08 indicates acceptable fit (Hu & Bentler, 1999); CFI ≥ 0.95 indicates good fit (Hu & Bentler, 1999) and CFI between 0.90-0.94 indicates acceptable fit (Little, 2013); SRMR ≤ 0.05 indicates good fit (Keith, 2019) and < 0.08 indicates acceptable-to-good fit (Hu & Bentler, 1999; Keith, 2019). A rule of thumb for examining sources of model misfit is to identify standardized residuals larger than |2| (Keith, 2019).

After completing the multifactor CFAs, I investigated longitudinal measurement invariance, which required testing for configural, loading, and intercept invariance. Although residual (i.e., strict) invariance can also be tested with longitudinal data, Little (2013) "strongly argue[s] against enforcing it" (p. 143). Thus, for the present study, I only tested for configural, loading, and intercept invariance. I conducted invariance testing according to the recommendations outlined by Cheung and Rensvold (2002), Little (2013), and Widaman and Thompson (2003). Specifically, I considered CFI changes of ≤ 0.01 as passing that aspect of invariance (Cheung & Rensvold, 2002; Little, 2013; Widaman & Thompson, 2003). As described by Widaman and Thompson (2003), the default null model calculated by many software packages, including M*Plus*, is inappropriate for multiple-time-point models because the default null model is not "nested" within subsequently tested models. That is, when testing longitudinal invariance, the null model should be more restricted (i.e., characterized by more parameter constraints) than the configural, loading, and intercept invariant models (Widaman & Thompson, 2003). In the traditional null model, there are no constraints placed on the means and variances of the indicators, meaning that these parameters are allowed to vary across time. This

specification is incorrect when testing longitudinal invariance, however, because the null model should be nested within an intercept invariant model where indicator loadings and intercepts are constrained to be equal across time. Thus, I specified a more restricted, alternative null model by constraining the means and variances of the indicators for each construct to be equal across time points (Widaman & Thompson, 2003). Moreover, I constrained covariances among indicators to be 0—a constraint that is also applied in the traditional null model (Little, 2013).

After specifying the alternative null model, I tested for configural invariance by specifying the factor structure to be the same across time points (Little, 2013). In other words, I specified that the same pattern of loadings (but not necessarily the same values) held across time points. I constrained the latent means and latent variances to 0 and 1, respectively, across all three time points. I also allowed the residuals for each specific indicator to correlate across time points (e.g., the residual for item 1 at Time 1 was allowed to correlate with the residual from that same item measured at Time 3). The intercepts for the same item were also permitted to vary in their values over time.

For the test of loading invariance, I constrained the loadings for each specific indicator to be equal across time points. Latent means remained constrained at 0 across the three time points; however, latent variances were freely estimated subsequent to Time 1. If the change in CFI exceeded -0.01, I tested for partial loading invariance by allowing one factor loading at a time to vary freely across time points (Little, 2013).

Finally, I proceeded to test for intercept invariance. I constrained specific indicator item intercepts to be equal across time points while freely estimating latent means subsequent to Time 1. Again, if the change in CFI exceeded -0.01, I tested for partial intercept invariance by allowing the intercept of one item to vary freely across time points. After establishing

longitudinal invariance, I created prorated scale scores from the items by averaging values across the items. Before proceeding with the LPAs and LPTAs, I conducted scale-level descriptive analyses.

Scale-Level Descriptive Analyses

The process of examining scale scores was similar to the aforementioned item-level screening. For each of the seven constructs, at each of the three time points, I examined missingness and computed descriptive statistics. I also computed correlations among the scale scores, at each of the three time points. Using these scale scores, I proceeded with the final three stages of analysis—LPA, LPTA, and latent profile moderation analysis.

Latent Profile Analysis

The first stage of latent profile analysis is marked by profile enumeration. For each of the three time points, I estimated a series of models with different latent profiles. For each profile I specified (starting with 1, and continuing until model fit no longer improved or until *MPlus* produced errors associated with issues like non-convergence), I tested six variance-covariance structures. These variance-covariance structures represent different specifications of the variances and covariances of the set of indicators in each profile. These different specifications can be referred to as: Full-Unrestricted, Full-Proportional, Full-Homoscedastic, Diagonal-Unrestricted, Diagonal-Proportional, Diagonal-Homoscedastic (Bauer & Steinley, 2020).

These six variance-covariance structures can be classified within two larger categories—full and diagonal. Full within-class covariance matrices allow indicators to covary within profiles. In contrast, diagonal within-class covariance matrices assume that indicators are uncorrelated, or independent, within profiles (Bauer & Steinley, 2020). Within each of these larger categories, three additional restrictions can be tested related to the variance of the

indicators within each profile—unrestricted, proportional, and homoscedastic. Unrestricted covariance structures allow different covariance matrices to be estimated across profiles. Proportional covariance structures allow each profile to have its own covariance matrix while simultaneously constraining the variances and covariances across the classes to be proportional. For instance, under a proportional specification, if there is more variance in one variable in one profile, there will also be more variance in that variable in another profile. Thus, variances can be different, but they are different in a proportional manner. Finally, the most restricted (and simplest) covariance structure is the homoscedastic covariance structure. Homoscedastic covariance structures specify a common covariance matrix across all profiles. In sum, at Time 1, I tested six variance-covariance structures for *K* (profile) = 1, six variance-covariance structures for *K* = 2, and so on until model fit no longer improved or until M*Plus* produced error messages. I repeated this process for time points 3 and 5.

Given the difficulty of comparing several model specifications across various fit indices, I opted to follow Bauer and Steinley's (2020) recommendation to choose among models by focusing on the Bayesian Information Criteria (BIC); lower BIC values suggest better fit. Although a number of additional statistical criteria can be used to evaluate model fit (e.g., correct model probability and the Bayes factor), some researchers argue that the BIC is the most reliable indicator of model fit (e.g., Bauer & Steinley, 2020; Nylund, 2007). This may be due to the BIC being a more conservative information criteria than the AIC, but less restrictive than the CAIC.

In comparing models, I also examined entropy—a diagnostic statistic that indicates how well-separated the profiles are. I considered entropy values between 0.90 and 1 as good, and between 0.80 and 0.89 as acceptable (Weller et al., 2020). It is also important to note that different fit indices may favor different profile solutions. Thus, as is common practice with finite

mixture models, I also considered theoretical meaningfulness as I selected profile solutions (Bauer & Steinley, 2020).

Latent Profile Transition Analysis

I used the latent profiles identified cross-sectionally at Time 1, Time 3, and Time 5 to inform my LPTA model. As described in greater detail in the Results, I specified an LPTA model with the same variance-covariance specification across time points, but with different numbers of profiles at each time point. Moreover, I used the mean estimates from each of the final cross-sectional LPA models to inform the starting values (which are required for the optimization algorithms in model estimation) of the profile means in the LPTA model (Asparouhov & Muthén, 2019). Utilizing user-specified starting values, rather than randomly-generated start values, can substantially reduce computation time (Asparouhov & Muthén, 2019). Additionally, user-specified values are appropriate when there is already knowledge about the relation between indicators and latent profiles (Asparouhov & Muthén, 2019). In total, I estimated six LPTA models and compared model fit by examining BIC values (Collins & Lanza, 2010). Higher BIC values indicated worsening model fit. As with the LPAs, missing data in these LPTAs was accounted for using full information maximum likelihood estimation (FIML).

First, I estimated an unconstrained model where the profile means were freely estimated in each profile at Time 1, Time 3, and Time 5. Time 1 profile means and profile proportions shifted substantially from the LPA model to the LPTA model. I therefore decided to conduct additional profile enumeration with the full LPTA model to determine whether a different profile solution provided a better fit to the Time 1 data. Despite a large number of two-stage random starts (5,000 and 500), the loglikelihood was not replicated for the LPTA model with an increased number of profiles at Time 1. I next decided to test a pairwise LPTA at Time 1 and

Time 3 to investigate the extent to which profile means and proportions would shift. Based on these results (described in greater detail in the Results section), I concluded that the original LPTA model (based on the cross-sectional LPAs) provided the best fit to the data and proceeded to test constraints.

In the fourth LPTA model, I estimated a partially constrained model where all profile means from Time 3 were constrained to equal all profile means in Time 5 (but the Time 1 means were freely estimated). In the fifth LPTA model, I estimated another partially constrained model which built upon the previous model by further constraining Profile 2 in Time 1 to equal the Time 3/5 Profile 3. Finally, I estimated a fully constrained model in which Time 1 Profile 1 was constrained to equal Time 3/5 Profile 4. After selecting the best-fitting model, I examined the latent profile prevalences and transition probabilities.

Latent Profile Moderation Analysis

Following Nylund-Gibson et al. (2021), I conducted an LPA moderation in two stages. In the first stage, I specified a model using Bolck, Croon, and Hagenaars' (BCH; 2004) 3-step approach that investigated mean differences in Time 5 commitment to activism based on Time 3 latent motivation profiles. I manually implemented the BCH approach for this model. Broadly, the BCH 3-step approach ensures that profile distortion will not occur when distal outcomes are added to the model. Put simply, the manual BCH approach effectively "holds" the profiles in place.

The first step of the BCH 3-step approach includes re-fitting the LPA model (with the chosen variance-covariance structure) without regressors or outcomes. In this step, I asked M*Plus* to save the weights needed for the BCH analysis; there are as many weight variables as there are profiles in the model. It is also important to declare the auxiliary variables that are not

part of the Step 1 LPA, but will be used in Step 3. Here, the auxiliary variable was commitment to activism at Time 5. The data file outputted from the Step 1 LPA, which includes the BCH weights, was then used in the final step. I conducted Wald tests with the Holm-Bonferroni correction for multiple comparisons to compare mean differences in commitment to activism across pairs of profiles. Significant *p*-values indicate support for statistically significant differences between means.

In the second stage, the LPA moderation, I again manually implemented the BCH 3-step approach to conduct a cross-time LPA moderation. This cross-time LPA moderation examined the interaction between social analysis at Time 3 and motivation profile membership at Time 3 in predicting commitment to activism at Time 5 (controlling for commitment to activism at Time 3). In this model, the auxiliary variables were social analysis at Time 3, commitment to activism at Time 3, and commitment to activism at Time 5. The data file outputted from the Step 1 LPA, which includes the BCH weights, was then used in the final step.

It is important to note that I allowed Time 3 social analysis and commitment to activism to predict the latent profiles (see Figure 4). I included these pathways because omitting them would imply that the prevalence of each latent profile is the same across levels of social analysis and commitment to activism (Bauer & Steinley, 2020; Lamont et al., 2016). Thus, although I hypothesized an interaction between latent profile membership and social analysis at Time 3, the final model also technically specified an interaction between profile membership and commitment to activism at Time 3 (even though testing this relation was not one of my research questions).

Finally, I conducted Wald tests to determine whether the coefficients were statistically significantly different from each other. In the context of LPA moderations, Wald tests assess the

null hypothesis that effect estimates (i.e., slopes) are equal across profiles (Bauer & Steinley, 2020). Significant *p*-values support conclusions around latent profile moderation.

Chapter 4: Results

Preliminary Analyses

I conducted several preliminary analyses before conducting the analyses to address my research questions. I describe the results of these preliminary analyses in the following five subsections: 1. item-level missing data, 2. item-level descriptive analyses, 3. multifactor confirmatory factor analyses, 4. longitudinal measurement invariance, and 5. scale-level descriptive analyses.

Item-Level Missing Data

This study included 733 participants: 349 with data at Time 1 (ninth grade fall), 303 with data at Time 3 (tenth grade spring), and 508 with data at Time 5 (twelfth grade spring). Of these, 99 participated at just Time 1, 27 participated at just Time 3, and 256 participated at just Time 5; 166 adolescents participated at all three time points. In other words, 567 out of 733 participants were missing data across one or two of the three total time points.

I also examined missingness at the item level. Across all 733 participants, there were 45 participants with 100% of their data missing (i.e., they were missing data across the 30 items at all three time points). There were 385 participants (52.5%) with 50-83% of their data missing. The remaining 303 participants had less than 50% of their data missing; 130 of these 303 participants had no missing data whatsoever.

I did not identify issues related to univariate nonresponse. Across the three time points, missing data on the items associated with social analysis**,** commitment to activism, autonomous motivation, intrinsic motivation, political self-efficacy, prevention focus, and amotivation generally followed a similar pattern of missingness: lowest levels of missingness at Time 5 and highest levels of missingness at Time 3 (see Tables 3-9).

For all 30 items, at each of the three time points, I conducted Little's MCAR test using the "mcar_test" function in R's "naniar" package. Data were not MCAR at any of the three time points. Thus, I examined average percent missingness by three auxiliary variables (gender, school, and race). On average, male and female students had similar rates of missingness—48.88% and 46.73%, respectively. Whereas missingness ranged from 30.34%-47.95% at schools 1-6, missingness was 66.8% at school 7, 67.49% at school 8, 66.84% at school 9, and 67.63% at school 10. Missingness was higher for these schools because participants from these schools only had Time 5 data. Finally, it was difficult to cleanly parse students into racial/ethnic categories (e.g., Black vs Latinx) because several students marked that they identified as both Black and Latinx. However, among students who identified as monoracial, missingness did not seem to vary as a function of race/ethnicity; average missingness among Black students was 46.99% and average missingness among Latinx students was 50.77%. Overall, the results of these missing data diagnostics suggest that it is reasonable to conclude that the data are missing at random (MAR).

Item-Level Descriptive Analyses

I computed the descriptive statistics (e.g., mean, standard deviation, skewness, kurtosis) for all 30 items at each of the three time points (see Tables 3-9). I also examined histograms and P-P plots of these items. Based on this information, I concluded that, overall, the data for all items appeared to be reasonably following a normal distribution.

To assess the potential existence of multivariate outliers, I conducted visual inspections of outliers via histograms and box plots for each of the items, across time points. I also computed Mahalanobis Distance measures for the 30 items at each of the three time points using the "mahad" function in the "careless" package in R. R flags potential outliers using the confidence

level specified (here, I specified 0.99). According to the results, there were eight multivariate outliers at Time 1, 22 multivariate outliers at Time 3, and 32 multivariate outliers at Time 5. Across all three time points, I identified seven participants who were flagged as potential outliers more than once. Although I noted these participants, I decided not to remove them from analysis because they could potentially constitute a latent profile later on.

Finally, I conducted inter-item correlations for sets of indicators at each of the three time points (see Tables 10-30). After examining these correlation patterns, I identified three items (one social analysis item, one activism item, and one prevention focus item) as being potentially problematic due to their low correlation with the other items in their group across at least one time point. I noted these items and then proceeded to conduct multifactor confirmatory factor analyses.

Multifactor Confirmatory Factor Analyses

I estimated cross-sectional multifactor confirmatory factor analyses (CFAs) at each time point. I initially specified all seven constructs and all 30 items in Model 1 (see Figure 5). Overall, model fit for Model 1 was acceptable-to-good (see Table 31). Although the RMSEA was below the 0.05 cutoff (0.046; 90% CI = 0.04-0.052), the SRMR was slightly above the 0.05 cutoff (0.058). The CFI of 0.83 was below the recommended 0.95 benchmark; however, CFIs are influenced by the average size of correlations in a model, and low CFIs can occur in multifactor models (Lai & Green, 2016; Rigdon, 1996). Thus, the low CFI value for Model 1 indicated that some of the constructs were not strongly correlated with one another.

Next, I examined the standardized model results to determine whether any of the constructs appeared to be redundant. More specifically, I flagged correlations between constructs that were greater than or equal to 0.80. I identified three pairs of strongly correlated constructs:

1. autonomous motivation and political efficacy (0.914), 2. prevention focus and political efficacy (0.880), and 3. prevention focus and autonomous motivation (0.827).

Given that the items relating to prevention focus and autonomous motivation were drawn from the same original scale, I then specified a model that combined these two factors into a single factor (Model 2). Model fit for Model 2 was nearly identical to the model where all seven constructs were modeled separately (see Table 31). Given this finding, I decided to proceed with the original seven factor model.

However, I also decided to re-specify Model 1 because I identified two problematic items based on their low standardized loadings—one activism item ("NOT buy something because of the company that makes it") and one prevention focus item ("Teenagers should just enjoy themselves and not worry about things like poverty and the environment"). Given that these items had also been flagged during item-level descriptive analyses, I re-specified the original seven factor model (Model 1) without these two items (Model 3).

After removing those two problematic items, global model fit for Model 3 was acceptable-to-good (see Table 31). Examining the standardized model results once again highlighted a very strong correlation between autonomous motivation and political efficacy (0.92). After reviewing the items associated with each of these factors, I decided to remove the one autonomous motivation item that was drawn from the same scale as the three political efficacy items ("It is important to me that I actively participate in local teen issues; see Figure 6). This re-specification (Model 4) resulted in slightly improved global model fit (see Table 31). As expected, this re-specification resulted in a reduced correlation between autonomous motivation and political efficacy (0.68). It also reduced the correlation between prevention focus and

autonomous motivation (0.54). The correlation between prevention focus and political efficacy, however, remained strong (0.86).

I proceeded to test this finalized model specification (Model 4; 27 items) at Time 3 and Time 5. Model fit was similarly acceptable-to-good at Time 3 (RMSEA = 0.049, 90% CI = 0.042-0.056; SRMR = 0.062; CFI = 0.89) and at Time 5 (RMSEA = 0.048, 90% CI = 0.043-0.053; SRMR = 0.051; CFI = 0.90). Factor correlations were the strongest at Time 3—autonomous motivation and political efficacy were correlated at 0.72; prevention focus and autonomous motivation were correlated at 0.73; prevention focus and political efficacy were correlated at 0.90. By Time 5, autonomous motivation and political efficacy were correlated at 0.58, prevention focus and autonomous motivation were correlated at 0.68, and prevention focus and political efficacy were correlated at 0.73.

Longitudinal Measurement Invariance

After specifying a restricted alternative null model in which the means and variances of the indicators for each construct were constrained to be equal across time points, I proceeded to test Model 4 for configural, loading, and intercept invariance. Results of the longitudinal measurement invariance testing are presented in Table 32. The adjusted CFI for the configural model was 0.835. The RMSEA was 0.029 (90% CI = 0.027-0.030) and SRMR was 0.068, indicating good model fit. Next, I estimated a model to check for loading invariance and compared the adjusted CFI for this model (with constrained loadings) to the adjusted CFI obtained from the configural model. The CFI decreased from 0.835 to 0.832, a change of 0.003, which was below the 0.01 cut-off (Little, 2013). I therefore concluded that this model passed the test of loading invariance.

In the final step of invariance testing, I constrained the intercepts of each indicator to be equal across time points. This constraint resulted in a CFI decrease of 0.012, indicating the presence of at least one noninvariant parameter. After examining the intercepts of the items across time points, as well as their wording, I decided to relax the intercept constraints on four out of the total 27 items—two social analysis items ("Racism in the educational system can limit the success of Black, Latino and other racial minorities"; "Black, Latino and other racial minorities in the United States often don't get their fair share of the good things in life, such as better jobs and more money"), one political efficacy item ("Youth like me have the ability to participate effectively in community or school activities and decision making"), and one prevention focus item ("Everybody should volunteer sometime for the good of their community"). This re-specification resulted in a CFI decrease of 0.009 compared to the loading invariance model; I therefore concluded partial intercept invariance. Beyond these relaxed intercept constraints, the majority of the indicators (e.g., two of three) for each construct were invariant over each time point. According to Little (2013), it is therefore reasonable to "discuss changes in the underlying construct as defined by the invariant indicators" (p. 159). In other words, differences in the latent means over time can be interpreted as true differences when most of the indicators of a factor are invariant.

Scale-Level Descriptive Analyses

Given that the study constructs showed acceptable-to-good cross-sectional and longitudinal measurement properties, I computed prorated scale scores for each construct as long as participants had at least 50% of their item-level data available for proration. Although proration can result in negatively biased scale scores (Lee et al., 2015), Graham (2009) suggests that proration is acceptable when at least half of the variables are used to form the score (e.g., by

only creating a scale score if at least 50% of the items are available). Descriptive statistics for these scale scores are presented in Table 33. Correlations between the scale scores at Time 1 are presented in Table 34, for Time 3 in Table 35, and for Time 5 in Table 36. Amotivation was negatively correlated with all other scale scores across each time point; the only scale score amotivation was not statistically significantly correlated with was social analysis at Times 1 and 3 (the two were statistically significantly negatively correlated at Time 5). Social analysis and commitment to activism were not correlated at Time 1, and they were weakly-to-moderately correlated at Time 3 and at Time 5. Commitment to activism was moderately correlated with autonomous motivation, intrinsic motivation, political efficacy, and prevention focus at all three time points.

Latent Profile Analyses

In this section, I present the results of the first research question. Specifically, I investigated heterogeneity in Black and Latinx adolescents' responses around five motivation constructs (autonomous motivation; intrinsic motivation; political self-efficacy; prevention focus; amotivation), at each of the three time points (ninth grade fall; tenth grade spring; twelfth grade spring). First, I describe the model selection process at each of the three time points. As noted in the earlier Analysis Plan section, for each profile I specified, I tested six variance-covariance structures—Full-Unrestricted, Full-Proportional, Full-Homoscedastic, Diagonal-Unrestricted, Diagonal-Proportional, Diagonal-Homoscedastic (Bauer & Steinley, 2020). To reiterate, full within-class covariance matrices allow indicators to covary within profiles and diagonal within-class covariance matrices assume that indicators are uncorrelated within profiles (Bauer & Steinley, 2020). Furthermore, unrestricted covariance structures allow different covariance matrices to be estimated across profiles, proportional covariance structures allow

each profile to have its own covariance matrix while simultaneously constraining the variances and covariances across the classes to be proportional, and homoscedastic covariance structures specify a common covariance matrix across all profiles. Following model selection descriptions, I present a more detailed explanation of the number of nature of profiles at each time point. To compare means across latent profiles, I calculated Wald Tests with the Holm-Bonferroni correction for multiple comparisons.

Model Selection at Time 1

I was able to estimate models with up to six profiles within the full-free specification, up to four profiles within the full-proportional specification, up to four profiles within the full-homoscedastic specification, up to two profiles within the diagonal-free specification, up to three profiles within the diagonal-proportional specification, and up to four profiles with the diagonal-homoscedastic specification. Model fit statistics from the latent profile analyses for Time 1 are presented in Table 37.

The best overall BIC was obtained with the diagonal-proportional specification with three profiles (BIC = 3275.84). However, the entropy value associated with this model was relatively low (0.80; see Table 38) and there were only six people assigned to one of the profiles. I concluded that this specification was over-extracting profiles and I considered the next lowest BIC for a model with a stable solution (i.e., a model where the loglikelihood was replicated)—the full-proportional specification with two profiles (BIC = 3290.39). A visual inspection of the mean values of the indicators for this two-profile full-proportional model indicated that the model was easily interpretable and conceptually meaningful. The characteristics of this two-profile model are discussed in greater detail in the Profile Descriptions section.

Model Selection at Time 3

I was able to estimate models with up to one profile within the full-free specification, up to four profiles within the full-proportional specification, up to three profiles within the full-homoscedastic specification, up to one profile within the diagonal-free specification, up to four profiles within the diagonal-proportional specification, and up to seven profiles with the diagonal-homoscedastic specification. Model fit statistics from the latent profile analyses for Time 3 are presented in Table 39.

The best overall BIC was obtained with the diagonal-homoscedastic specification with seven profiles (BIC = 2439.29). However, this model contained multiple profiles characterized by very similar means and variances, as well as by relatively low numbers of individuals assigned to them. The next best BIC was obtained with the diagonal-proportional specification with four profiles. Although the BIC for the four-profile diagonal-proportional model (BIC = 2984.12) was the lower than the BIC for the four-profile full-proportional model (BIC = 2994.65), I noticed that the two BICs were very similar. Moreover, their entropy values were identical (see Table 40). Given that the four-profile diagonal-proportional model is nested within the four-profile full-proportional model, I was able to conduct a likelihood ratio test (LRT) to determine which model provided the better fit to the data. Within this LRT, the null model is the diagonal-proportional model because it is more restricted; the alternative model is the less restricted full-proportional model. Significant *p*-values indicate support for rejecting the diagonal-proportional model in favor of the full-proportional model. Results of the LRT supported the four-profile full-proportional model over the four-profile diagonal-proportional model (see Table 41).

A visual inspection of the mean values of the indicators for the four-profile full-proportional model indicated that the model was easily interpretable and conceptually

meaningful. The characteristics of this model are discussed in greater detail in the Profile Descriptions section.

Model Selection at Time 5

I was able to estimate models with up to one profile within the full-free specification, up to four profiles within the full-proportional specification, up to five profiles within the full-homoscedastic specification, up to one profile within the diagonal-free specification, up to five profiles within the diagonal-proportional specification, and up to six profiles with the diagonal-homoscedastic specification. Model fit statistics from the latent profile analyses for Time 3 are presented in Table 42.

The two best overall BICs were obtained with homoscedastic specifications—one model had five profiles and one model had six profiles. This finding may be due to the fact that assumptions of homoscedasticity helps reduce model complexity (Bauer & Steinley, 2020). However, assumptions of homoscedasticity may not be realistic. That is, as Bauer and Steinley (2020) note, "natural groups tend to display differences in variances as well as correlations of attributes." Additionally, both of these homoscedastic specifications appeared to be over-extracting profiles because some of these profiles were small and conceptually similar to one another.

The next best BICs were obtained with the five-profile diagonal-proportional specification and the five-profile full-proportional specification. However, both of these models contained two profiles characterized by very similar means and variances, as well as by relatively low numbers of individuals assigned to them. Given that these profiles did not appear to be qualitatively distinct from one another, I decided to consider the four-profile diagonal-

proportional and full-proportional specifications. Both of these four-profile solutions were characterized by good entropy values (see Table 43).

Similar to model selection at Time 3, I conducted a likelihood ratio test (LRT) comparing the four-profile diagonal-proportional model (BIC = 4185.81) and the four-profile full-proportional model (BIC = 4222.78). As noted earlier, within this LRT, the null model is the diagonal-proportional model because it is more restricted; the alternative model is the less restricted full-proportional model. Significant *p*-values indicate support for rejecting the diagonal-proportional model in favor of the full-proportional model. Results of the LRT supported the four-profile full-proportional model over the four-profile diagonal-proportional model (see Table 44). A visual inspection of the mean values of the indicators for the four-profile full-proportional model indicated that the model was easily interpretable and conceptually meaningful. The characteristics of this model are discussed in greater detail in Profile Descriptions section.

Profile Descriptions at Time 1, Time 3, and Time 5

The mean scores on each motivation indicator variable for each profile at Time 1, Time 3, and Time 5 are presented in Table 45, Table 46, and Table 47, respectively. Line plots of the mean scores at each time point are illustrated in Figure 7, Figure 9, and Figure 11. To further support interpretation, I also converted the mean scores of the indicator variables for each profile (at each of the time points) to z-scores using the formula: $\frac{x-\mu}{\sigma}$. Here, x represents the mean score of a given indicator variable within a specific profile and at a certain time point; μ represents the mean score for a given indicator variable across the entire sample at that time point; σ represents the standard deviation of the variable. Bar graphs of these z-scores at each time point are illustrated in Figure 8, Figure 10, and Figure 12.

Profiles at Time 1. At Time 1, when participants were beginning their ninth-grade year, a two-profile model provided the best fit to the data. The majority of adolescents in this sample were assigned to Profile 2 (98.29%), with substantially fewer being assigned to Profile 1 (1.72%). Compared to the motivation scores averaged across the whole sample at Time 1, Profile 1 (1.72%) was characterized by lower average levels of autonomous motivation ($M = 4.00$, $p < 0.001$), intrinsic motivation ($M = 3.33$, $p < 0.001$), and amotivation ($M = 1.40$, $p < 0.001$), but higher average levels of political self-efficacy ($M = 4.00$, $p < 0.001$) and prevention focus ($M = 4.00$, $p < 0.001$). Notably, adolescents in Profile 1 reported efficacy levels that were nearly a full standard deviation above the mean (z-score = 0.80). On the other hand, Profile 2 (98.29%) was characterized by average levels of autonomous motivation ($M = 4.35$), intrinsic motivation ($M = 3.74$), political self-efficacy ($M = 3.53$), prevention foucs ($M = 3.79$), and amotivation ($M = 2.14$; all p-values were non-significant).

In comparing the means between profiles, results indicated that Profile 1 (1.72%) was characterized by statistically significantly lower levels of autonomous motivation ($p < 0.001$) and intrinsic motivation ($p < 0.001$) as compared to Profile 2 (98.29%), but statistically significantly higher levels of political self-efficacy ($p < 0.001$) and prevention focus ($p < 0.001$). Notably, despite reporting lower levels of autonomous and intrinsic motivation compared to Profile 2, the average individual in Profile 1 reported experiencing less amotivation as compared to their peers in Profile 2 ($p < 0.001$). Based on these results, I labeled Profile 1 as "Mixed Motivation, High Efficacy." On the other hand, I labeled Profile 2 as "Moderate Motivation."

Profiles at Time 3. At Time 3, when participants were concluding their tenth grade year, a four-profile model provided the best fit to the data. Profile 4 (59.91%) was the most prevalent latent profile, followed by Profile 3 (18.88%), Profile 2 (16.45%), and Profile 1 (4.77%).

Compared to the motivation scores averaged across the whole sample at Time 3, Profile 1 (4.77%) was characterized by lower average levels of autonomous motivation ($M = 2.81$, $p < 0.001$), intrinsic motivation ($M = 3.47$, $p < 0.001$), political self-efficacy ($M = 2.54$, $p < 0.001$), and prevention focus ($M = 2.90$, $p < 0.001$), but higher average levels of amotivation ($M = 2.93$, $p < 0.001$). Adolescents in Profile 1 reported autonomous motivation scores that were nearly three standard deviations below the Time 3 mean (z-score = -2.89). Their levels of efficacy and prevention focus were also very low, at 1.48 and 1.32 standard deviations below the mean, respectively. In contrast, their levels of amotivation were almost one standard deviation above the mean (z-score = 0.94).

Compared to the whole sample, Profile 2 (16.45%) was characterized by higher average levels of autonomous motivation ($M = 5.00$, $p < 0.001$), intrinsic motivation ($M = 4.58$, $p < 0.001$), political self-efficacy ($M = 4.28$, $p < 0.001$), and prevention motivation ($M = 4.84$, $p < 0.001$), but lower average levels of amotivation ($M = 1.47$, $p < 0.001$). Adolescents in Profile 2 reported autonomous motivation scores that were 0.63 standard deviations above the Time 3 mean. Their levels of intrinsic motivation, efficacy, and prevention focus were all close to one standard deviation above the mean. In contrast, their levels of amotivation were almost one standard deviation below the mean (z-score = -0.93).

Compared to the whole sample, Profile 3 (18.88%) was characterized by lower average levels of autonomous motivation ($M = 3.84$, $p < 0.001$), intrinsic motivation ($M = 3.63$, $p < 0.01$), political self-efficacy ($M = 3.22$, $p < 0.01$), and prevention focus ($M = 3.62$, $p < 0.001$), but higher average levels of amotivation ($M = 2.59$, $p < 0.01$). Whereas adolescents in Profile 3 reported levels of intrinsic motivation, efficacy, and prevention focus that were roughly half a

standard deviation below the mean, their reported autonomous motivation was 1.23 standard deviations below the mean.

Finally, compared to the whole sample, Profile 4 (59.91%) was characterized by higher average levels of autonomous motivation ($M = 4.89$, $p < 0.001$), but average levels of intrinsic motivation ($M = 3.81$), political self-efficacy ($M = 3.60$), prevention focus ($M = 4.04$), and amotivation ($M = 2.22$). Adolescents in Profile 4 reported levels of autonomous motivation that were roughly half a standard deviation above the mean.

Comparing means across profiles, results indicated that Profile 1 (4.77%) was characterized by the lowest levels of autonomous motivation and efficacy; Profile 1 (4.77%) and Profile 3 (18.88%) were characterized by statistically similar levels of intrinsic motivation, prevention focus, and amotivation. In contrast to these two profiles (Profile 1 and Profile 3) characterized by lower average levels of motivation, Profile 2 (16.45%) and Profile 4 (59.91%) were characterized by higher average levels of motivation. Profile 2 (16.45%) was characterized by the highest overall levels of autonomous motivation, intrinsic motivation, political efficacy, and prevention focus, and the lowest overall levels of amotivation. Compared to Profiles 1 and 3, Profile 4 (59.91%) had statistically similar levels of intrinsic motivation, but reported significantly greater political efficacy and prevention focus and significantly less amotivation.

After examining the profile mean scores in relation to the overall mean, as well as the means across profiles, I decided to label Profile 1 as "Low Motivation," Profile 2 as "High Motivation," Profile 3 as "Moderate Motivation, Low Autonomy" and Profile 4 as "Moderate Motivation, High Autonomy."

Profiles at Time 5. At Time 5, when participants were concluding their twelfth grade year, a four-profile model provided the best fit to the data. Similar to the results at Time 3, the

results at Time 5 indicated that Profile 4 (52.21%) was the most prevalent latent profile, followed by Profile 3 (23.18%), Profile 2 (17.16%), and Profile 1 (7%).

Compared to the motivation scores averaged across the whole sample at Time 5, Profile 1 (7%) was characterized by lower average levels of autonomous motivation ($M = 3.16$, $p < 0.001$), intrinsic motivation ($M = 3.22$, $p < 0.001$), political self-efficacy ($M = 2.94$, $p < 0.001$), and prevention focus ($M = 3.32$, $p < 0.001$), but higher average levels of amotivation ($M = 2.89$, $p < 0.001$). Similar to Time 3, adolescents in Profile 1 at Time 5 reported autonomous motivation scores that were nearly three standard deviations below the mean (z-score = -2.88). Their levels of intrinsic motivation, efficacy, and prevention focus were also low, all about one standard deviation below the mean. In contrast, their levels of amotivation were almost one standard deviation above the mean (z-score = 0.84).

Profile 2 (17.16%%) was characterized by higher average levels of autonomous motivation ($M = 5.00$, $p < 0.001$), intrinsic motivation ($M = 4.67$, $p < 0.001$), political self-efficacy ($M = 4.44$, $p < 0.001$), and prevention focus ($M = 4.91$, $p < 0.001$), but lower average levels of amotivation ($M = 1.53$, $p < 0.001$). Adolescents in Profile 2 reported autonomous motivation scores that were 0.55 standard deviations above the Time 5 mean. Similar to Time 3, their levels of intrinsic motivation, efficacy, and prevention focus were all close to one standard deviation above the mean at Time 5. Their levels of amotivation were almost one standard deviation below the mean (z-score = -0.85).

Profile 3 (23.18%) was characterized by lower average levels of autonomous motivation ($M = 4.28$, $p < 0.001$), intrinsic motivation ($M = 3.75$, $p < 0.001$), political self-efficacy ($M = 3.44$, $p < 0.001$), and prevention focus ($M = 3.82$, $p < 0.001$), but higher average levels of amotivation ($M = 2.32$, $p < 0.01$). Whereas adolescents in Profile 3 reported levels of intrinsic

motivation, efficacy, and prevention focus that were roughly half a standard deviation below the mean, their reported autonomous motivation was 0.79 standard deviations below the mean.

Finally, Profile 4 (52.21%) was characterized by higher average levels of autonomous motivation ($M = 5.00$, $p < 0.001$), but average levels of intrinsic motivation ($M = 3.92$), political self-efficacy ($M = 3.82$), prevention focus ($M = 4.31$), and amotivation ($M = 2.30$). Adolescents in Profile 4 reported levels of autonomous motivation that were 0.55 standard deviations above the mean.

Similar to the Time 3 profiles, the Time 5 profiles were characterized by two profiles with lower average levels of motivation (Profile 1 and Profile 3), and two profiles with higher average levels of motivation (Profile 2 and Profile 4). Just as with Time 3, results at Time 5 indicated that Profile 1 (7%) was characterized by the lowest levels of autonomous motivation out of all four profiles. However, this profile had statistically similarly low levels of intrinsic motivation, political efficacy, and prevention focus as compared to Profile 3 (23.18%). Moreover, Profile 1 (7%) had statistically similar levels of amotivation as compared to Profile 3 (23.18%) and Profile 4 (52.21%).

In contrast to these two profiles (Profile 1 and Profile 3) characterized by lower average levels of motivation, Profile 2 (17.16%) and Profile 4 (52.21%) were characterized by higher average levels of motivation. Profile 2 (17.16%) was characterized by the highest overall levels of intrinsic motivation, political efficacy, and prevention focus. This profile also had the lowest overall levels of amotivation. Profile 4 (52.21%) had statistically similar levels of autonomous motivation as Profile 2, and statistically similar levels of intrinsic motivation and amotivation as Profile 3.

After examining the profile mean scores in relation to the overall mean, as well as the means across profiles, I decided to maintain the labels I used with the Time 3 profiles. Specifically, I labeled Profile 1 "Low Motivation," Profile 2 as "High Motivation," Profile 3 as "Moderate Motivation, Low Autonomy" and Profile 4 as "Moderate Motivation, High Autonomy."

Latent Profile Transition Analyses

In this section, I present the results of the second research question. Specifically, I investigated whether adolescents changed motivation profile membership across high school, and, if so, which profile transitions were most likely. I estimated a total of six LPTA models and examined BIC values to select the best-fitting LPTA model. All LPTA models were specified with a full-proportional variance-covariance structure, which was the variance-covariance structure that produced the best-fitting models at each of the cross-sectional LPAs.

The first LPTA model was guided by the cross-sectional LPA results and specified two profiles at Time 1, four profiles at Time 3, and four profiles at Time 5. This model was unconstrained and allowed all profiles to be different across the three time points. Whereas the profile means and profile proportions at Time 3 and Time 5 were very similar to their corresponding Time 3 and Time 5 LPAs, the profile means and proportions for Time 1, Profile 1 (but not Time 1, Profile 2) noticeably shifted. For instance, in the Time 1 LPA, only 1.72% of the sample was modally assigned to Profile 1 ("Mixed Motivation, High Efficacy"). In the LPTA, however, 32.65% of the sample was modally assigned to Profile 1. Moreover, this LPTA profile was characterized by higher average levels of autonomous motivation and intrinsic motivation, but lower levels of political efficacy, as compared to its LPA counterpart.

As noted in the literature review, these changes were somewhat expected because the LPTA model (which accounts for all measurement occasions) is different than each cross-sectional LPA model. This observed shift in Profile 1 was likely driven by differential rates of missingness across the three time points. In light of this shift, I decided to follow-up with profile enumeration within the LPTA framework to investigate whether a different profile solution provided a better fit to the Time 1 data than the two-profile solution obtained with the LPA. When I specified a model with three profiles at Time 1 (increasing the number of profiles by just one), and four profiles at Times 3 and 5, the best loglikelihood was not replicated despite a very large number of two-stage random starts (5,000 and 500). The failure of the loglikelihood to replicate may indicate that the sample size was too small to support the model complexity.

I next decided to test a pairwise LPTA at Time 1 and Time 3 to investigate the extent to which profile means and proportions shifted with just two time points; however results were nearly identical to the full LPTA model with three time points (both in terms of means and proportions). Previously, in considering missingness across time points, I noted that 256 participants only had data at Time 5. It seems reasonable to conclude, therefore, that differential rates of missingness affected profile solutions at Time 1 when all three time points were linked together with FIML. Although I could have pursued additional profile enumeration for the pairwise Time 1-Time 3 LPTA, I decided this was unnecessary because the best loglikelihood for the three-time-point LPTA was not replicating beyond a two-profile solution at Time 1. Thus, I concluded that a two-profile solution at Time 1 solution was the best fit to the data, and proceeded to examine LPTA models with an increasing number of constraints.

Given that the profiles at Time 3 and Time 5 appeared fairly similar, the first partially constrained LPTA model I specified constrained all four profiles at Time 3 to equal their

corresponding profiles at Time 5. Both the AIC and BIC decreased, indicating that constraining these profiles across time points improved the overall model fit (see Table 48). The next partially constrained LPTA model built on the previous partially constrained model by constraining Profile 2 in Time 1 to equal the Time 3/5 Profile 3. Although the AIC increased slightly, the BIC decreased slightly. Given these conflicting model fit statistics, I followed the recommendations of Collins and Lanza (2010), who state that "parsimony and conceptual appeal are important model selection criteria in LTA" (p. 190). Thus, I concluded that the Time 1 Profile 2 could be constrained to equal the Time 3/5 Profile 3. Finally, I examined a fully constrained model in which Time 1 Profile 1 was constrained to equal Time 3/5 Profile 4. Both the AIC and the BIC increased, indicating that Time 1 Profile 1 could not be constrained (see Table 48). I therefore chose to interpret the partially constrained LPTA model (i.e., the LPTA model with all but one profile constraint).

Profile Descriptions at Time 1, Time 3, and Time 5

The mean scores on each motivation indicator for each profile at Time 1, Time 3, and Time 5 are presented in Table 49 and visually depicted in Figure 13. In Table 49, the Time 3 and Time 5 profile means are presented together because they were constrained to be equal across these time points. There were only two profiles at Time 1, but one of the profiles (Profile 2) was constrained to equal Time 3/Time 5 Profile 3. Given that most of the profiles were able to be constrained across time points, the following profile description sections are organized by profile name, rather than by time; there are five such distinct profiles to describe.

Moderate High Motivation. At Time 1, only, I identified a motivation profile (Profile 1) characterized by high levels of autonomous motivation (M = 4.59), intrinsic motivation (M = 4.19), and prevention focus (M = 4.17), and comparatively weaker levels of political efficacy (M

= 3.76). The average adolescent in this profile also reported very low levels of amotivation (*M* = 1.65). At Time 1, this profile (Profile 1) was the smaller of the two profiles, with 35.11% of the sample modally assigned to it.

Based on these results, I labeled this profile, "Moderate High Motivation." The higher levels of autonomous motivation suggest that adolescents in this group have internalized sociopolitical activism as being personally important or valuable; high levels of intrinsic motivation suggest that, on average, these adolescents' behavior may be driven and regulated by curiosity and interest; finally, the high levels of prevention focus suggest that adolescents in this profile may be committed to action to ensure social conditions do not worsen. However, the comparatively weaker levels of political efficacy in this profile indicates that, despite valuing activism, the average adolescent in this group may not feel entirely capable of bringing about change.

Low Motivation. At Time 3 and Time 5, I identified a motivation profile (Profile 1) characterized by weak levels of autonomous motivation (*M* = 3.16), intrinsic motivation (*M* = 3.22), political efficacy (*M* = 2.94), and prevention focus (*M* = 3.32), but comparatively heightened levels of amotivation (*M* = 2.89). At both Time 3 and Time 5, this profile (Profile 1) was the smallest of the four profiles, characterizing 11.13% of the sample and 7.12% of the sample, respectively. Just as with the latent profile analyses, I named this profile, "Low Motivation."

High Motivation. At Time 3 and Time 5, I identified a motivation profile (Profile 2) characterized by very high levels of autonomous motivation (*M* = 5.00), intrinsic motivation (*M* = 4.67), political efficacy (*M* = 4.45), and prevention focus (*M* = 4.90), and very low levels of amotivation (*M* = 1.52). At Time 3, this profile made up 14.56% of the sample and at Time 5, it

made up 16.97% of the sample. Just as with the latent profile analyses, I named this profile, "High Motivation."

Moderate Motivation, Low Autonomy. Across all the three time points, I identified a motivation profile characterized by moderate levels of intrinsic motivation ($M = 3.75$), political efficacy ($M = 3.75$), and prevention focus ($M = 3.82$). Although adolescents in this profile also had moderate-to-high autonomous motivation raw scores ($M = 4.28$), compared to the whole sample, their autonomous motivation was lower than the mean. This profile was also characterized by low-to-moderate levels of amotivation ($M = 2.32$). At Time 1, this profile (Profile 2) was the larger of the two profiles, with 64.89% of the sample being modally assigned to it. At Time 3 and Time 5, this profile (Profile 3) was the second largest profile, characterizing 26.03% of the sample and 23.50% of the sample, respectively. Just as with the latent profile analyses, I named this profile, "Moderate Motivation, Low Autonomy."

Moderate Motivation, High Autonomy. At Time 3 and Time 5, I identified a motivation profile (Profile 4) characterized by levels of autonomous motivation ($M = 5.00$) that were equal to that of the "High Motivation" profile. However, Profile 4 was also characterized by levels of intrinsic motivation ($M = 3.92$), political efficacy ($M = 3.81$), and prevention focus ($M = 4.31$) that were lower than the "High Motivation" profile. On average, adolescents in Profile 4 and Profile 3 ("Moderate Motivation, Low Autonomy") reported nearly equal levels of amotivation ($M_{Profile\ 4} = 2.30$; $M_{Profile\ 3} = 2.32$). At both Time 3 and Time 5, Profile 4 was the largest of the four profiles, characterizing 48.28% and 52.42% of the sample, respectively. Just as with the latent profile analyses, I named this profile, "Moderate Motivation, High Autonomy."

Transitions Between Profiles (Time 1 to Time 3)

I estimated transition probabilities for profiles at Time 3, which represent the probability of being in a particular profile at a Time 3, conditional on profile membership at Time 1. The proportion of adolescents transitioning from and to each of the profiles are presented in Table 50 and visually depicted in Sankey diagrams in Figures 14a and 14b.

Between Time 1 and Time 3, the majority of adolescents transitioned to Profile 4. More specifically, between the beginning of ninth grade and the end of tenth grade, transitions to the "Moderate Motivation, High Autonomy" profile represented 48.45% of all transitions. An additional 22.20% transitioned to Profile 3, "Moderate Motivation, Low Autonomy," and 20.75% transitioned to Profile 2, "High Motivation." Transitions to Profile 1, the "Low Motivation" profile, represented only 8.6% of all transitions between Time 1 and Time 3.

The majority of adolescents in the "Moderate High Motivation" profile at Time 1 transitioned to the "Moderate Motivation, High Autonomy" profile at Time 3 (49.1%). Most of the remaining adolescents in this profile transitioned to the "High Motivation" profile (41.5%). The remaining 9.4% of adolescents in this profile transitioned to the "Moderate Motivation, Low Autonomy" profile. None of the adolescents in the "Moderate High Motivation" profile at Time 1 transitioned to the "Low Motivation" profile at Time 3.

The majority of adolescents in the "Moderate Motivation, Low Autonomy" profile at Time 1 transitioned to the "Moderate Motivation, High Autonomy" profile at Time 3 (47.8%). Another 35% of adolescents remained in the "Moderate Motivation, Low Autonomy" profile at Time 3. The remaining 17.2% of adolescents in the "Moderate Motivation, Low Autonomy" profile at Time 1 transitioned to the "Low Motivation" profile at Time 3. None of the adolescents in the "Moderate Motivation, Low Autonomy" profile at Time 1 transitioned to the "High Motivation" profile at Time 3.

Transitions Between Profiles (Time 3 to Time 5)

I estimated transition probabilities for profiles at Time 5, which represent the probability of being in a particular profile at a Time 5, conditional on profile membership at Time 3. Again, the proportion of adolescents transitioning from and to each of the profiles are presented in Table 50 and visually depicted in Sankey diagrams in Figures 14a and 14b.

Between Time 3 and Time 5, the majority of adolescents transitioned to (or remained in) the "Moderate Motivation, High Autonomy" profile (Profile 4). Specifically, transitions to Profile 4 represented 45% of all transitions between Time 3 (the end of tenth grade) and Time 5 (the end of twelfth grade). Another 25% of adolescents transitioned to the "Moderate Motivation, Low Autonomy" profile (Profile 3), and 22.18% transitioned to the "High Motivation" profile (Profile 2). Transitions to the "Low Motivation" profile (Profile 1) once again represented the smallest overall transition probability, characterizing just 7.8% of all transitions between Time 3 and Time 5.

The majority of adolescents in the "Low Motivation" profile (Profile 1) at Time 3 transitioned to a different profile by Time 5. The most likely transition was fairly evenly split between the "Moderate Motivation, Low Autonomy" profile (Profile 3; 41.7%) and the "Moderate Motivation, High Autonomy" profile (Profile 4; 41.0%). Another 14.5% of adolescents remained in the "Low Motivation" profile between Time 3 and Time 5. Finally, only 2.8% of adolescents in the "Low Motivation" profile at Time 3 transitioned to the "High Motivation" profile (Profile 2) at Time 5.

The majority of adolescents (69.0%) in the "High Motivation" profile (Profile 2) at Time 3 remained in this profile at Time 5. A smaller proportion of adolescents (27.3%) transitioned to the "Moderate Motivation, High Autonomy" profile (Profile 4), followed by an even smaller

proportion of adolescents (3.7%) transitioning to the "Moderate Motivation, Low Autonomy" profile (Profile 3). None of the adolescents in the "High Motivation" profile (Profile 2) at Time 3 transitioned to the "Low Motivation" profile by Time 5.

Most adolescents in the "Moderate Motivation, Low Autonomy" profile (Profile 3) at Time 3 transitioned to a different profile by Time 5. The plurality of these adolescents (45.2%) transitioned to the "Moderate Motivation, High Autonomy" profile (Profile 4). A substantially smaller proportion of adolescents (11.7%) transitioned to the "Low Motivation" profile (Profile 1), followed by just 7% of adolescents transitioning to the "High Motivation" profile (Profile 2). The remaining 36.1% of adolescents remained in the "Moderate Motivation, Low Autonomy" profile between Time 3 and Time 5.

The majority of adolescents (66.5%) in the "Moderate Motivation, High Autonomy" profile (Profile 4) at Time 3 remained in this profile at Time 5. A smaller proportion of adolescents (18.5%) transitioned to the "Moderate Motivation, Low Autonomy" profile (Profile 3), followed by 9.9% of adolescents transitioning to the "High Motivation" profile (Profile 2). Finally, only 5.1% of adolescents in the "Moderate Motivation, High Autonomy" profile transitioned to the "Low Motivation" profile (Profile 1).

Latent Profile Moderation Analysis

To facilitate understanding of the moderation results, I first present the results of an analysis of distal outcomes (i.e., Time 5 commitment to activism) predicted by latent profile membership (i.e., Time 3 motivation profiles). Next, I describe the results of the cross-time LPA moderation analysis, which assessed mean slope differences across latent motivation profiles.

Distal Outcome Predicted by Latent Profile Membership

Results of the BCH 3-step approach to predicting distal outcomes revealed differences in Time 5 commitment to activism based on Time 3 latent motivation profile membership. Looking at the means in Table 51 and Figure 15, adolescents in Profile 2 ("High Motivation"; 17.45%) had the highest average Time 5 commitment to activism scores ($M = 3.57$). In contrast, adolescents in Profile 3 ("Moderate Motivation, Low Autonomy"; 17.23%) had, on average, the lowest Time 5 commitment to activism scores ($M = 3.04$). Profile 1 ("Low Motivation"; 3.72%) and Profile 4 ("Moderate Motivation, High Autonomy"; 61.60%) had moderate commitment to activism scores at Time 5 ($M = 3.25$ and $M = 3.23$, respectively). Compared to the commitment to activism scores averaged across the whole sample at Time 5 ($M = 3.26$), Profile 2 had higher average scores, Profile 3 had lower average scores, and Profiles 1 and 4 had scores at the average (see Figure 15).

Pairwise tests of distal means for commitment to activism found significant differences between Profile 2 and Profile 3 ($p < 0.01$), and between Profile 2 and Profile 4 ($p < 0.05$; see Table 52). However, after applying the Holm-Bonferroni correction for multiple comparisons, only the difference between Profile 2 ("High Motivation") and Profile 3 ("Moderate Motivation, Low Autonomy") remained significant ($p < 0.05$). All other pairwise differences were not significant, including the difference between Profile 1 ("Low Motivation") and Profile 2 ("High Motivation").

Moderation Model

In this section, I present the results of the third and final research question. Specifically, I investigated whether motivation profile membership at the end of tenth grade (Time 3) moderated the relation between social analysis at the end of tenth grade (Time 3) and commitment to activism at the end of twelfth grade (Time 5), controlling for initial (Time 3)

commitment to activism. As noted in the Analysis Plan section, this moderation model also specified an interaction between motivation profile membership and commitment to activism at Time 3 in predicting commitment to activism at Time 5. When I conducted this analysis, M*Plus* indicated that 80 cases were missing Time 5 commitment to activism data and were therefore removed from the analysis. Thus, the profile proportions for the four profiles in this LPA moderation differ very slightly from the original Time 3 LPA (see Table 53).

Standardized model results are presented in Table 54. Here, significant effects indicate that the values were statistically significantly different from zero. Across all four profiles, social analysis at Time 3 did not predict commitment to activism at Time 5, after controlling for commitment to activism at Time 3. In contrast, across all profiles, commitment to activism at Time 3 did significantly predict commitment to activism at Time 5, after controlling for social analysis at Time 3.

For three of the four profiles (Profiles 2, 3, and 4), commitment to activism at Time 3 positively predicted commitment to activism at Time 5. For Profile 2 ("High Motivation"; 17.54%), every one standard deviation higher score in commitment to activism scores at Time 3 was associated with a 0.39 standard deviation higher score in commitment to activism scores at Time 5 ($p < 0.05$). For Profile 3 ("Moderate Motivation, Low Autonomy"; 17.31%), every one standard deviation higher score in commitment to activism scores at Time 3 was associated with a 0.49 standard deviation higher score in commitment to activism scores at Time 5 ($p < 0.01$). Finally, for Profile 4 ("Moderate Motivation, High Autonomy"; 61.41%), every one standard deviation higher score in commitment to activism scores at Time 3 was associated with a 0.46 standard deviation higher score in commitment to activism scores at Time 5 ($p < 0.001$).

For adolescents in Profile 1 ("Low Motivation"), only, commitment to activism at Time 3 negatively predicted commitment to activism at Time 5, controlling for social analysis at Time 3 ($p < 0.001$). Specifically, for the "Low Motivation" adolescents, every one standard deviation unit higher score in commitment to activism scores at Time 3 was associated with a predicted 0.74 standard deviation unit lower score in commitment to activism scores at Time 5, controlling for their initial social analysis scores.

To examine whether the effect estimates (i.e., slopes) for social analysis and commitment to activism were equal across profiles, I conducted two Wald Tests. In the first Wald Test, I examined the null hypothesis that the social analysis coefficients were equal across profiles. Results indicated that there were no significant differences in the coefficient for social analysis across profiles, $\chi^2(3) = 1.21$, $p = 0.750$. In other words, profile differences in the influence of Time 3 social analysis on Time 5 commitment to activism did not exceed what might be expected by chance. I therefore concluded that there was no evidence of latent profile moderation in relation to Time 3 social analysis and Time 5 commitment to activism.

Next, I examined whether the incidental finding regarding the commitment to activism coefficients were equal across profiles. Results indicated that there were significant differences in the relationship between commitment and activism across profiles, $\chi^2(3) = 19.15$, $p < 0.001$. In other words, profile differences in the influence of Time 3 commitment to activism on Time 5 commitment to activism exceeded what might be expected by chance. These results provide evidence that motivation profile membership moderated the relation between commitment to activism at the end of tenth grade on commitment to activism at the end of twelfth grade.

Chapter 5: Discussion

Overview of Chapter

This dissertation sought to expand the motivation component of the Critical Consciousness (CC) and Youth Sociopolitical Development (Youth SPD) frameworks by using group differential approaches to explore the role of several motivational constructs drawn from Self-Determination Theory (SDT) and Regulatory Focus Theory (RFT). Although the CC and Youth SPD frameworks focus on political self-efficacy as the sole motivation construct related to youths' sociopolitical development, the results of this dissertation suggest that CC/Youth SPD research may benefit from incorporating a number of additional motivation constructs in considering adolescents' commitment to activism over time.

In the first section of this chapter, I summarize the results of my analyses and interpret the findings within the context of relevant motivation and civic development literature. In the second section, I discuss the main limitations of this study and explain how these limitations should be accounted for when interpreting the study's results. Based on this discussion of limitations, I proceed to the third section, in which I present implications of this work and some recommendations for future research. Finally, I end this chapter with a brief conclusion regarding the overall findings of this study.

Summary of Results

The following summary of results consists of three subsections, as follows: 1. latent profile analyses; 2. latent profile transition analyses; 3. latent profile moderation analysis. As a reminder, I examined five motivation constructs within a latent profile framework: identified/integrated (autonomous) motivation, intrinsic motivation, political self-efficacy, prevention focus, and amotivation. Three of these motivation constructs were drawn from Self-

Determination Theory (autonomous motivation, intrinsic motivation, amotivation), one construct was drawn from Regulatory Focus Theory (prevention focus), and one construct was drawn from Critical Consciousness/Youth Sociopolitical Development Theory (political self-efficacy).

According to SDT, identified and integrated regulation represent two separate constructs (Ryan & Deci, 2000); however, SDT measures often assess identified and integrated regulation as a single "identified/integrated" construct (e.g., Ryan & Connell, 1989). Similarly, in my dissertation, I assessed adolescents' identified/integrated (autonomous) motivation for sociopolitical activism. Identified/integrated regulation represents a more autonomous form of extrinsic motivation and can refer to behavior motivated by the personal importance or value placed on some goal (Deci & Ryan, 2008). Intrinsic motivation is motivation that stems from factors that are inherent to the task or activity, such as interest or the inherent satisfaction one experiences when engaging in the behavior (Deci & Ryan, 2008). From an SDT perspective, both identified/integrated motivation and intrinsic motivation are conceptualized as representing autonomous, or self-determined, forms of regulation. For the sake of simplicity, however, I refer to the identified/integrated regulation construct as "autonomous motivation" throughout this dissertation. The last SDT construct I assessed was amotivation, which can be defined as a lack of motivation or intention to act.

According to RFT, prevention focus broadly refers to motivation that is regulated by fundamental concerns around safety and security (Higgins, 1997). Prevention-focused individuals experience a sense of responsibility or obligation to guard against losses, and tend to engage in vigilant behavior to ensure conditions do not worsen (Scholer et al., 2019). Finally, in line with CC/Youth SPD work, I conceptualized political self-efficacy as one's perceived ability to effect meaningful social change.

After identifying subgroups of adolescents characterized by distinct configurations on this set of five interacting motivation variables, I investigated these latent motivation profiles in relation to the two other core constructs in the CC/Youth SPD frameworks that I considered: social analysis and commitment to activism. Here, social analysis refers specifically to adolescents' critical awareness of, and reflection about, systemic racial inequity. Commitment to activism refers to youths' self-reported commitment to civic action aimed at systems-level change—both presently and in the future.

Latent Profile Analyses

My first research question sought to examine the number and nature of latent motivation profiles in a sample of Black and Latinx adolescents at three time points—the beginning of ninth grade, the end of tenth grade, and the end of twelfth grade. Based on the Self-Determination Theory literature (e.g., Deci & Ryan, 2008; Howard et al., 2016; Xie et al., 2020), I expected to find a motivation profile characterized by low levels of autonomous motivation, intrinsic motivation, and efficacy, but high levels of amotivation. Furthermore, I expected to find a profile characterized by high levels of motivation across the constructs (but low amotivation) and a profile characterized by moderate levels of motivation. Put simply, I expected to find profiles characterized by low, medium, and high levels of motivation. Based on Regulatory Focus Theory, I also expected to find a motivation profile characterized by diverging levels of autonomous/intrinsic motivation and prevention focus. For instance, I imagined that there would be a group of adolescents in the sample who internalized sociopolitical activism as being personally important to them (experiencing strong autonomous motivation), and whose behavior was regulated by curiosity and interest (experiencing strong intrinsic motivation), but who did not feel a perceived responsibility to engage in activism (experiencing weak prevention focus).

Low Motivation Profile. My hypothesis regarding a "Low Motivation" profile was mostly supported. Although I did not find a "Low Motivation" profile at Time 1 (ninth grade fall), I did find a "Low Motivation" profile at Time 3 (tenth grade spring) and at Time 5 (twelfth grade spring). Drawing from Ryan and Deci's (2000) suggestion that amotivation may occur when individuals do not value an activity or when they do not feel a sense of efficacy to complete the activity, adolescents in this "Low Motivation" profile may experience greater amotivation than their peers because they neither valued sociopolitical activism, nor felt capable of effecting meaningful social change.

Surprisingly, at Time 5, I found that adolescents in Profile 3 ("Moderate Motivation, Low Autonomy") and Profile 4 ("Moderate Motivation, High Autonomy") reported nearly equal levels of amotivation, despite the fact that adolescents in Profile 4 reported significantly greater levels of autonomous motivation and efficacy as compared to adolescents in Profile 3. This contradicts scholarship by Ryan and Deci (2000); I expected adolescents in Profile 4 to report lower levels of amotivation than Profile 3 due to their stronger feelings of autonomous motivation and efficacy. One interpretation of this result is that additional motivational constructs must be measured and considered in relation to adolescents' experiences of amotivation. That is, not valuing an activity and feeling inefficacious to complete that activity may represent just two of many factors implicated in adolescents' experiences of amotivation.

Another explanation for this unexpected finding is rooted in how these constructs were measured. Whereas autonomous motivation and efficacy were measured at the task level, in relation to sociopolitical activism, amotivation was measured more generally as a motivational orientation. Thus, comparing Profile 3 and Profile 4 at Time 5 indicates that adolescents may experience a range of events in their lives as somewhat discouraging or amotivating (Deci &

Ryan, 1985), despite valuing activism and feeling capable of making change. Put another way, comparing Profile 3 with Profile 4 suggest that adolescents can have similar levels of general motivational orientations but very different levels of motivation for activism. This disconnect between general motivational orientations and task-specific motivations highlights the importance of adopting holistic approaches to supporting adolescents as they progress through high school. For instance, if I had omitted a measure of amotivation, I may have incorrectly concluded that adolescents in Profile 4 would be in less need of (motivational) support compared to their peers in Profile 3.

Finally, in considering why adolescents in Profile 3 and Profile 4 reported near equal levels of amotivation despite very different levels of autonomous motivation and efficacy, it may be useful to draw on Regulatory Focus Theory. For instance, Profile 4 was characterized by significantly higher levels of prevention focus compared to Profile 3; however, the two profiles had similar levels of intrinsic motivation. According to Scholer et al. (2019), prolonged prevention motivation can be emotionally exhausting; however, intrinsic motivation has been found to buffer against emotional burnout (Sheldon et al., 2016). Thus, it is possible that the average levels of amotivation reported by adolescents in Profile 4 may have been related to a disconnect between their heightened prevention focus relative to their intrinsic motivation. Following this logic, it makes sense that the adolescents in Profile 2 ("High Motivation") reported very low levels of amotivation despite reporting the highest average levels of prevention focus, because they also reported extremely high levels of intrinsic motivation. In sum, these results may tentatively suggest that intrinsic motivation can provide a buffer against the potentially draining impacts of prevention focus (at least among some youth). Future, longitudinal research around this topic is required to better understand the long-term

relationships among prevention focus, intrinsic motivation, and amotivation (and/or other measures of burnout).

Although the "Low Motivation" profile was small at both time points, characterizing roughly 5-7% of the sample, it is notable that the profile was identified at multiple time points. This finding suggests that this pattern of responses was not incidental; rather, there does appear to be a small number of adolescents who consistently experience lower levels of autonomous motivation, intrinsic motivation, political self-efficacy, and prevention focus but higher levels of amotivation. From a developmental perspective, it is worth considering why this "Low Motivation" profile was not present at the beginning of ninth grade. One possible explanation concerns motivational changes associated adolescents' transition from more a more junior high school year (e.g., beginning of ninth grade) to more senior high school years (e.g., end of tenth and twelfth grade). For instance, previous research has demonstrated that amotivation can increase as students progress through school years (Green-Demers et al., 2008; Otis et al., 2005). Thus, the present results regarding the emergence of a "Low Motivation" profile only after ninth grade fall aligns with what might be expected based on previous findings in the motivation literature.

At the same time, it is somewhat surprising (and perhaps encouraging) that this "Low Motivation" profile characterized such a small proportion of the sample at both time points (5%-7%, respectively). For instance, in their work with high school students, Vansteenkiste et al. (2009) found a low motivation profile that characterized 28% of their sample. On the other hand, more recent work by Xie et al. (2020) identified a low motivation profile that characterized just 2.5% of adolescents in their sample. Given this variation across these different high school samples, future research might consider exploring the contextual factors (such as school climate)

that potentially buffer youth from experiencing low levels of motivation (Green-Demers et al., 2008; Otis et al., 2005).

High and Moderate Motivation Profiles. My hypotheses regarding a highly motivated profile and a moderately motivated profile were mostly supported; I identified a highly motivated profile (Profile 2; "High Motivation") and two moderately motivated profiles (Profile 3, "Moderate Motivation, Low Autonomy"; Profile 4; "Moderate Motivation, High Autonomy") at two of the three time points (Time 3 and Time 5). At Time 3 and Time 5, the "High Motivation" profile (16.45%; 17.16%) was the second smallest profile (after the "Low Motivation" profile). In contrast, the "Moderate Motivation, Low Autonomy" profile (18.88%; 23.18%) was the second largest profile at both time points (after the "Moderate Motivation, High Autonomy" profile).

Because I was unable to contrast autonomous forms of motivation with controlled forms of motivation, it is difficult to directly compare these profiles to those obtained by research using a more complete set of SDT constructs (e.g., Xie et al., 2020; Xie et al., 2022). Nonetheless, it is notable that Xie et al. (2020), who examined academic motivation, also identified a "moderately motivated" profile that was also the second largest profile in their sample (28.1%). This finding tentatively suggests that, regardless of domain (academics or activism), about a quarter of high school students may be characterized by average levels of motivation. Yet, Xie et al.'s (2020) higher motivation profile was the largest profile (37.5%), whereas my "High Motivation" profile was the second smallest profile across two time points (16.45%; 17.16%). Perhaps, then, adolescents may find it easier to be highly motivated for academics as compared to activism. As noted above, however, these conclusions are extremely tentative and additional research with a more complete set of SDT constructs is required to test these propositions.

Relation Between Autonomous Motivation and Prevention Focus. Lastly, I hypothesized that there would be a profile characterized by diverging levels of autonomous/intrinsic motivation and prevention focus; this hypothesis was mostly supported. At Time 3 and Time 5, I identified a profile (Profile 4) that was characterized by very high levels of autonomous motivation and comparatively weaker, or more moderate, levels of prevention focus. Adolescents in the "Moderate Motivation, High Autonomy" profile seemed to have deeply internalized the value of sociopolitical activism as being personally important, but did not feel a correspondingly deep responsibility or obligation to engage in civic action. At the same time, it is important to note that the measure of autonomous motivation for activism may actually be tapping autonomous motivation for civic awareness. As discussed in greater detail in the Limitations section, the items associated with the autonomous motivation construct were more related to the importance of being aware of social issues, rather than the importance of engaging in social change efforts. Thus, this "Moderate Motivation, High Autonomy" profile may represent a group of adolescents who believe that staying informed about social issues aligns with their personal values, but who do not necessarily feel a sense of responsibility to engage in civic action and who do not feel politically efficacious.

From a Regulatory Focus perspective, it is interesting to consider why youth might have internalized the importance of civic awareness without feeling a correspondingly high responsibility to engage in civic action (i.e., they had lower levels of prevention focus relative to their autonomous motivation). One explanation is simply that the items I used to tap prevention focus may have actually been tapping autonomous motivation for civic action (versus autonomous motivation for civic awareness). In other words, the reason that these "prevention" and "autonomy" items loaded onto different factors in the preliminary CFAs was perhaps due to

the fact that the prevention items focused on civic action whereas the autonomy items focused on civic awareness.

At the same time, considering that Laroche et al. (2019) identified associations between controlled motivation and prevention focus and between autonomous motivation and promotion focus, it is possible that these "Moderate Motivation, High Autonomy" youth also have high levels of promotion focus. Unfortunately, as discussed in greater detail in the Limitations section, I was unable to assess adolescents' controlled motivation and promotion focus. Had I been able to assess these constructs, it is possible that adolescents in Profile 4 would have been characterized by very high levels of promotion focus (and relatively lower levels of controlled motivation).

Despite being unable to investigate the role of controlled motivation and promotion focus, it is nevertheless noteworthy that these LPA results demonstrate some clear divergences between autonomous motivation and prevention focus. This is particularly notable given that that the items relating to each construct were drawn from the same original scale (Pancer et al., 2007). In other words, these LPA results might be interpreted as providing tentative support for the notion that autonomous motivation can be experienced as qualitatively distinct from prevention focus (e.g., Miele & Scholer, 2018). However, this conclusion must be considered in light of the aforementioned limitation (that the prevention focused items might really be tapping autonomous motivation for civic action).

As of yet, there has been very little empirical work examining SDT constructs in tandem with RFT constructs (but see Lalot et al., 2019 and Laroche et al., 2019 for notable examples). However, the results of this dissertation indicate that there would be great value in measuring and assessing intrinsic/extrinsic and promotion/prevention constructs together.

Patterns of Political Self-Efficacy. Looking across the profiles, and across time points, it was notable that average levels of political self-efficacy in each profile were typically lower relative to the average levels of the other motivation constructs in that profile. One interpretation of this finding is that, despite internalizing the value of sociopolitical activism (and perhaps even feeling a sense of responsibility to engage in activism), some adolescents still felt relatively incapable effecting sociopolitical change. In fact, at Time 3 and Time 5, autonomous motivation and political self-efficacy were not correlated with each other in any of the four profiles. This average lack of a relationship between autonomous motivation and efficacy contradicts work in the education domain (for a review, see Kaldi & Xafakos, 2017) and in the physical activity domain (Sweet et al., 2014). Across these studies, autonomous motivation and efficacy have, on average, been significantly, positively associated with one another.

It is possible that domain differences partially account for why the present findings around autonomous motivation and efficacy diverge from other research on this topic. For instance, autonomous motivation and efficacy may be positively associated in the context of physical activity (Sweet et al., 2014), but not in the context of sociopolitical activism. Given that activism can often take the form of collective efforts (e.g., protesting), perhaps it is important to also measure youths' perceptions of collective efficacy with regard to sociopolitical development. Whereas youth may feel somewhat personally inefficacious to effect change, as just one individual, they may feel much more capable of effecting change when they consider themselves as part of a group. This notion aligns with work in the youth organizing literature (Watts & Flanagan, 2007).

At the same time, it is notable that political self-efficacy was higher in profiles characterized by higher levels of autonomous motivation, intrinsic motivation, and prevention

focus. For instance, at Time 3, efficacy was lowest in the "Low Motivation" profile, followed by the "Moderate Motivation, Low Autonomy" profile, the "Moderate Motivation, High Autonomy" profile, and finally highest in the "High Motivation" profile. This pattern suggests potential reciprocal relations among these motivation constructs. For example, it is possible that adolescents' growing autonomous motivation related to activism may improve their feelings of political self-efficacy (which may, in turn, strengthen their autonomous motivation). Although no work that I know of has explicitly examined reciprocal relations between autonomous motivation and efficacy in the civic development domain, recent work in sports psychology has demonstrated reciprocal relations between autonomous motivation and various social cognition constructs (Chan et al., 2020).

Differences Between Identified/Integrated Motivation and Intrinsic Motivation. These LPA results also highlight the value of measuring autonomous forms of extrinsic motivation (i.e., identified/integrated motivation) as distinct from intrinsic motivation (Howard et al., 2016; Sheldon et al., 2016). As Figures 7, 9, and 11 demonstrate, autonomous motivation and intrinsic motivation did not always track together. In most of the motivation profiles, the average adolescent reported higher levels of autonomous motivation as compared to intrinsic motivation. It is important to remember that these measures assessed motivation at different levels of specificity. Whereas the autonomous motivation construct tapped the extent to which adolescents internalized sociopolitical activism (or civic awareness) as being personally important to them, the intrinsic motivation construct assessed the extent to which adolescents felt their behaviors were, more generally, driven and regulated by curiosity and interest. Thus, these LPA results indicate that some adolescents may deeply internalize the value of sociopolitical activism

without necessarily feeling like their behaviors are generally driven by strong feelings of curiosity and interest.

This discrepancy between autonomous motivation for sociopolitical activism and general intrinsic motivation is particularly salient in Profile 4 ("Moderate Motivation, High Autonomy"; see Figure 9 and Figure 11). Specifically, at Time 5, despite being characterized by statistically similar levels of intrinsic motivation as Profile 3 ("Moderate Motivation, Low Autonomy"), Profile 4 had significantly higher levels of autonomous motivation. This pattern was also evident between Profile 1 ("Low Motivation") and Profile 3 ("Moderate Motivation, Low Autonomy"); Profile 3 had similar levels of intrinsic motivation as Profile 1, but significantly higher levels of autonomous motivation.

It therefore appears that youth need not always be characterized by a strong "intrinsic motivational orientation" to commit to activism for autonomous reasons. Put another way, adolescents with similar general motivational orientations might not find all topics equally motivating. This finding extends prior work examining correlations between intrinsic motivational orientations and autonomous reasons for task engagement (see Eccles & Wigfield, 2002) by demonstrating substantial discrepancies between more stable motivational orientations and task-level motivation. Additional work is required to better understand when and why individuals with similar motivational orientations report strikingly different levels of autonomous (and controlled) motivation at the task level.

Context and Prevention Focus. In considering these LPA results, it is important to remember that these data were collected at the rise of the Black Lives Matter (BLM) movement in 2013 and the subsequent presidential election of Donald Trump in 2016—a sociohistorical context that I imagined could have primed a strong prevention focus among these adolescents

over the course of high school. According to these results, there was substantial variation with regard to adolescents' levels of prevention focus. For instance, by the end of tenth grade, 23.65% of adolescents (Profiles 1 and 3) reported prevention focus scores that were lower than the mean prevention focus score obtained by averaging scores across the whole sample; in contrast, 16.45% of adolescents (Profile 2) reported prevention focus scores that were higher than the whole-sample average. The majority of adolescents at Time 3 (59.91%; Profile 4) reported prevention focus scores that aligned with the whole-sample average. Given that these data do not include measures of adolescents' prevention focus prior to 2013, it would be inappropriate to suggest that sociohistorical factors between 2013-2017 primed a stronger prevention focus among participating adolescents. However, it is notable that the average prevention focus scores at Time 3 and Time 5 were both above 4.0 on a 5.0 scale. Future research may want to consider the short- and long-term motivational impact of sociohistorical events on adolescents' sociopolitical motivation.

Profile Stability. Finally, it is noteworthy that the four motivation profiles I identified at Time 3 appeared very similar to the four motivation profiles I identified at Time 5. These LPA results tentatively support the notion that the motivation profiles I identified at Time 3 and Time 5 are relatively robust. In other words, it seems unlikely that I identified these four motivation profiles at each time point by chance. I formally tested whether these profiles could be constrained to be constant across Time 3 and Time 5 through a series of latent profile transition analyses (LPTAs)—the results of which are discussed in the following subsection.

In sum, the results of these latent profile analyses have important implications for motivation theory and for civic development theory. From a motivation perspective, these LPAs highlight the value of simultaneously investigating motivation constructs drawn from multiple

motivation frameworks, and at different levels of specificity. Utilizing a group differential approach to investigate the multidimensional nature of motivation is extremely valuable in understanding the joint effect of three or more interacting motivational constructs.

From a civic development perspective, these LPA results suggest that there is much more nuance and complexity to the motivation component of the CC/Youth SPD framework than is currently studied. Adolescents seem to navigate a number of qualitatively distinct motivational experiences throughout high school. Researchers interested in the factors associated with youths' sociopolitical development might consider drawing on Self-Determination Theory and Regulatory Focus Theory to better understand variation in adolescents' commitment to activism—both cross-sectionally and longitudinally.

Latent Profile Transition Analyses

My second research question sought to examine whether adolescents changed motivation profile membership across high school, and if so, to identify the most likely profile transitions. Given the scarcity of research using LPA and LPTA to examine motivation profiles characterized by SDT and RFT constructs, it was difficult to specify detailed hypotheses about motivation profile stability. Nonetheless, given that the progression from early to later adolescence can sometimes be marked by increased feelings of autonomy and idealism (Arnett, 2007), I hypothesized that adolescents would transition from profiles characterized by low or moderate levels of motivation to profiles characterized by high levels of motivation. Furthermore, based on prior research examining motivation profile transitions (Gillet et al., 2017), I expected that adolescents characterized by high levels of motivation at an earlier time point would remain in this "High Motivation" profile at later time points. In other words, I did

not expect adolescents with high levels of motivation to transition to profiles characterized by lower levels of motivation.

Before examining transition probabilities, I investigated whether the latent profiles identified at each of the three time points could be constrained to be constant. Results of a series of LPTAs supported a partially constrained LPTA model in which the four profiles identified at Time 3 and at Time 5 were constrained to equal each other (i.e., Time 3 Profile 1 and Time 5 Profile 1 were the same; Time 3 Profile 2 and Time 5 Profile 2 were the same, and so on). Moreover, I was able to constrain the Time 1 Profile 2 to equal the Time 3/5 Profile 3. The only profile I was unable to constrain was Time 1, Profile 1. In short, I was able to demonstrate profile stability between tenth and twelfth grade, but not between ninth and tenth grade.

From Lower Motivation to Higher Motivation. My hypothesis that adolescents would transition from profiles characterized by low or moderate levels of motivation to profiles characterized by high levels of motivation was somewhat supported. In simple terms, at Time 1, there was a "Moderate High" profile (Profile 1) and a "Moderate Motivation, Low Autonomy" profile ("Profile 2"). Between Time 1 and Time 3, the majority of adolescents in the "Moderate Motivation, Low Autonomy" profile transitioned to the "Moderate Motivation, High Autonomy" profile at Time 3 (47.8%). In line with my hypothesis, this result suggests that some adolescents felt more autonomous, efficacious, and prevention focused with regard to sociopolitical activism as they moved from ninth grade to tenth grade. Although the current study cannot speak to why adolescents' motivation for activism improved between these time points, qualitative research suggests that actual engagement in collective action can strengthen Black and Latinx adolescents' feelings of political self-efficacy (e.g., Christens & Dolan, 2011; May et al., 2022). Thus, it is possible that transitioning to "higher motivation" profiles was related to adolescents'

participation in one or more activist efforts between ninth and tenth grade. Future research is required to investigate the potential link between activist engagement and changes in motivation.

However, it is important to note that 35% of adolescents in the "Moderate Motivation, Low Autonomy" profile at Time 1 remained in this profile at Time 3. The remaining 17.2% of adolescents in the "Moderate Motivation, Low Autonomy" profile at Time 1 transitioned to the "Low Motivation" profile at Time 3. None of the adolescents in the "Moderate Motivation, Low Autonomy" profile at Time 1 transitioned to the "High Motivation" profile at Time 3. Thus, in contrast to my hypothesis, a substantial number of adolescents with more "moderate" levels of motivation in ninth grade maintained, or even lost, some of this motivation by tenth grade. This finding somewhat aligns with work by Gillet et al. (2017), who found that first-year college students characterized by moderate levels of autonomous motivation were just as likely to transition to a "Strongly Motivated" profile (19.2%) as they were to a "Moderately Unmotivated" profile (19.5%). Thus, as noted by Gillet et al. (2017), it is possible that the present study's "Moderate Motivation, Low Autonomy" profile characterizes adolescents "whose motivational orientation has not yet crystalized" (p. 232). From a practical standpoint, then, the transition from ninth to tenth grade may represent a particularly important time to support adolescents' motivation for sociopolitical activism. Perhaps, as suggested by the Youth SPD framework, adults invested in youths' sociopolitical development may consider offering high school students opportunities to engage in meaningful social action as early as ninth grade.

At Time 3 and Time 5, there were essentially two "lower motivation" profiles ("Low Motivation" and "Moderate Motivation, Low Autonomy") and two "higher motivation" profiles ("High Motivation" and "Moderate Motivation, High Autonomy"). The majority of adolescents in the "Low Motivation" profile at Time 3 transitioned to a profile characterized by higher levels

of motivation by Time 5. Similarly, most adolescents in the "Moderate Motivation, Low Autonomy" profile at Time 3 transitioned to a profile characterized by higher levels of motivation by Time 5. Thus, as expected, it appears that many adolescents' motivation increased as they moved from tenth to twelfth grade. These findings contradict Gillet et al.'s (2017) findings that members of "Poorly Motivated" and "Controlled" motivation profiles tended to remain in these profiles from one time point to another. This discrepancy may be driven by differences in participating youths' ages; whereas Gillet et al. (2017) focused on first-year college students, I focused on high school students. It is therefore possible that the motivational orientations of younger adolescents are more malleable than those of older adolescents/young adults. Moreover, Gillet et al. (2017) only examined change twice across a two-month period, whereas I examined change three times across a four-year period. Perhaps Gillet et al. (2017) would have found different patterns of stability and change had they examined these motivation profiles across years, rather than across months.

Nevertheless, in line with Gillet et al. (2017), some of the adolescents in the "Low Motivation" profile and the "Moderate Motivation, Low Autonomy" profile did remain in these profiles between Time 3 and Time 5. Furthermore, a handful of adolescents in the "Moderate Motivation, Low Autonomy" profile at Time 3 transitioned to the "Low Motivation" profile at Time 5. Thus, as was found with the Time 1-to-Time 3 transitions, adolescents do not necessarily experience gains in their motivation as they move through high school. In sum, it is clear that additional longitudinal research around this topic is required to better understand motivational stability and change as youth transition from high school to college and beyond.

Motivational Stability. Whereas I expected adolescents with lower-to-moderate levels of motivation to experience motivational gains over time, I hypothesized that adolescents already

characterized by high levels of motivation would remain highly motivated over time. This hypothesis was largely supported. Between Time 1 and Time 3, the majority of adolescents in the "higher motivation" profile ("Moderate High") transitioned to qualitatively different "higher motivation" profiles at Time 3. Specifically, most adolescents in this profile transitioned to the "Moderate Motivation, High Autonomy" profile and the "High Motivation" profile. A smaller number of adolescents transitioned to the "Moderate Motivation, Low Autonomy" profile. None of the adolescents in the "Moderate High" profile at Time 1 transitioned to the "Low Motivation" profile at Time 3. Overall, these results suggest that the majority of adolescents with higher levels of motivation in ninth grade also had higher levels of motivation in tenth grade. This finding is an encouraging one, and it suggests that youth, themselves, are able to sustain high levels of "high-quality" motivation over time. In other words, adolescents' individual-level motivations may represent important internal assets (Schmid & Lopez, 2011) that youth can draw on to help them achieve social change goals that are personally important to them.

Between Time 3 and Time 5, the majority of adolescents in the two "higher motivation" profiles ("High Motivation" and "Moderate Motivation, High Autonomy") remained in these profiles over time. That is, between tenth and twelfth grade, the "High Motivation" and "Moderate Motivation, High Autonomy" profiles were the most stable. Notably, however, there were more transitions from the "Moderate Motivation, High Autonomy" profile to the "Moderate Motivation, Low Autonomy" profile (18.5%) than there were to the "High Motivation" profile (9.9%). In other words, several adolescents reported lower average levels of autonomous motivation, intrinsic motivation, political self-efficacy, and prevention focus in twelfth grade than they had in tenth grade. In considering why some adolescents transitioned from a higher motivation profile to a lower motivation profile, it is notable that youth in this profile (Profile 4)

were characterized by a disconnect between their prevention focus and their intrinsic motivation. As noted in the earlier subsection, prolonged prevention motivation can be exhausting (Scholer et al., 2019); perhaps this persistent experience of vigilance in the absence of an intrinsic motivation buffer (Sheldon et al., 2016) resulted in some adolescents experiencing motivational burnout between tenth and twelfth grade. Future research is required to investigate this hypothesis more fully.

Finally, it is worth noting that none of the "High Motivation" adolescents transitioned to the "Low Motivation" profile by twelfth grade; however, 5.1% of "Moderate Motivation, High Autonomy" adolescents did transition to the "Low Motivation" profile by the end of high school. Given that both of these profiles were characterized by nearly identical levels of autonomous motivation (but variation across the other motivational constructs), it would seem that autonomous motivation, alone, is insufficient to buffer adolescents from experiencing motivational declines between tenth and twelfth grade. What remains less clear, however, is why none of the adolescents in the "High Motivation" profile transitioned to the "Low Motivation" profile. In line with some SDT research (e.g., Sheldon et al., 2016), it is possible that adolescents who reported extremely high levels of intrinsic motivation were buffered from motivational decline, or burnout. However, it also seems plausible that remaining in the "High Motivation" profile across multiple years requires experiencing higher-than-average levels of political self-efficacy and prevention focus, in conjunction with high intrinsic motivation. Future research is required to better understand the factors that may buffer adolescents from motivational declines across high school.

In sum, using LPTAs, I identified five distinct motivation profiles across three time points and examined the most likely profile transitions. Overall, these results suggest that

adolescents experience substantial shifts in their motivation across high school. Between the beginning of ninth grade and the end of tenth grade, the majority of adolescents transitioned to the "Moderate Motivation, High Autonomy" profile, followed by transitions to the "Moderate Motivation, Low Autonomy" profile, the "High Motivation" profile, and finally, the "Low Motivation" profile. The transition pattern looked strikingly similar between the end of tenth grade and the end of twelfth grade. Overall, it is encouraging that transitions to the "Low Motivation" profile were rare; instead, on average, adolescents tended to transition to profiles characterized by higher levels of motivation. At the same time, it is important to note that, based on these LPTA results, several adolescents experienced apparent declines in their motivation across high school. It will be important for future research to examine potential predictors of profile transition probabilities.

In terms of the CC/Youth SPD framework, these LPTA results highlight a number of qualitatively distinct motivations that adolescents can experience variation along (beyond political self-efficacy). In the next subsection, I discuss the extent to which the combinations of these motivation constructs may influence youths' commitment to activism.

Latent Profile Moderation Analysis

My third and final research question sought to investigate whether latent motivation profile membership at the beginning of high school moderated the relation between social analysis at the beginning of high school and commitment to activism at the end of high school, controlling for initial commitment to activism. I chose to investigate the interaction between motivation profiles and social analysis at Time 3 (rather than at Time 1) in predicting commitment to activism at Time 5. This choice was largely guided by my LPA and LPTA findings, which suggested that the four profiles at Time 3 and Time 5 could be constrained to be

constant; however, the Time 1 LPTA profiles differed substantively from the Time 1 LPA profiles. Thus, from an analytic standpoint, I concluded that the Time 3 latent motivation profiles were more robust than the Time 1 latent motivation profiles. Choosing to focus on the Time 3 profiles as opposed to the Time 1 profiles also makes sense from a theoretical perspective because adolescents' motivation at the beginning of ninth grade may be somewhat inflated in relation to their motivation at later time points (e.g., Green-Demers et al., 2008; Otis et al., 2005). In other words, I concluded that it was more likely that adolescents' motivation in tenth grade, rather than in ninth grade, would be associated with their commitment to activism in twelfth grade.

In line with Nylund-Gibson et al.'s (2021) recommendations, I conducted the LPA moderation in two main stages. First, I examined latent motivation profiles at Time 3 as direct predictors of adolescents' commitment to activism at Time 5. Second, I examined the Time 3 latent motivation profiles as moderators of the relation between Time 3 social analysis and Time 5 commitment to activism (controlling for Time 3 commitment to activism). Below, I discuss the results of the distal outcomes analysis, followed by a discussion of the cross-time LPA moderation.

Motivation Profiles as Direct Predictors of Activism. Results of the manual BCH 3-step approach to predicting distal outcomes revealed some differences in Time 5 commitment to activism based on Time 3 latent motivation profile membership. In line with expectations, results indicated that adolescents in the "High Motivation" profile at the end of tenth grade reported the highest average commitment to activism at the end of twelfth grade. Although it is unclear which combination of motivations (autonomous, intrinsic, efficacy, prevention focus) predicted heighted commitment to activism two years later, Sheldon et al. (2016) suggest that high levels

of autonomous and intrinsic motivation are required for sustained commitment to activism. Although autonomous motivation and intrinsic motivation were measured at different levels of specificity in the present dissertation, these results provide tentative support for Sheldon et al.'s (2016) hypothesis that high levels of autonomous and intrinsic motivation are implicated in long-term commitment to activism. From a civic development perspective, these findings add to the growing body of work examining longitudinal predictors of adolescents' sociopolitical development (e.g., Ballard, 2016; Bañales et al., 2020a; Diemer, 2012), and suggest that individual-level motivations should be considered in relation to youths' long-term commitment to activism.

Despite the fact that adolescents in the "High Motivation" profile reported the highest average commitment to activism, after adjusting the *p*-values, this number was only statistically significantly higher than the number reported by adolescents in the "Moderate Motivation, Low Autonomy" profile. This finding was unexpected given that previous SDT research has identified overall levels of autonomous motivation as an important predictor of donating and volunteering (Hardy et al., 2015) and commitment to environmental activism (Sheldon et al., 2016). Based on these studies, I expected commitment to activism to be highest in the profiles with the highest levels of autonomous motivation (Profiles 2 and 4), second highest in the profile with the second highest level of autonomous motivation (Profile 3), and so on. At the same time, the studies by Hardy et al. (2015) and Sheldon et al. (2016) were both cross-sectional; they did not examine or establish longitudinal associations between autonomous motivation and civic engagement. Thus, the results of the present distal outcome analysis may simply suggest that it is somewhat impractical to use adolescents' motivations as predictors of their commitment to activism two years later. From a life course perspective (e.g., Benner & Graham, 2009; Crosnoe & Huston,

2007; Elder, 1998), high school can be conceptualized as a particularly dynamic period marked by significant developmental changes and "turning points" (Rutter, 1996). Along these lines, the two-year period between this tenth-grade snapshot of adolescents' motivation and their twelfth-grade commitment to activism may have been too broad to capture important changes and developments that occurred for these youth (which may have either strengthened or weakened their commitment to activism).

In fact, the LPTA results highlight that many adolescents in this sample experienced, at the very least, motivational changes over this two-year period. For instance, the majority of adolescents in the "Low Motivation" profile at Time 3 transitioned to higher motivation profiles by Time 5. On the other hand, several adolescents from the "Moderate Motivation, Low Autonomy" and "Moderate Motivation, High Autonomy" profiles transitioned to lower motivation profiles from tenth to twelfth grade. Adolescents in the "High Motivation" profile tended to stay in that profile across time. Perhaps, then, these motivational transitions over this two-year period partially explain why the only statistically significant difference in Time 5 commitment to activism was between Profile 2 and Profile 3. Future research on this topic should consider linking motivational transition/stability with commitment to activism. Alternatively, future research might consider examining adolescents' motivations as predictors of their commitment to activism within a shorter time period than was examined in the present dissertation.

Finally, from a CC/Youth SPD perspective, it is notable that profiles characterized by higher levels of political self-efficacy at Time 3 did not have higher levels of commitment to activism at Time 5. This finding diverges from what would be expected based on cross-sectional work by Diemer and Li (2011) and Moore et al. (2016), which identified efficacy as a significant

positive predictor of civic engagement among youth. Instead, the present longitudinal results suggest that, when considered in relation to additional motivational constructs, higher levels of political self-efficacy earlier in high school are not necessarily predictive of greater commitment to activism later in high school. Again, this finding may be rooted in the fact that many adolescents in this sample transitioned to different motivational profiles across the two-year period from tenth to twelfth grade, therefore experiencing substantial variation in their perceived efficacy to effect change. Supporting youths' long-term commitment to activism, then, may require a better understanding of why youth experience changes in their political self-efficacy over time (and examining the extent to which these changes affect commitment to activism).

Another explanation for why profiles characterized by higher levels of political self-efficacy at Time 3 did not have higher levels of commitment to activism at Time 5 comes from work by Hope et al. (2016). Drawing on longitudinal data from Black and Latinx college students, Hope et al. (2016) found that political efficacy was only predictive of later activism among Latinx students—not among Black students. Given that I did not examine differences between Black and Latinx adolescents in the present dissertation, it is possible that a connection between political self-efficacy and later commitment to activism among Latinx adolescents was missed altogether. Regardless, these results highlight a need for additional longitudinal research testing the theoretical assumptions underlying the CC/Youth SPD frameworks.

Motivation Profiles as Moderators. My hypothesis that latent motivation profiles would moderate the relation between social analysis and commitment to activism was not supported; across all four motivation profiles, social analysis in tenth grade did not predict commitment to activism in twelfth grade, after controlling for commitment to activism in tenth grade. This finding was unexpected in light of cross-sectional work that has identified social analysis as a

positive predictor of civic engagement and commitment to activism among Black and Latinx youth and young adults (e.g., Bañales et al., 2020b; Diemer & Rapa, 2016; Hope & Jagers, 2014). Furthermore, this finding somewhat contradicts longitudinal work by Clark and Seider (2020), who used multivariate latent growth models to demonstrate a correlation between growth in Black and Latinx adolescents' social analysis and growth in their commitment to activism across four years of high school. In other words, Clark and Seider's (2020) work would seem to indicate that adolescents' social analysis at an earlier point in high school might be predictive of their commitment to activism at a later point in high school. Yet, the results of the present dissertation suggest that adolescents' social analysis, alone, may be an imperfect predictor of future commitment to activism—particularly if that future is two years after initial social analysis is measured. In fact, recent work with a racially and ethnically diverse sample of college students found that social analysis may not even be predictive of commitment to activism just one year later (Monjaras-Gaytan et al., 2021). Given that Monjaras-Gaytan et al. (2021) examined this relation among predominantly White young adults, future research with youth of color will be important for better understanding the long-term relation between social analysis and commitment to activism among youth marginalized on the basis of race/ethnicity.

An explanation for why social analysis in tenth grade was unrelated to commitment to activism in twelfth grade is that this two-year period is simply characterized by tremendous change for adolescents. In light of the LPTA results highlighting substantial movement between motivation profiles over time, it seems likely that adolescents also experienced significant shifts in their social analysis and commitment to activism. For example, some adolescents may have reported high social analysis and high commitment to activism in tenth grade, but then experienced declines in both factors by twelfth grade. Thus, tenth grade social analysis would not

necessarily be positively predictive of twelfth grade commitment to activism. In fact, group differential CC/Youth SPD work by Suzuki (2021) suggests that some youth of color experience declines in their critical consciousness/sociopolitical development. This finding challenges a major theoretical assumption of the CC/Youth SPD frameworks—that social analysis and commitment to activism are mutually reinforcing—and highlights a need for additional longitudinal work investigating CC/Youth SPD processes. Whereas social analysis and commitment to activism may be mutually reinforcing among some adolescents, on average (Clark & Seider, 2020), the present LPA moderation results indicate that this relation is perhaps more complicated when examined from a group differential perspective.

Although not part of my original research agenda, I found that, across all profiles, commitment to activism in tenth grade significantly predicted commitment to activism in twelfth grade, after controlling for social analysis at tenth grade. This finding aligns with previous research identifying past activism as a strong predictor of future activism (Hope et al., 2016; Hope et al., 2019). The present dissertation extends these findings by suggesting that past commitment to activism may only be positively predictive of future commitment to activism among some subgroups of youth. More specifically, for three of the four motivation profiles (Profiles 2, 3, and 4), commitment to activism in tenth grade positively predicted commitment to activism in twelfth grade. In other words, experiencing moderate-to-high levels of motivation appears to support adolescents' ability to maintain their commitment to activism across time.

It is interesting to note that the strength of the relation between tenth grade commitment to activism and twelfth grade commitment to activism was similar across these three motivation profiles, despite being qualitatively distinct. Perhaps, then, maintaining a commitment to activism over time simply requires one to have some form of "positive" or "adaptive"

motivation. On the other hand, as evidenced by the LPTA results, many adolescents transitioned between motivation profiles over time. It would be interesting to examine whether, for example, adolescents in the "High Motivation" profile at both time points experienced greater growth in their commitment to activism as compared to adolescents who were in the "High Motivation" profile in tenth grade but then transitioned to a lower motivation profile by twelfth grade. From a practical standpoint, understanding the relation between motivational stability versus change and commitment to activism will be important for supporting educators and practitioners invested in fostering youths' sociopolitical development.

For adolescents in Profile 1 ("Low Motivation") only, commitment to activism in tenth grade negatively predicted commitment to activism in twelfth grade. Notably, adolescents in this "Low Motivation" profile were predicted to have a much higher commitment to activism in twelfth grade (controlling for other predictors) as compared to their peers in other, higher motivation profiles (see Table 54). Yet, in contrast to their peers, adolescents in the "Low Motivation" profile seemed unable to sustain their commitment to activism between tenth and twelfth grade. This finding is particularly noteworthy given that most adolescents in the "Low Motivation" profile in tenth grade actually transitioned to a higher-motivation profile by twelfth grade. Based on motivation theory and research (e.g., Deci & Ryan, 2008; Gillet et al., 2017; Ryan & Deci, 2000; Wang et al., 2016) it might be expected that positive changes in motivation from tenth to twelfth grade would support adolescents' attempts to sustain or increase their commitment to activism. One possible explanation for the present finding relates to the timing of my analyses. Given that I did not assess motivation at any time point between tenth and twelfth grade, it is possible that adolescents remained in the "Low Motivation" profile throughout eleventh grade and only transitioned to a higher motivation profile by the end of twelfth grade.

Thus, it is important to better understand how the length of time experiencing "Low Motivation" relates to changes in commitment to activism. In sum, the results of this LPA moderation analysis indicate that adolescents' individual-level motivations are important factors to consider in relation to how they sustain their commitment to activism over time.

Limitations

The present dissertation is characterized by several limitations, which should be taken into consideration when interpreting the results. These limitations fall under three main categories—measurement, sample, and analysis.

Measurement Limitations

In terms of measurement, this dissertation was limited by the fact that the original study from which these data originate did not include measures of motivation beyond political self-efficacy. Instead, I identified items that I hypothesized would tap SDT and RFT motivation constructs. Consequently, three main issues related to the measurement of motivation emerged.

First, I was unable to identify items that could be used to assess all of the motivational constructs proposed by the SDT and RFT frameworks. For instance, despite identifying items related to identified/integrated regulation (autonomous motivation), intrinsic motivation, and amotivation, I was unable to identify items related to introjected regulation or external regulation. Thus, I was unable to contrast autonomous forms of motivation (identified/integrated regulation and intrinsic motivation) with controlled forms of motivation (introjected regulation and external regulation) in relation to adolescents' commitment to activism. One consequence of this limitation is that the profiles I identified are incomplete representations of adolescents' motivational orientations towards activism. For example, adolescents in the "Low Motivation" profile at Time 3 and Time 5 may actually be characterized by high levels of controlled

motivation. Rather than being unmotivated, adolescents in this profile may actually be oriented towards activism for controlled reasons, like wanting peer approval. Nevertheless, some SDT work in the civic engagement domain suggests that overall levels of autonomous motivation are more predictive of civic engagement than relative levels of autonomous motivation (Hardy et al., 2015). That is, assessing adolescents' controlled motivation may not have significantly altered the distal outcome results or the LPA moderation results.

Lastly, in terms of "missing" constructs, I was unable to assess adolescents' promotion focus. Given that a theoretical assumption of RFT is that prevention and promotion focus are independent, I would have ideally been able to contrast prevention focus with promotion focus. As previously stated, this limitation results in an incomplete representation of adolescents' motivational orientations towards activism. Still, RFT research in the civic engagement domain suggests that, when faced with the choice, it may be more important to assess individuals' prevention focus (Dolinski & Drogosz, 2011; Sassenberg & Hansen, 2007; Szekeres et al., 2019; Zaal et al., 2011; Zaal et al., 2012).

The second main issue related to the measurement of motivation was that I was unable to measure motivation at the same level of specificity across the constructs. Rather, intrinsic motivation and amotivation were measured at a more general level, whereas autonomous motivation, prevention focus, and efficacy were measured more specifically in relation to civic engagement and sociopolitical activism. Consequently, the present results cannot speak to the extent to which adolescents feel intrinsically motivated (versus amotivated) for sociopolitical activism, specifically. This is a limitation because, as evidenced by Stattin et al. (2017), domain-specific intrinsic motivation can be predictive of civic engagement up to three years later. Although some work has identified cross-sectional associations between general intrinsic

motivational orientations and civic engagement (Finkelstein, 2012), the present results do not necessarily support the conclusion that intrinsic motivational orientations are robust long-term indicators of commitment to activism. Nonetheless, examining more dispositional motivational constructs alongside domain-specific motivation constructs highlighted an interesting disconnect between some adolescents' general motivational orientations and their motivation for activism.

The third issue related to the measurement of motivation is that the items I chose to represent each larger motivational construct are imperfectly aligned with items traditionally used to tap SDT and RFT constructs. For instance, the two items that I used to represent autonomous motivation for sociopolitical activism may actually be tapping autonomous motivation for civic awareness. Specifically, the items associated with autonomous motivation asked youth to consider the importance of knowing "what's going on in their communities/in the world" (Pancer et al., 2007). Although validated SDT questionnaires similarly tap identified/integrated (autonomous) motivation by asking individuals to indicate the extent to which some behavior is personally important to them (e.g., Williams et al., 1998), the two autonomous motivation items in this dissertation are more focused on youths' motivation for being informed about sociopolitical issues (versus their motivation for being engaged in sociopolitical activism). Thus, a more theoretically sound measure of autonomous motivation for sociopolitical activism might ask youth to consider the extent to which they are committed to activism because it is "very important for many aspects of [their] life," or because "it is consistent with [their] life goals" (Williams et al., 1998). Whereas some youth in this study likely felt autonomously motivated for civic awareness and for sociopolitical activism, there may have been others who internalized the importance of awareness without simultaneously internalizing the importance of action.

In considering the prevention focus items in this dissertation, it is important to note that one of the three items focused on youths' sense of responsibility to volunteer—a more normative form of societal involvement behavior. Given that the present study sought to investigate youths' motivations for sociopolitical activism, a more theoretically sound measure of prevention focus in this context may ask youth to consider whether they feel a sense of responsibility or obligation to engage in activism to ensure social conditions do not worsen (Browman et al., 2017). Moreover, as noted earlier, the items I used to tap prevention focus may have actually been tapping autonomous motivation for civic action. Future research examining youths' motivations for sociopolitical activism should ensure that their measures of motivation are specific to sociopolitical activism (rather than civic awareness or more traditional forms of civic engagement).

A final measurement limitation that I want to highlight, which is unrelated to the measurement of motivation, has to do with the measures of social analysis and commitment to activism. Whereas the social analysis measure was specific to issues of race and racism, the commitment to activism measure did not focus on commitment to sociopolitical activism challenging racism. Thus, adolescents may have responded to items about their commitment to activism with other social issues in mind (e.g., environmentalism). Although previous CC/Youth SPD research has reliably used these measures to investigate youths' sociopolitical development (e.g., Clark & Seider, 2020; Seider et al., 2020a), this disconnect may partially explain why I did not find adolescents' social analysis in tenth grade to be predictive of their commitment to activism in twelfth grade.

Sample Limitations

This dissertation is characterized by two main sample limitations. First, the sample sizes for the LPA and LPTA models were relatively small in relation to the complexity of the models (Johnson, 2021). As noted by Johnson (2021), "at least a few hundred participants are needed to properly estimate various types of mixture models" (p. 118). Although the cross-sectional LPAs and the longitudinal LPTAs met this criterion, the sample size for the distal outcome analysis and LPA moderation was below 300. Thus, it is possible that my analyses lacked the statistical power to detect statistically significant effects between motivation profiles in terms of commitment to activism. Future research should therefore attempt to replicate the present findings with a larger sample size.

The second main sample limitation is that the present dissertation is not representative of Black and Latinx adolescents, nationally. The adolescents who participated in this study all attended public and public charter high schools in the Northeastern United States. Moreover, these youth were purposefully recruited from majority-minority high schools (i.e., schools serving predominantly racial and ethnic minority students), were mostly low-income, and many attended schools with explicit mission statements around youth civic development. Finally, these youth attended high school during the rise of the Black Lives Matter (BLM) movement in 2013 and the subsequent presidential election of Donald Trump in 2016—a unique sociohistorical context characterized by heightened levels of anger and activism (Mason, 2016). Taken together, these contextual factors limit the generalizability of the present findings to Black and Latinx adolescents attending high schools across the United States in the current sociopolitical climate. In fact, given the sample-dependent nature of mixture models (Collins & Lanza, 2010), the present results may even be difficult to replicate among Black and Latinx adolescents currently attending high school in the Northeastern United States.

Analysis Limitations

One analysis limitation was my use of composite scores. Although I conducted several preliminary analyses prior to computing these composites in an attempt to reduce bias, including investigating longitudinal measurement invariance, I did not investigate whether the factor loadings within each construct could be equated. Thus, as McNeish and Wolf (2020) point out, the resulting composite scores may deviate substantively from the validation model they were based on and ultimately bias the results. After examining the standardized loadings across items within constructs, though, I concluded that they were quite similar within constructs; this tentatively indicates that the latent scores are similar to the scale scores I computed (McNeish & Wolf, 2020). Nonetheless, future work in this area should ideally conduct a formal test of this constraint.

Another limitation of the present analyses was that I did not examine differences across the constructs by certain demographic variables like gender. Although some motivation research has identified gender differences in adolescents' academic motivations (e.g., Lee & Kim, 2014; Vallerand et al., 1997), other research has not found such gender differences (e.g., Green-Demers et al., 2008). To my knowledge, no research to date has examined gender differences with regard to motivation for activism, specifically. However, within the civic development literature, some research suggests that gender differences may exist with regard to the type of activism young men and women are oriented towards (e.g., Dodson, 2015; Hope et al., 2019). For instance, despite engaging in similar levels of activist activities, men, on average, may be more oriented towards "high-risk activism" (Hope et al., 2019) or "confrontational activities" (Dodson, 2015). Women, on the other hand, may be more oriented towards "low-risk activism" (Hope et al., 2019) or "nonconfrontational activities" (Dodson, 2015). It is therefore possible that the young

men and women in my dissertation sample were characterized by different motivational orientations towards activism. At the same time, prior studies utilizing this data have not found differences by gender across a number of variables (Seider et al., 2019; Seider et al., 2021a; Seider et al., 2021b).

Two final analysis limitations relate to the length of time between measurement occasions and to differential rates of missingness. In terms of timing, over twelve months elapsed between Time 1 and Time 3, and about two years elapsed between Time 3 and Time 5. Although the present results did not support the notion that motivation profiles moderate the relation between tenth grade social analysis and twelfth grade commitment to activism, future work may consider examining this relation over a shorter timespan (e.g., between tenth grade and eleventh grade). Furthermore, from an LPTA perspective, it is possible that I missed several important transitions between measurement occasions (Collins & Lanza, 2010). In other words, based on my results, it is impossible to know whether adolescents went directly from one motivation profile into another, or if they made multiple transitions before the final time point (Collins & Lanza, 2010). From a practical standpoint, better understanding the "rapidity" (Collins & Lanza, 2010, p. 210) of motivation transitions may be important for supporting youths' sociopolitical development. Finally, in terms of missingness, there were a number of students (n = 256) who only had data at the final time point, Time 5. This limitation resulted in substantively different LPA and LPTA results at Time 1, limiting the usefulness of examining the latent profile structure at that time point (Collins & Lanza, 2010).

Implications and Future Directions

Despite the aforementioned limitations, the present dissertation nevertheless has important implications for Critical Consciousness/Youth Sociopolitical Development theory,

practice, and future research. The present study adds to a relatively small, but growing body of research examining CC/Youth SPD longitudinally (for a review, see Heberle et al., 2020). Importantly, the results of this study suggest that key theoretical assumptions of the CC/Youth SPD frameworks require additional longitudinal investigation. For instance, the finding that adolescents' tenth grade social analysis did not predict their twelfth grade commitment to activism, after controlling for other variables, was unexpected. Broadly, from a CC/Youth SPD perspective, youths' analysis of systemic inequity should correspond to their commitment to activism challenging this inequity. Indeed, cross-sectional work has identified social analysis as a positive predictor of commitment to activism among young people (Bañales et al., 2020b; Diemer & Rapa, 2016; Hope & Jagers, 2014). Some CC/Youth SPD scholars and researchers have even proposed that youth of color move through stages of sociopolitical development, transitioning from "less critical" stages characterized by little analysis of inequity and a weak commitment to sociopolitical activism to "more critical" stages characterized by deep analysis of inequity and a strong commitment to sociopolitical activism (Kelly, 2018; Watts et al., 1999; Watts & Hipolito-Delgado, 2015).

Yet, the results of this dissertation suggest that youths' sociopolitical development may not be so linear. Given that the majority of adolescents in this sample transitioned to different motivation profiles at some point during high school (sometimes transitioning to lower motivation profiles), it seems plausible that they also experienced changes (including declines) in their levels of social analysis and commitment to activism. This notion aligns with research around activist burnout, which has found that activists can disengage from social change efforts when the pace of social change feels slow (Fernández et al., 2018; Gorski, 2019). Although the present dissertation did not examine profiles of adolescents' social analysis and commitment to

activism over time, these results suggest that future CC/Youth SPD research should utilize group differential approaches like latent profile transition analysis to investigate the stability of youths' sociopolitical development (for a notable example, see Suzuki, 2021).

The results of this dissertation also highlight a need for additional theorizing about the role of motivation within the CC/Youth SPD frameworks. For instance, some cross-sectional work has identified political efficacy as a significant, positive predictor of commitment to activism (Diemer & Li, 2011; Moore et al., 2016). Following this logic, it might have been expected that adolescents in motivation profiles characterized by the highest levels of efficacy at Time 3 would report the strongest commitment to activism levels at Time 5. Yet, adolescents with significantly different levels of efficacy at Time 3 reported statistically similar levels of commitment to activism by Time 5. At the very least, these results indicate that additional research is required to better understand the short- and long-term relation between efficacy and youths' commitment to activism. In light of the LPTA findings demonstrating motivational instability across high school, future research might consider examining the extent to which changes in efficacy relate to changes in activism. Whereas quantitative approaches like LPTA could help identify what changes occur (and highlight the rapidity of such changes), qualitative approaches like semi-structured interviews would facilitate a better understanding of how and why these changes occur. Thus, future research on this topic would benefit from adopting a mixed methods approach to data collection and analysis.

Moreover, although political self-efficacy is often positioned as the sole motivation construct related to youths' sociopolitical development, the results of this dissertation suggest that autonomous motivation, intrinsic motivation, prevention focus, and amotivation may also be implicated in youths' ability to sustain their commitment to activism over time. Thus, the present

dissertation extends the CC/Youth SPD frameworks by highlighting a number of additional motivational constructs that could serve as levers of youths' commitment to activism. Importantly, by taking a group differential approach, I was able to identify subgroups of adolescents with similar general motivational orientations (i.e., similar levels of general intrinsic motivation and amotivation), but very different levels of activism-specific motivations. This finding suggests that youth who appear generally curious and motivated may be oriented towards activism in distinct ways.

Another important finding from this dissertation was that, across motivation profiles, adolescents reported lower levels of political self-efficacy as compared to autonomous motivation and prevention focus. As previously noted, this finding suggests that youth may struggle to feel capable of effecting change despite valuing activism and feeling a sense of responsibility to engage in activism. Thus, in addition to helping youth see the value of activism, adults invested in youths' sociopolitical development may also want to explicitly support their sense of efficacy to effect change. Some work has investigated strategies and practices that educators can use to support adolescents' sociopolitical development, including their sense of efficacy (El-Amin et al., 2017; Seider & Graves, 2020). Future research might also consider utilizing established motivation scales to assess the extent to which these research-based strategies shape the different types of motivations implicated in youths' orientations toward activism.

Finally, this dissertation adds to an emerging body of research examining latent motivation profile transitions across high school (e.g., Xie et al., 2022), and is the first study that I know of that has examined latent motivation profiles and profile transitions from ninth grade to twelfth grade. Similar to Xie et al. (2022), the present LPTA results indicate that adolescents can

experience significant motivational shifts across high school. Between ninth grade and tenth grade, in particular, motivation may be especially malleable. These findings are notable, given that motivation has been found to be more stable among college students (Gillet et al., 2017). Thus, from a practical standpoint, high school may represent an especially important time and context to support young peoples' developing motivation for sociopolitical activism. Given the aforementioned limitations around measurement, any future research investigating motivational change in the context of sociopolitical activism should strive to measure a more complete set of motivation constructs.

Conclusion

As noted at the beginning of this dissertation, engagement in sociopolitical activism has important implications for youth of color and for the communities in which they live. Consequently, researchers and educators have sought to understand some of the factors implicated in youths' commitment to activism. Critical Consciousness and Youth Sociopolitical Development Theory, two prominent frameworks for investigating sociopolitical activism among youth of color, both position motivation as one of the key factors influencing youth activism. Yet, both frameworks narrowly define motivation as a sense of efficacy to effect change. Utilizing motivation constructs from two established motivation frameworks, Self-Determination Theory and Regulatory Focus Theory, this dissertation suggests that adolescents are motivated to activism by more than one driving force. Importantly, adolescents' motivation appears to be multidimensional and incredibly dynamic across high school, suggesting that youth may benefit from contexts aimed at supporting their sociopolitical development.

The results of this dissertation also highlight a need for additional longitudinal research testing the key theoretical assumptions of the CC/Youth SPD frameworks. Whereas social

analysis may reliably predict commitment to activism at a single time point, the relation between the two variables over time is less clear. Future research in this area should utilize group differential approaches like latent profile transition analysis to investigate patterns of change related to youth sociopolitical development.

In sum, this dissertation is the first-known study to integrate Self-Determination Theory and Regulatory Focus Theory with the Critical Consciousness and Youth Sociopolitical Development frameworks, and to do so using group differential approaches. A primary aim of this dissertation was to expand the number of motivation components considered within the CC/Youth SPD frameworks. Although this dissertation was characterized by several limitations, this study represents a first, important step towards assessing the role of distinct combinations of motivations in youths' sociopolitical development and how various types of motivation work together in influencing commitment to activism. Future CC/Youth SPD research should consider investigating a more complete set of established motivation constructs in relation to youths' sociopolitical development. Understanding the motivational factors associated with social analysis and commitment to activism among youth with marginalized racial and ethnic identities is critical for promoting more sustainable social change efforts and contributing to the development of a more equitable world.

References

Anyiwo, N., Palmer, G. J., Garrett, J. M., Starck, J. G., & Hope, E. C. (2020). Racial and political resistance: An examination of the sociopolitical action of racially marginalized youth.*Current Opinion in Psychology*, *35*, 86-91.

Arnett, J. (2007). Emerging adulthood: What is it, and what is it good for? *Child Development Perspectives*, *1*(2), 68-73.

Asparouhov, T., & Muthén, B. (2019). *Random Starting Values and Multistage Optimization*. 8.

Ballard, P. J. (2016). Longitudinal links between discrimination and civic development among Latino and Asian adolescents. *Journal of Research on Adolescence*, *26*(4), 723-737.

Ballard, P. J., & Ozer, E. J. (2016). The implications of youth activism for health and well-being. *Contemporary Youth Activism: Advancing Social Justice in the United States*, 223-243.

Bañales, J., Aldana, A., Richards-Schuster, K., Flanagan, C. A., Diemer, M. A., & Rowley, S. J. (2019). Youth anti-racism action: Contributions of youth perceptions of school racial messages and critical consciousness. *Journal of Community Psychology,* 1-22.

Bañales, J., Hoffman, A. J., Rivas-Drake, D., & Jagers, R. J. (2020a). The development of ethnic racial identity process and its relation to civic beliefs among Latinx and Black American adolescents. *Journal of Youth and Adolescence*, *49*(12), 2495-2508.

Bañales, J., Mathews, C., Hayat, N., Anyiwo, N., & Diemer, M. A. (2020b). Latinx and Black young adults' pathways to civic/political engagement. *Cultural Diversity and Ethnic Minority Psychology, 26*(2), 176–188. https://doi.org/10.1037/cdp0000271

Bauer, D. J., & Steinley, D. (2020, June 1-5). *Latent class/cluster analysis and mixture modeling* [Five-day workshop].

Benner, A. D., & Graham, S. (2009). The transition to high school as a developmental process among multiethnic urban youth. *Child Development*, *80*(2), 356-376.

Bolck, A., Croon, M. A., & Hagenaars, J. A. (2004). Estimating latent structure models with categorical variables: One-step versus three-step estimators. *Political Analysis, 12*, 3–27.

Browman, A. S., Destin, M., & Molden, D. C. (2017). Identity-specific motivation: How distinct identities direct self-regulation across distinct situations. *Journal of Personality and Social Psychology*, *113*(6), 835-857.

Buchanan, L., Bui, Q., & Patel, J. K. (2020). *Black Lives Matter may be the largest movement in U.S. history.* New York Times. https://www.nytimes.com/interactive/2020/07/03/us/george-floyd- protests-crowd-size.html

Burton, K. D., Lydon, J. E., D'Alessandro, D. U., & Koestner, R. (2006). The differential effects of intrinsic and identified motivation on well-being and performance: prospective, experimental, and implicit approaches to self-determination theory. *Journal of Personality and Social Psychology*, *91*(4), 750-762.

Carson, C. (1981). *In struggle: SNCC and the Black awakening of the 1960's*. Cambridge, MA: Harvard University Press.

Chan, D. K. C., Zhang, L., Lee, A. S. Y., & Hagger, M. S. (2020). Reciprocal relations between autonomous motivation from self-determination theory and social cognition constructs from the theory of planned behavior: A cross-lagged panel design in sport injury prevention. *Psychology of Sport and Exercise*, *48*, 101660.

Chan, W. Y., Ou, S. R., & Reynolds, A. J. (2014). Adolescent civic engagement and adult outcomes: An examination among urban racial minorities. *Journal of Youth and Adolescence*, *43*(11), 1829-1843.

Chemolli, E., & Gagné, M. (2014). Evidence against the continuum structure underlying motivation measures derived from self-determination theory. *Psychological Assessment, 26*(2), 575.

Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling*, *9*(2), 233-255.

Christens, B. D., Byrd, K., Peterson, N. A., & Lardier, D. T. (2018). Critical hopefulness among urban high school students. *Journal of Youth and Adolescence, 47*(8), 1649-1662.

Christens, B. D., & Dolan, T. (2011). Interweaving youth development, community development, and social change through youth organizing. *Youth & Society*, *43*(2), 528-548.

Clark, S., & Seider, S. (2020). The role of curiosity in the sociopolitical development of Black and Latinx adolescents. *Journal of Research on Adolescence*, *30*(1), 189-202.

Collins, L. M., & Lanza, S. T. (2010). *Latent Class and Latent Transition Analysis: With Applications in the Social, Behavioral, and Health Sciences*. John Wiley & Sons.

Corning, A. F., & Myers, D. J. (2002). Individual orientation toward engagement in social action. *Political Psychology*, 23, 703–729. https://doi.org/10.1111/0162- 895X.00304

Crosnoe, R., & Huston, A. C. (2007). Socioeconomic status, schooling, and the developmental trajectories of adolescents. Developmental Psychology, 43, 1097–1110.

Deci, E. L., & Ryan, R. M. (1985). The general causality orientations scale: Self-determination in personality. *Journal of Research in Personality*, *19*, 109-134.

Deci, E. L., & Ryan, R. M. (2008). Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian Psychology/Psychologie Canadienne*, *49*(3), 182-185.

Diemer, M. A. (2012). Fostering marginalized youths' political participation: Longitudinal roles of parental political socialization and youth sociopolitical development. *American Journal of Community Psychology*, *50*(1), 246-256.

Diemer, M. A., & Li, C. H. (2011). Critical consciousness development and political participation among marginalized youth. *Child Development, 82*(6), 1815-1833.

Diemer, M. A., Pinedo, A., Bañales, J., Mathews, C. J., Frisby, M. B., Harris, E. M., & McAlister, S. (2021). Recentering Action in Critical Consciousness. *Child Development Perspectives*, *15*(1), 12-17.

Diemer, M. A., & Rapa, L. J. (2016). Unraveling the complexity of critical consciousness, political efficacy, and political action among marginalized adolescents. *Child Development*, *87*(1), 221-238.

Diemer, M. A., Rapa, L. J., Park, C. J., & Perry, J. C. (2017). Development and validation of the Critical Consciousness Scale. *Youth & Society*, *49*(4), 461-483.

Dodson, K. (2015). Gendered activism: A cross-national view on gender differences in protest activity. *Social Currents*, *2*(4), 377-392.

Dolinski, D., & Drogosz, M. (2011). Regulatory fit and voting. *Journal of Applied Social Psychology, 41*(11), 2673-2688.

Dwyer, D. (2020, June 29). *Young women are helming protests against racism. Here's what they want you to know about the movement.* Boston.com. https://www.boston.com/news/local-news-2/2020/06/29/meet-young-activists-leading-protests-boston

Eccles, J. S., & Wigfield, A. (2002). Motivational beliefs, values, and goals. *Annual Review of Psychology, 53*, 109-132. doi: 10.1146/annurev.psych.53.100901.135153

El-Amin, A., Seider, S., Graves, D., Tamerat, J., Clark, S., Soutter, M., ... & Malhotra, S. (2017). Critical consciousness: A key to student achievement. *Phi Delta Kappan*, *98*(5), 18-23.

Elder, G. H. (1998). The life course as developmental theory. Child Development, 69, 1–12.

Enders, C. K. (2010). *Applied missing data analysis*. Guilford press.

Evans, P., & Bonneville-Roussy, A. (2016). Self-determined motivation for practice in university music students. *Psychology of Music*, *44*(5), 1095-1110.

Fernández, J. S., Gaston, J. Y., Nguyen, M., Rovaris, J., Robinson, R. L., & Aguilar, D. N. (2018). Documenting sociopolitical development via participatory action research (PAR) with women of color student activists in the neoliberal university. *Journal of Social and Political Psychology, 6*(2), 591-607–607. https://doi.org/10.5964/jspp.v6i2.900

Fernet, C., Guay, F., & Senécal, C. (2004). Adjusting to job demands: The role of work self-determination and job control in predicting burnout. *Journal of Vocational Behavior*, *65*(1), 39-56.

Finkelstein, M. A. (2012). Dispositional correlates of informal volunteering. *Current Research in Social Psychology*, *18*(6), 60-69.

Förster, J., Grant, H., Idson, L. C., & Higgins, E. T. (2001). Success/failure feedback, expectancies, and approach/avoidance motivation: How regulatory focus moderates classic relations. *Journal of Experimental Social Psychology, 37*, 253–260.

Freire, P. (1974). Conscientisation. *CrossCurrents, 24*(1), 23-31.

Freire, P. (1998). Reprint: Cultural action for freedom. *Harvard Educational Review, 68*(4), 476 522. (Original work published 1970). https://doi.org/10.17763/haer.68.4.656ku47213445042

Gillet, N., Morin, A. J., & Reeve, J. (2017). Stability, change, and implications of students' motivation profiles: A latent transition analysis. *Contemporary Educational Psychology*, *51*, 222-239.

Ginwright, S. A. (2010). Peace out to revolution! Activism among African American youth: An argument for radical healing. *Young*, *18*(1), 77-96.

Ginwright, S. A., & James, T. (2002). From assets to agents of change: Social justice, organizing, and youth development. In B. Kirshner, J. O'Donoghue, M. McLaughlin (Eds.), *Youth participation: Improving institutions and communities* (pp. 27-46): San Francisco, CA: Jossey-Bass.

Godfrey, E. B., Burson, E. L., Yanisch, T. M., Hughes, D., & Way, N. (2019). A bitter pill to swallow? Patterns of critical consciousness and socioemotional and academic well-being in early adolescence. *Developmental Psychology, 55*(3), 525–537. https://doi.org/10.1037/dev0000558

Gorski, P. C. (2019). Fighting racism, battling burnout: Causes of activist burnout in US racial justice activists. *Ethnic and Racial Studies*, *42*(5), 667-687.

Graham, J. W. (2009). Missing data analysis: Making it work in the real world. *Annual Review of Psychology*, *60*, 549-576.

Green-Demers, I., Legault, L., Pelletier, D., & Pelletier, L. G. (2008). Factorial invariance of the Academic Amotivation Inventory (AAI) across gender and grade in a sample of Canadian high school students. *Educational and Psychological Measurement*, *68*(5), 862-880.

Gurin, P., Nagda, B. R. A., & Zuniga, X. (2013). *Dialogue across difference: Practice, theory, and research on inter-group dialogue.* New York, NY: Russel Sage Foundation.

Hardy, S. A., Dollahite, D. C., Johnson, N., & Christensen, J. B. (2015). Adolescent motivations to engage in pro-social behaviors and abstain from health-risk behaviors: A self-determination theory approach. *Journal of Personality, 83*(5), 479-490.

Heberle, A. E., Rapa, L. J., & Farago, F. (2020). Critical consciousness in children and adolescents: A systematic review, critical assessment, and recommendations for future research. *Psychological Bulletin, 146*(6), 525–551. https://doi.org/10.1037/bul0000230

Higgins, E. T. (1997). Beyond pleasure and pain. *American psychologist*, *52*(12), 1280-1300.

Hope, E. C., Gugwor, R., Riddick, K. N., & Pender, K. N. (2019). Engaged against the machine: Institutional and cultural racial discrimination and racial identity as predictors of activism orientation among Black youth. *American Journal of Community Psychology*, *63*(1-2), 61-72.

Hope, E. C., & Jagers, R. J. (2014). The role of sociopolitical attitudes and civic education in the civic engagement of black youth. *Journal of Research on Adolescence, 24*(3), 460-470.

Hope, E. C., Keels, M., & Durkee, M. I. (2016). Participation in Black Lives Matter & Deferred Action for Childhood Arrivals: Modern activism among Black & Latino college students. *Journal of Diversity in Higher Education, 9*, 203–215.

Hope, E. C., & Spencer, M. B. (2017). Civic engagement as an adaptive coping response to conditions of inequality: An application of phenomenological variant of ecological systems theory (PVEST). In N. Cabrera & B. Leyendecker (Eds.), *Handbook on positive development of minority children and youth* (pp. 421–425). Dordrecht, the Netherlands: Springer.

Howard, J., Gagné, M., Morin, A. J., & Van den Broeck, A. (2016). Motivation profiles at work: A self-determination theory approach. *Journal of Vocational Behavior, 95*, 74-89.

Hu, L., & Bentler, P. M. (1999). Cut-off Criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modelling*, *6*(1), 1-55.

Idson, L. C., & Higgins, E. T. (2000). How current feedback and chronic effective ness influence motivation: Everything to gain versus everything to lose. *European Journal of Social Psychology, 30*, 583–592.

Johnson, S. K. (2021). Latent profile transition analyses and growth mixture models: A very non-technical guide for researchers in child and adolescent development. *New Directions for Child and Adolescent Development*, *2021*(175), 111-139.

Kaldi, S., & Xafakos, E. (2017). Student teachers' school teaching practice: The relation amongst perceived self-competence, motivation and sources of support. *Teaching and Teacher Education*, *67*, 246-258.

Keith, T. Z. (2019). *Multiple regression and beyond (3rd ed.)*. Routledge.

Kelly, L. L. (2018). A snapchat story: How black girls develop strategies for critical resistance in school. *Learning, Media and Technology*, *43*(4), 374-389.

Kline, R. B. (2016). *Principles and practice of structural equation modeling* (4th ed.). New York: Guilford Press.

Koestner, R., Losier, G. F., Vallerand, R. J., & Carducci, D. (1996). Identified and introjected forms of political internalization: extending self-determination theory. *Journal of Personality and Social Psychology*, *70*(5), 1025.

Lai, K., & Green, S. B. (2016). The problem with having two watches: Assessment of fit when RMSEA and CFI disagree. *Multivariate Behavioral Research*, *51*(2-3), 220-239.

Lalot, F., Quiamzade, A., & Zerhouni, O. (2019). Regulatory focus and self-determination motives interact to predict students' nutrition-habit intentions. *Journal of Experimental Psychology: Applied*, *25*(3), 477-490.

Lamont, A. E., Vermunt, J. K., & Van Horn, M. L. (2016). Regression mixture models: Does modeling the covariance between independent variables and latent classes improve the results?. *Multivariate Behavioral Research*, *51*(1), 35-52.

Lang, K. M., & Little, T. D. (2018). Principled missing data treatments. *Prevention Science*, *19*(3), 284-294.

Laroche, M., Roussel, P., Cury, F., & Boiché, J. (2019). Understanding the dynamics of physical activity practice in the health context through Regulatory Focus and Self-Determination theories. *PLoS ONE 14*(8): e0216760. https://doi.org/ 10.1371/journal.pone.0216760

Lee, H., & Kim, Y. (2014). Korean adolescents' longitudinal change of intrinsic motivation in learning English and mathematics during secondary school years: Focusing on gender difference and school characteristics. *Learning and Individual Differences*, *36*, 131-139.

Lee, M. R., Bartholow, B. D., McCarthy, D. M., Pedersen, S. L., & Sher, K. J. (2015). Two alternative approaches to conventional person-mean imputation scoring of the Self-Rating of the Effects of Alcohol Scale (SRE). *Psychology of Addictive Behaviors*, *29*(1), 231-236.

Little, R. J., & Rubin, D. B. (1989). The analysis of social science data with missing values. *Sociological Methods & Research*, *18*(2-3), 292-326.

Little, T. D. (2013). *Longitudinal structural equation modeling.* New York, NY: Guilford.

Lonsdale, C., Hodge, K., Hargreaves, E. A., & Ng, J. Y. (2014). Comparing sport motivation scales: A response to Pelletier et al. *Psychology of Sport and Exercise*, *15*(5), 446-452.

Mason, L. (2016, March 10). Why are Americans so angry this election season? Here's new research that helps explain it. *The Washington Post.* https://www.washingtonpost.com/news/monkey-cage/wp/2016/03/10/why-are-americans-so-angry-this-election-season-heres-new-research-that-helps-explain-it/

Masyn, K. E. (2013). Latent class analysis and finite mixture modeling. In T. Little (Ed.), *Oxford Handbook of Quantitative Methods*. Oxford, UK: Oxford University Press.

May, S., Seider, S., El-Amin, A., Diaz, B., & Graves, D. (2022). Black and Latinx adolescents' developing commitment to antiracist activism over four years of high school:" Good Trouble, Necessary Trouble" Special Section: Dismantling Oppression Series. *Journal of Research on Adolescence: the Official Journal of the Society for Research on Adolescence*.

McNeish, D., & Wolf, M. G. (2020). Thinking twice about sum scores. *Behavior Research Methods*, *52*(6), 2287-2305.

Meyer, J. P., Becker, T. E., & Vandenberghe, C. (2004). Employee commitment and motivation: a conceptual analysis and integrative model. *Journal of Applied Psychology*, *89*(6), 991-1007.

Miele, D. B., & Scholer, A. A. (2018). The role of metamotivational monitoring in motivation regulation. *Educational Psychologist*, *53*(1), 1-21.

Mohiyeddini, C., & Montada, L. (1998). BJW and self-efficacy in coping with observed victimization: Results from a study about unemployment. In. L. Montada, & M. Lerner (Eds.), Responses to victimizations and belief in a just world (pp. 41–54). New York, NY: Plenum Press.

Monjaras-Gaytan, L. Y., Sánchez, B., Anderson, A. J., Garcia-Murillo, Y., McGarity-Palmer, R., de Los Reyes, W., ... & Liao, C. L. (2021). Act, talk, reflect, then act: The role of natural mentors in the critical consciousness of ethnically/racially diverse college students. *American Journal of Community Psychology*, *68*(3-4), 292-309.

Moore, S. S., Hope, E. C., Eisman, A. B., & Zimmerman, M. A. (2016). Predictors of civic engagement among highly involved young adults: Exploring the relationship between agency and systems worldview. *Journal of Community Psychology*, *44*(7), 888-903.

Morris, S. L. (2018). *Adolescent girls' contributions to community and society: Exploring perceptions, goals and motivations* (Doctoral dissertation, Boston College).

Muthén, B. O. (2009). Latent variable mixture modeling. In G. A. Marcoulides & R. E. Schumacker (Eds.), *New developments and techniques in structural equation modeling* (2nd ed., pp. 1–33). Lawrence Erlbaum.

Muthén, L. K., & Muthén, B. O. (1998-2017). *Mplus User's Guide* (8th) [Computer software]. Muthén & Muthén.

Narea, N. (2020, June 10). *How 2 weeks of protests have changed America.* Vox. https://www.vox.com/2020/6/10/21283966/protests-george-floyd-police-reform-policy

Nylund, K. L. (2007). *Latent transition analysis: Modeling extensions and an application to peer victimization* (Doctoral dissertation, University of California, Los Angeles).

Nylund-Gibson, K., Garber, A. C., Singh, J., Witkow, M. R., Nishina, A., & Bellmore, A. (2021). The Utility of Latent Class Analysis to Understand Heterogeneity in Youth's Coping Strategies: A Methodological Introduction. Pre-Print.

Otis, N., Grouzet, F. M., & Pelletier, L. G. (2005). Latent motivational change in an academic setting: a 3-year longitudinal study. *Journal of Educational Psychology*, *97*(2), 170-183.

Pancer, S., Pratt, M., Hunsberger, B., & Alisat, S. (2007). Community and political involvement in adolescence: What distinguishes the activists from the uninvolved? *Journal of Community Psychology, 35*, 741–759. https://d oi.org/10.1002/jcop.20176

Park, N., & Peterson, C. (2006). Moral competence and character strengths among adolescents: The development and validation of the Values in Action Inventory of Strengths for Youth. *Journal of Adolescence*, *29*(6), 891-909.

Perez, W., Espinoza, R., Ramos, K., Coronado, H. M., & Cortes, R. (2009). Academic resilience among undocumented Latino students. *Hispanic Journal of Behavioral Sciences*, *31*(2), 149-181.

Peterson, N. A., Peterson, C. H., Agre, L., Christens, B. D., & Morton, C. M. (2011). Measuring youth empowerment: Validation of a sociopolitical control scale for youth in an urban community context. *Journal of Community Psychology, 39*, 592–605. https://doi.org/10.1002/jcop.20456

Portes, A. (1998). Social capital: Its origins and application to modern ociology. *American Sociological Review* 24(1): 1–24.

Rigdon, E. E. (1996). CFI versus RMSEA: A comparison of two fit indexes for structural equation modeling. *Structural Equation Modeling: A Multidisciplinary Journal*, *3*(4), 369-379.

Rubin, B. C. (2007). "There's still not justice": Youth civic identity development amid distinct school and community contexts. *Teachers College Record, 109*(2), 449-481.

Rutter, M. (1996). Transitions and turning points in developmental psychopathology: As applied to the age span between childhood and mid-adulthood. *International Journal of Behavioral Development*, *19*(3), 603-626.

Ryan, R. M. (1982). Control and information in the intrapersonal sphere: An extension of cognitive evaluation theory. *Journal of Personality and Social Psychology*, *43*, 450-461.

Ryan, R. M. (2019). Inside the black box: Motivational science in the 21st century. In R. M. Ryan (Ed.), *The Oxford Handbook of Human Motivation* (pp. 1-9). Oxford, UK: Oxford University Press.

Ryan, R. M., & Connell, J. P. (1989). Perceived locus of causality and internalization: Examining reasons for acting in two domains. *Journal of Personality and Social Psychology*, *57*(5), 749-761.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68-78.

Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Publications.

Ryan, R. M., Koestner, R., & Deci, E. L. (1991). Varied forms of persistence: When free-choice behavior is not intrinsically motivated. *Motivation and Emotion*, *15*, 185-205.

Ryan, R. M., Ryan, W. S., Di Domenico, S., & Deci, E. L. (2019). The nature and conditions of human autonomy and flourishing: Self-determination theory and basic psychological needs. In R. M. Ryan (Ed.), *The Oxford Handbook of Human Motivation*. Oxford, UK: Oxford University Press.

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, *57*(6), 1069-1081.

Saegert, S., Thompson, J. P., & Warren, M. (2001). Social capital and poor communities. In S. Saegert, P. Thompson, and M. Warren (Eds) *Ford Foundation Series on Asset Building*, pp. 4–43. New York: Russell: Sage.

Sassenberg, K., & Hansen, N. (2007). The impact of regulatory focus on affective responses to social discrimination. *European Journal of Social Psychology, 37*(3), 421-444.

Schmid, K. L., & Lopez, S. J. (2011). Positive pathways to adulthood: the role of hope in adolescents' constructions of their futures. *Advances in Child Development and Behavior*, *41*, 69–88.

Scholer, A. A., Cornwell, J. F., & Higgins, E. T. (2019). Regulatory focus theory and research: Catching up and looking forward after 20 years. In R. M. Ryan (Ed.), *The Oxford Handbook of Human Motivation* (pp. 47-82). Oxford, UK: Oxford University Press.

Scholer, A. A., Zou, X., Fujita, K., Stroessner, S. J., & Higgins, E. T. (2010). When risk seeking becomes a motivational necessity. *Journal of Personality and Social Psychology*, *99*(2), 215-231.

Seider, S., Clark, S., & Graves, D. (2020a). The development of critical consciousness and its relation to academic achievement in adolescents of color. *Child Development*, *91*(2), e451-e474.

Seider, S., Clark, S., Graves, D., Kelly, L. L., Soutter, M., El-Amin, A., & Jennett, P. (2019). Black and Latinx adolescents' developing beliefs about poverty and associations with their awareness of racism. *Developmental Psychology*, *55*(3), 509-524.

Seider, S., El-Amin, A., & Kelly, L. L. (2020b). The Development of Critical Consciousness. *The Oxford Handbook of Moral Development: An Interdisciplinary Perspective*, 203.

Seider, S., & Graves, D. (2020). *Schooling for critical consciousness: Engaging Black and Latinx youth in analyzing, navigating, and challenging racial injustice.* Harvard University Press.

Seider, S., Graves, D., & Diaz, B. (2021a). The development of awareness of racism in adolescents of color over 4 years of high school. *Journal of Community Psychology*, *50*(1), 64-89.

Seider, S., Graves, D., El-Amin, A., Kelly, L., Soutter, M., Clark, S., Jennett, P., & Tamerat, J. (2021b). The development of critical consciousness in adolescents of color attending "opposing" schooling models. *Journal of Adolescent Research*, *1-45*. https://doi.org/10.1177/07435584211006466

Sheldon, K. M., Wineland, A., Venhoeven, L., & Osin, E. (2016). Understanding the motivation of environmental activists: A comparison of self-determination theory and functional motives theory. *Ecopsychology, 8*(4), 228-238.

Stattin, H., Hussein, O., Özdemir, M., & Russo, S. (2017). Why do some adolescents encounter everyday events that increase their civic interest whereas others do not?. *Developmental Psychology*, *53*(2), 306-350.

Suzuki, S. (2021). *Critical Consciousness and Positive Youth Development: A Group-Differential Longitudinal Study Among Youth of Color in the United States* (Doctoral dissertation, Boston College).

Sweet, S. N., Fortier, M. S., Strachan, S. M., Blanchard, C. M., & Boulay, P. (2014). Testing a longitudinal integrated self-efficacy and self-determination theory model for physical activity post-cardiac rehabilitation. *Health Psychology Research*, *2*(1), 30-37.

Szekeres, H., Halperin, E., Kende, A., & Saguy, T. (2019). The effect of moral loss and gain mindset on confronting racism. *Journal of Experimental Social Psychology, 84*, 103833.

Tudoran, A. A., Scholderer, J., & Brunsø, K. (2012). Regulatory focus, self-efficacy and outcome expectations as drivers of motivation to consume healthy food products. *Appetite, 59*(2), 243-251.

Vallerand, R. J., & Bissonnette, R. (1992). Intrinsic, extrinsic, and amotivational styles as predictors of behavior: A prospective study. *Journal of Personality, 60*(3), 599-620.

Vallerand, R. J., Fortier, M. S., & Guay, F. (1997). Self-determination and persistence in a real-life setting: toward a motivational model of high school dropout. *Journal of Personality and Social psychology*, *72*(5), 1161-1176.

van-Dijk, D., & Kluger, A. N. (2004). Feedback sign effect on motivation: Is it moderated by regulatory focus? *Applied Psychology: An International Review, 53*, 113–135.

Vansteenkiste, M., Sierens, E., Soenens, B., Luyckx, K., & Lens, W. (2009). Motivational profiles from a self-determination perspective: The quality of motivation matters. *Journal of Educational Psychology, 101*(3), 671–688. https://doi.org/10.1037/a0015083

Vaughn, L. A. (2017). Foundational tests of the need-support model: A framework for bridging regulatory focus theory and self-determination theory. *Personality and Social Psychology Bulletin*, *43*(3), 313-328.

Vaughn, L. A., Garvey, C. A., & Chalachan, R. D. (2020). Need Support and Regulatory Focus in Responding to COVID-19. *Frontiers in Psychology*, *11*.

Villarreal, M. D. L., & García, H. A. (2016). Self-determination and goal aspirations: African American and Latino males' perceptions of their persistence in community college basic

and transfer-level writing courses. *Community College Journal of Research and Practice*, *40*(10), 838-853.

Wang, J. C., Morin, A. J., Ryan, R. M., & Liu, W. C. (2016). Students' motivational profiles in the physical education context. *Journal of Sport and Exercise Psychology, 38*(6), 612-630.

Watts, R. J., Diemer, M. A., & Voight, A. M. (2011). Critical consciousness: Current status and future directions. In C. A. Flanagan & B. D. Christens (Eds.), *Youth Civic Development: Work at the Cutting Edge* (Vol. 134). San Francisco: Josey-Bass.

Watts, R. J., & Flanagan, C. (2007). Pushing the envelope on youth civic engagement: A developmental and liberation psychology perspective. *Journal of Community Psychology, 35*(6), 779-792.

Watts, R. J., Griffith, D. M., & Abdul-Adil, J. (1999). Sociopolitical development as an antidote for oppression—theory and action. *American Journal of Community Psychology*, *27*(2), 255-271.

Watts, R. J., & Guessous, O. (2006). Sociopolitical development: The missing link in research and policy on adolescents. In S. Ginwright, P. Noguera, & J. Cammarota (Eds.), *Beyond resistance! Youth activism and community change: New democratic possibilities for practice and policy for America's youth* (pp. 59-80). Routledge.

Watts, R. J., & Hipolito-Delgado, C. P. (2015). Thinking ourselves to liberation?: Advancing sociopolitical action in critical consciousness. *The Urban Review*, *47*(5), 847-867.

Weller, B. E., Bowen, N. K., & Faubert, S. J. (2020). Latent class analysis: A guide to best practice. *Journal of Black Psychology*, *46*(4), 287-311.

Widaman, K. F., & Thompson, J. S. (2003). On specifying the null model for incremental fit indices in structural equation modeling. *Psychological Methods*, *8*, 16–37.

Williams, G. C., Deci, E. L., & Ryan, R. M. (1998). Building Health-Care Partnerships by Supporting Autonomy: Promoting Maintained Behavior Change and Positive Health Outcomes. In A. L. Suchman, P. Hinton-Walker, & R. Botelho (Eds.) *Partnerships in healthcare: Transforming relational process* (pp. 67-87). Rochester, NY: University of Rochester Press.

Xie, K., Vongkulluksn, V. W., Cheng, S. L., & Jiang, Z. (2022). Examining high-school students' motivation change through a person-centered approach. *Journal of Educational Psychology*, *114*(1), 89.

Xie, K., Vongkulluksn, V. W., Lu, L., & Cheng, S. L. (2020). A person-centered approach to examining high-school students' motivation, engagement and academic performance. *Contemporary Educational Psychology*, *62*, 101877.

Zaal, M. P., Van Laar, C., Ståhl, T., Ellemers, N., & Derks, B. (2011). By any means necessary: The effects of regulatory focus and moral conviction on hostile and benevolent forms of collective action. *British Journal of Social Psychology*, *50*(4), 670-689.

Zaal, M. P., Van Laar, C., Ståhl, T., Ellemers, N., & Derks, B. (2012). Social change as an important goal or likely outcome: How regulatory focus affects commitment to collective action. *British Journal of Social Psychology*, *51*(1), 93-110.

Zinn, H. (1980/2005). *A people's history of the United States.* Harper Perennial. New York: NY.

Table 1

Race/Ethnicity and Gender Identification of Participants at Time 1

Variable		Frequency	Percent
Race/Ethnicity	Black	350	47.7%
	Black and Latinx	35	4.8%
	Caribbean	46	6.3%
	Caribbean and Black	64	8.7%
	Haitian	9	1.2%
	Haitian and Black	9	1.2%
	Haitian and Caribbean	1	0.1%
	Latinx	204	27.8%
	Latinx and Caribbean	15	2%
Gender	Woman	392	54.1%
	Man	329	45.4%
	Non-binary	3	0.4%
	Missing	9	1.2%
Total		733	100%

Table 2

Variable List

Construct	Framework	Items
Social Analysis	CC/Youth SPD	"Racism in the educational system can limit the success of Black, Latino and other racial minorities" "Many White people don't understand the problems of Black, Latino and other racial minorities" "Many businesses intentionally keep Black, Latino and other racial minorities from gaining positions of power" "Many White people discriminate against Black, Latino and other racial minorities" "Black, Latino and other racial minorities in the United States often don't get their fair share of the good things in life, such as better jobs and more money"
Commitment to Sociopolitical Activism	CC/Youth SPD	"Participate in a protest or demonstration" "Sign a petition about a social or political issue" "Campaign door-to-door for a political candidate or cause" "NOT buy something because of the company that makes it" "Send a letter or email expressing your opinion to a newspaper or website" "Try to change a relative's mind about a social or political issue"
Identified/Integrated (Autonomous) Motivation	SDT	"It's important for teenagers to know what's going on in the world" "It is important for young people to know what's going on in their communities" "It is important to me that I actively participate in local teen issues"
Intrinsic Motivational Orientation	SDT	"I always want to know more about things" "I am interested in all kinds of things" "I am curious about how things work" "I ask questions all the time" "I am always curious about people, places or things I don't know about"
Political Self-Efficacy	CC/Youth SPD	"Youth like me have the ability to participate effectively in community or school activities and decision making" "Most community leaders would listen to me" "There are plenty of ways for youth like me to have a say in what our community does"
Prevention Focus	RFT	"Everybody should volunteer sometime for the good of their community" "People should help one another without expecting to get paid or rewarded for it" "Teenagers should just enjoy themselves and not worry about things like poverty and the environment" (reverse-coded)
Impersonal (Amotivated) Orientation	SDT	"I think it's a waste of time to set goals for myself" "The things I do every day often feel boring and unimportant" "I tend to wander aimlessly through life" "I don't really know what I'm trying to accomplish in life" "I live life one day at a time and don't really think about the future"

Table 3

Social Analysis Indicators

Item	Time	*n*	*M*	*SD*	Range	Skewness	Kurtosis
1. "Racism in the educational system can limit the success of Black, Latino and other racial minorities."	Fall 9th Grade	341	3.89	1.01	1-5	-0.68	0.01
	Spring 10th Grade	301	4.15	1.02	1-5	-1.06	0.38
	Spring 12th Grade	500	4.37	0.89	1-5	-1.36	1.45
2. "Many White people don't understand the problems of Black, Latino and other racial minorities."	Fall 9th Grade	339	3.50	1.05	1-5	-0.31	-0.33
	Spring 10th Grade	301	3.54	1.09	1-5	-0.23	-0.78
	Spring 12th Grade	500	4.04	1.04	1-5	-0.79	-0.29
3. "Many businesses intentionally keep Black, Latino and other racial minorities from gaining positions of power."	Fall 9th Grade	342	3.16	0.97	1-5	0.03	-0.16
	Spring 10th Grade	300	3.35	1.00	1-5	-0.16	-0.20
	Spring 12th Grade	502	3.68	0.95	1-5	-0.32	-0.24
4. "Many White people discriminate against Black, Latino and other racial minorities."	Fall 9th Grade	335	3.37	0.95	1-5	-0.06	-0.04
	Spring 10th Grade	299	3.53	1.06	1-5	-0.20	-0.65
	Spring 12th Grade	500	3.87	0.99	1-5	-0.55	-0.27
5. "Black, Latino and other racial minorities in the United States often don't get their fair share of the good things in life, such as better jobs and more money."	Fall 9th Grade	343	3.72	1.04	1-5	-0.62	-0.17
	Spring 10th Grade	298	3.70	0.96	1-5	-0.28	-0.31
	Spring 12th Grade	498	3.94	0.90	1-5	-0.44	-0.38

Table 4

Commitment to Activism Indicators

Item	Time	*n*	*M*	*SD*	Range	Skewness	Kurtosis
1. "Participate in a protest or demonstration."	Fall 9th Grade	347	2.91	1.07	1-5	0.20	-0.58
	Spring 10th Grade	303	3.26	1.11	1-5	-0.14	-0.75
	Spring 12th Grade	508	3.46	1.12	1-5	-0.25	-0.81
2. "Sign a petition about a social or political issue."	Fall 9th Grade	346	3.29	1.09	1-5	-0.11	-0.62
	Spring 10th Grade	303	3.47	1.05	1-5	-0.25	-0.64
	Spring 12th Grade	508	3.79	0.98	1-5	-0.52	-0.20
3. "NOT buy something because of the company that makes it."	Fall 9th Grade	346	2.66	1.15	1-5	0.25	-0.72
	Spring 10th Grade	303	2.93	1.09	1-5	0.18	-0.62
	Spring 12th Grade	508	3.17	1.10	1-5	0.04	-0.72
4. "Campaign door-to-door for a political candidate or cause."	Fall 9th Grade	348	2.24	1.03	1-5	0.75	0.11
	Spring 10th Grade	303	2.21	1.03	1-5	0.79	0.14
	Spring 12th Grade	505	2.16	1.03	1-5	0.85	0.31
5. "Send a letter or email expressing your opinion to a newspaper or website."	Fall 9th Grade	348	2.67	1.24	1-5	0.44	-0.79
	Spring 10th Grade	303	2.74	1.08	1-5	0.36	-0.53
	Spring 12th Grade	508	2.75	1.14	1-5	0.35	-0.65
6. "Try to change a relative's mind about a social or political issue."	Fall 9th Grade	346	3.30	1.14	1-5	-0.27	-0.72
	Spring 10th Grade	303	3.48	1.04	1-5	-0.33	-0.40
	Spring 12th Grade	507	3.60	1.07	1-5	-0.41	-0.57

Table 5

Identified/Integrated (Autonomous) Motivation Indicators

Item	Time	*n*	*M*	*SD*	Range	Skewness	Kurtosis
1. "It's important for teenagers to know what's going on in the world."	Fall 9th Grade	349	4.30	0.69	1-5	-0.73	0.67
	Spring 10th Grade	302	4.60	0.75	1-5	-2.11	4.85
	Spring 12th Grade	506	4.74	0.56	1-5	-2.18	4.31
2. "It is important for young people to know what's going on in their communities."	Fall 9th Grade	348	4.38	0.68	1-5	-1.07	2.27
	Spring 10th Grade	302	4.62	0.67	1-5	-2.01	4.60
	Spring 12th Grade	504	4.67	0.62	1-5	-1.78	2.28
3. "It is important to me that I actively participate in local teen issues."	Fall 9th Grade	348	3.33	0.89	1-5	-0.05	0.08
	Spring 10th Grade	302	3.57	1.01	1-5	-0.25	-0.51
	Spring 12th Grade	505	3.57	1.04	1-5	-0.25	-0.59

Table 6

Intrinsic Motivational Orientation Indicators

Item	Time	*n*	*M*	*SD*	Range	Skewness	Kurtosis
1. "I always want to know more about things."	Fall 9th Grade	313	3.99	1.00	1-5	-0.72	-0.16
	Spring 10th Grade	300	4.09	0.99	1-5	-0.85	0.15
	Spring 12th Grade	497	4.12	0.92	1-5	-0.79	-0.03
2. "I am interested in all kinds of things."	Fall 9th Grade	325	3.61	1.10	1-5	-0.55	-0.36
	Spring 10th Grade	299	3.79	1.13	1-5	-0.58	-0.49
	Spring 12th Grade	498	3.89	1.01	1-5	-0.57	-0.40
3. "I am curious about how things work."	Fall 9th Grade	324	3.90	1.03	1-5	-0.66	-0.23
	Spring 10th Grade	299	4.16	0.97	1-5	-1.19	1.44
	Spring 12th Grade	497	4.16	0.94	1-5	-0.92	0.18
4. "I ask questions all the time."	Fall 9th Grade	305	3.24	1.22	1-5	0.05	-1.03
	Spring 10th Grade	299	3.42	1.25	1-5	-0.29	-0.97
	Spring 12th Grade	496	3.52	1.16	1-5	-0.30	-0.74
5. "I am always curious about people, places or things I don't know about."	Fall 9th Grade	298	3.92	1.04	1-5	-0.68	-0.24
	Spring 10th Grade	299	3.98	1.07	1-5	-0.82	0.05
	Spring 12th Grade	497	4.12	0.99	1-5	-0.98	0.35

Table 7

Political Self-Efficacy Indicators

Item	Time	*n*	*M*	*SD*	Range	Skewness	Kurtosis
1. "Youth like me have the ability to participate effectively in community or school activities and decision making."	Fall 9th Grade	348	3.99	0.78	1-5	-0.56	0.46
	Spring 10th Grade	302	3.98	0.97	1-5	-0.80	0.23
	Spring 12th Grade	505	4.15	0.96	1-5	-1.03	0.72
2. "Most community leaders would listen to me."	Fall 9th Grade	349	2.75	0.91	1-5	-0.01	-0.15
	Spring 10th Grade	301	2.77	1.03	1-5	0.20	-0.48
	Spring 12th Grade	506	3.07	1.08	1-5	0.08	-0.58
3. "There are plenty of ways for youth like me to have a say in what our community does."	Fall 9th Grade	349	3.89	0.90	1-5	-0.63	0.24
	Spring 10th Grade	302	4.01	1.06	1-5	-0.86	0.04
	Spring 12th Grade	504	4.11	1.01	1-5	-0.89	-0.04

Table 8

Prevention Focus Indicators

Item	Time	*n*	*M*	*SD*	Range	Skewness	Kurtosis
1. "Everybody should volunteer sometime for the good of their community."	Fall 9th Grade	349	3.81	0.85	1-5	-0.48	0.38
	Spring 10th Grade	302	4.08	1.00	1-5	-0.90	0.21
	Spring 12th Grade	504	4.24	0.84	1-5	-0.79	-0.07
2. "People should help one another without expecting to get paid or rewarded for it."	Fall 9th Grade	349	3.78	0.93	1-5	-0.56	0.25
	Spring 10th Grade	302	3.99	1.07	1-5	-0.86	0.03
	Spring 12th Grade	506	4.22	0.95	1-5	-1.07	0.55
3. "Teenagers should just enjoy themselves and not worry about things like poverty and the environment." (reverse-coded)	Fall 9th Grade	348	3.64	1.13	1-5	-0.60	-0.33
	Spring 10th Grade	302	3.81	1.28	1-5	-0.83	-0.43
	Spring 12th Grade	506	3.86	1.21	1-5	-0.91	-0.14

Table 9

Impersonal (Amotivated) Orientation Indicators

Item	Time	*n*	*M*	*SD*	Range	Skewness	Kurtosis
1. "I think it's a waste of time to set goals for myself."	Fall 9th Grade	328	1.47	0.89	1-5	2.05	3.73
	Spring 10th Grade	299	1.62	0.98	1-5	1.50	1.51
	Spring 12th Grade	499	1.60	0.99	1-5	1.59	1.76
2. "The things I do every day often feel boring and unimportant."	Fall 9th Grade	305	2.73	1.10	1-5	0.47	-0.45
	Spring 10th Grade	300	2.45	1.14	1-5	0.51	-0.35
	Spring 12th Grade	495	2.42	1.15	1-5	0.48	-0.53
3. "I tend to wander aimlessly through life."	Fall 9th Grade	323	2.42	1.15	1-5	0.37	-0.78
	Spring 10th Grade	299	2.41	1.21	1-5	0.44	-0.65
	Spring 12th Grade	499	2.45	1.24	1-5	0.45	-0.73
4. "I don't really know what I'm trying to accomplish in life."	Fall 9th Grade	320	2.19	1.24	1-5	0.77	-0.57
	Spring 10th Grade	300	2.20	1.26	1-5	0.69	-0.62
	Spring 12th Grade	496	2.22	1.25	1-5	0.69	-0.62
5. "I live life one day at a time and don't really think about the future."	Fall 9th Grade	298	2.31	1.25	1-5	0.62	-0.69
	Spring 10th Grade	299	2.32	1.25	1-5	0.50	-0.76
	Spring 12th Grade	495	2.36	1.29	1-5	0.54	-0.82

Table 10

Inter-Item Correlations for Social Analysis Indicators at Time 1

	1.	2.	3.	4.	5.
1.	1	0.22***	0.22***	0.14*	0.47***
2.		1	0.33***	0.48***	0.31***
3.			1	0.44***	0.38***
4.				1	0.34***
5.					1

Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Table 11

Inter-Item Correlations for Social Analysis Indicators at Time 3

	1.	2.	3.	4.	5.
1.	1	0.13*	0.27***	0.27***	0.31***
2.		1	0.32***	0.40***	0.29***
3.			1	0.44***	0.34***
4.				1	0.43***
5.					1

Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Table 12

Inter-Item Correlations for Social Analysis Indicators at Time 5

	1.	2.	3.	4.	5.
1.	1	0.25***	0.32***	0.22***	0.37***
2.		1	0.29***	0.43***	0.26***
3.			1	0.36***	0.39***
4.				1	0.41***
5.					1

Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Table 13

Inter-Item Correlations for Commitment to Activism Indicators at Time 1

	1.	2.	3.	4.	5.	6.
1.	1	0.57***	0.17**	0.32***	0.39***	0.31***
2.		1	0.17**	0.24***	0.35***	0.33***
3.			1	0.036	0.08	0.064
4.				1	0.40***	0.22***
5.					1	0.37***
6.						1

Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Table 14

Inter-Item Correlations for Commitment to Activism Indicators at Time 3

	1.	2.	3.	4.	5.	6.
1.	1	0.63***	0.25***	0.36***	0.46***	0.43***
2.		1	0.23**	0.28***	0.35***	0.48***
3.			1	0.12*	0.28***	0.23***
4.				1	0.40***	0.36***
5.					1	0.23***
6.						1

Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Table 15

Inter-Item Correlations for Commitment to Activism Indicators at Time 5

	1.	2.	3.	4.	5.	6.
1.	1	0.57***	0.35**	0.40***	0.43***	0.47***
2.		1	0.30**	0.30***	0.36***	0.49***
3.			1	0.18***	0.35***	0.32***
4.				1	0.48***	0.29***
5.					1	0.40***
6.						1

Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Table 16

Inter-Item Correlations for Autonomous Motivation Indicators at Time 1

	1.	2.	3.
1.	1	0.41***	0.15**
2.		1	0.20***
3.			1

Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Table 17

Inter-Item Correlations for Autonomous Motivation Indicators at Time 3

	1.	2.	3.
1.	1	0.54***	0.33***
2.		1	0.23***
3.			1

Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Table 18

Inter-Item Correlations for Autonomous Motivation Indicators at Time 5

	1.	2.	3.
1.	1	0.66***	0.20***
2.		1	0.23***
3.			1

Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Table 19

Inter-Item Correlations for Intrinsic Motivation Indicators at Time 1

	1.	2.	3.	4.	5.
1.	1	0.35***	0.45***	0.42***	0.41***
2.		1	0.28***	0.19***	0.27***
3.			1	0.27***	0.42***
4.				1	0.33***
5.					1

Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Table 20

Inter-Item Correlations for Intrinsic Motivation Indicators at Time 3

	1.	2.	3.	4.	5.
1.	1	0.28***	0.60***	0.31***	0.50***
2.		1	0.34***	0.13*	0.36***
3.			1	0.19**	0.47***
4.				1	0.32***
5.					1

Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Table 21

Inter-Item Correlations for Intrinsic Motivation Indicators at Time 5

	1.	2.	3.	4.	5.
1.	1	0.48***	0.62***	0.31***	0.49***
2.		1	0.41***	0.19***	0.39***
3.			1	0.23***	0.51***
4.				1	0.35***
5.					1

Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Table 22

Inter-Item Correlations for Political Self-Efficacy Indicators at Time 1

	1.	2.	3.
1.	1	0.13*	0.21***
2.		1	0.15**
3.			1

Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Table 23

Inter-Item Correlations for Political Self-Efficacy Indicators at Time 3

	1.	2.	3.
1.	1	0.30***	0.47***
2.		1	0.26***
3.			1

Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Table 24

Inter-Item Correlations for Political Self-Efficacy Indicators at Time 5

	1.	2.	3.
1.	1	0.35***	0.52***
2.		1	0.34***
3.			1

Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Table 25

Inter-Item Correlations for Prevention Focus Indicators at Time 1

	1.	2.	3.
1.	1	0.31***	0.14**
2.		1	0.069
3.			1

Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Table 26

Inter-Item Correlations for Prevention Focus Indicators at Time 3

	1.	2.	3.
1.	1	0.38***	0.25***
2.		1	0.26***
3.			1

Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Table 27

Inter-Item Correlations for Prevention Focus Indicators at Time 5

	1.	2.	3.
1.	1	0.43***	0.23***
2.		1	0.15***
3.			1

Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Table 28

Inter-Item Correlations for Amotivation Indicators at Time 1

	1.	2.	3.	4.	5.
1.	1	0.29***	0.22***	0.15**	0.20***
2.		1	0.23***	0.25***	0.38***
3.			1	0.24***	0.32***
4.				1	0.27***
5.					1

Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Table 29

Inter-Item Correlations for Amotivation Indicators at Time 3

	1.	2.	3.	4.	5.
1.	1	0.21***	0.27***	0.36***	0.28***
2.		1	0.31***	0.26***	0.19***
3.			1	0.48***	0.34***
4.				1	0.36***
5.					1

Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Table 30

Inter-Item Correlations for Amotivation Indicators at Time 5

	1.	2.	3.	4.	5.
1.	1	0.33***	0.27***	0.26***	0.29***
2.		1	0.36***	0.35***	0.23***
3.			1	0.43***	0.38***
4.				1	0.36***
5.					1

Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Table 31

Model Fit Indices for Multifactor Confirmatory Factor Analysis at Each Time Point

	n	CFI	RMSEA	90% CI of RMSEA	SRMR
Time 1					
Model 1	349	0.830	0.046	0.040-0.052	0.058
Model 2	349	0.831	0.046	0.040-0.052	0.058
Model 3	349	0.840	0.048	0.042-0.058	0.056
Model 4 (Final Model)	349	0.856	0.046	0.040-0.053	0.054
Time 3					
Model 4 (Final Model)	303	0.887	0.049	0.042-0.056	0.062
Time 5					
Model 4 (Final Model)	508	0.899	0.048	0.043-0.053	0.051

Note. CFI = comparative fit index; RMSEA = root mean square error of approximation; CI = confidence interval; SRMR = standardized root mean square residual.

Table 32

Longitudinal Measurement Invariance Results

Model	Adjusted CFI	ΔCFI	RMSEA	90% CI of RMSEA	SRMR
Configural	0.835		0.029	0.027-0.030	0.068
Loading	0.832	0.003	0.029	0.027-0.030	0.069
Intercept	0.820	0.012	0.029	0.028-0.031	0.069
Partial Intercept	0.823	0.009	0.029	0.028-0.031	0.069

Note. Adjusted CFI = adjusted comparative fit index; RMSEA = root mean square error of approximation; CI = confidence interval; SRMR = standardized root mean square residual.

Table 33

Descriptive Statistics of Scale Variables at Each Time Point

Variable	Time	*n*	*M*	*SD*	Range	Skewness	Kurtosis
1. Social Analysis	Fall 9th Grade	342	3.53	0.69	1-5	-0.05	-0.17
	Spring 10th Grade	300	3.66	0.69	1-5	-0.05	-0.27
	Spring 12th Grade	502	3.98	0.65	1-5	-0.48	0.06
2. Commitment to Activism	Fall 9th Grade	347	2.88	0.77	1-5	0.11	-0.26
	Spring 10th Grade	303	3.03	0.77	1-5	-0.07	-0.20
	Spring 12th Grade	508	3.15	0.78	1-5	0.06	-0.24
3. Autonomous Motivation	Fall 9th Grade	349	4.34	0.57	1-5	-0.65	0.03
	Spring 10th Grade	302	4.61	0.62	1-5	-1.84	4.01
	Spring 12th Grade	506	4.70	0.54	1-5	-1.92	2.94
4. Intrinsic Motivation	Fall 9th Grade	315	3.73	0.74	1-5	-0.29	-0.55
	Spring 10th Grade	300	3.89	0.74	1-5	-0.43	-0.15
	Spring 12th Grade	498	3.96	0.72	1-5	-0.41	-0.38
5. Political Self-Efficacy	Fall 9th Grade	349	3.54	0.58	1-5	-0.28	0.27
	Spring 10th Grade	302	3.59	0.77	1-5	-0.68	0.44
	Spring 12th Grade	506	3.78	0.79	1-5	-0.63	0.28
6. Prevention Focus	Fall 9th Grade	349	3.80	0.72	1-5	-0.39	0.71
	Spring 10th Grade	302	4.04	0.86	1-5	-0.75	0.06
	Spring 12th Grade	506	4.23	0.76	1-5	-0.69	-0.36
7. Amotivation	Fall 9th Grade	319	2.13	0.72	1-5	0.52	0.07
	Spring 10th Grade	300	2.20	0.78	1-5	0.34	-0.48
	Spring 12th Grade	497	2.21	0.81	1-5	0.55	-0.32

Table 34

Correlations Between Scale Variables at Time 1

	SA	ACT	AUT	INT	EFF	PREV	AMOT
Social Analysis	1	0.024	0.11*	0.14*	0.024	0.054	-0.04
Commitment to Activism		1	0.24***	0.20***	0.25***	0.35***	-0.13*
Autonomous Motivation			1	0.20***	0.31***	0.27***	-0.19***
Intrinsic Motivation				1	0.22***	0.20***	-0.26***
Political Self-Efficacy					1	0.35***	-0.15**
Prevention Focus						1	-0.14**
Amotivation							1

Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Table 35

Correlations Between Scale Variables at Time 3

	SA	ACT	AUT	INT	EFF	PREV	AMOT
Social Analysis	1	0.18**	0.17**	0.17**	0.003	0.026	-0.082
Commitment to Activism		1	0.35***	0.32***	0.24***	0.38***	-0.24***
Autonomous Motivation			1	0.24***	0.46***	0.45***	-0.31***
Intrinsic Motivation				1	0.28***	0.38***	-0.15**
Political Self-Efficacy					1	0.52***	-0.25***
Prevention Focus						1	-0.29***
Amotivation							1

Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Table 36

Correlations Between Scale Variables at Time 5

	SA	ACT	AUT	INT	EFF	PREV	AMOT
Social Analysis	1	0.22***	0.25***	0.21***	0.13**	0.23***	-0.15***
Commitment to Activism		1	0.22***	0.30***	0.32***	0.35***	-0.10*
Autonomous Motivation			1	0.35***	0.39***	0.46***	-0.24***
Intrinsic Motivation				1	0.27***	0.33***	-0.24***
Political Self-Efficacy					1	0.44***	-0.25***
Prevention Focus						1	-0.28***
Amotivation							1

Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Table 37

BIC Values for LPA Models at Time 1

		Full			Diagonal	
Profiles	Free	Proportional	Homoscedastic	Free	Proportional	Homoscedastic
1	**3325.72**	3325.72	3325.72	3416.69	3416.69	3416.69
2	3369.79	**3290.39**	3336.44	**3324.10**	3314.69	3342.71
3	3402.77	3297.20	**3317.80**		**3275.84**	3337.19
4	3462.95	3309.89	3325.90			**3312.84**
5	3511.40					
6	3652.07					

Note. Bolded values represent the lowest BIC value for each variance-covariance specification.

Table 38

Entropy Values for LPA Models at Time 1

		Full			Diagonal	
Profiles	Free	Proportional	Homoscedastic	Free	Proportional	Homoscedastic
1	0.00	0.00	0.00	0.00	0.00	0.00
2	0.99	1.00	0.92	0.76	0.65	0.51
3	0.85	0.76	0.89		0.80	0.69
4	0.87	0.84	0.88			0.78
5	0.92					
6	0.75					

Table 39

BIC Values for LP Models at Time 3

	Full			Diagonal		
Profiles	Free	Proportional	Homoscedastic	Free	Proportional	Homoscedastic
1	**3236.62**	3236.62	3236.62	**3465.35**	3465.35	3465.35
2		3133.82	3149.74		3170.13	3225.69
3		3059.97	**3079.43**		3058.11	3148.43
4		**2994.65**			**2984.12**	3085.17
5						3030.77
6						2933.91
7						**2439.29**

Note. Bolded values represent the lowest BIC value for each variance-covariance specification.

Table 40

Entropy Values for LPA Models at Time 3

	Full			Diagonal		
Profiles	Free	Proportional	Homoscedastic	Free	Proportional	Homoscedastic
1	0.00	0.00	0.00	0.00	0.00	0.00
2		0.96	0.93		0.78	0.91
3		0.91	0.98		0.91	0.97
4		0.94			0.94	0.88
5					0.93	0.89
6						0.93
7						0.93

Table 41

Likelihood Ratio Test Comparing the Time 3 Four-Profile Full-Proportional Model and the Time 3 Four-Profile Diagonal-Proportional Model

LL Full-Prop	LL Diag-Prop	Parameters Full-Prop	Parameters Diag-Prop	LR χ^2	df	p
-1380.26	-1403.55	41	31	46.566	10	< 0.001

Table 42

BIC Values for LPA Models at Time 5

		Full			Diagonal	
Profiles	Free	Proportional	Homoscedastic	Free	Proportional	Homoscedastic
1	**5141.40**	5141.40	5493.51	**5493.51**	5493.51	5493.51
2		4821.90	4852.24		4935.48	5002.55
3		4456.74	4601.56		4505.14	4647.24
4		**4222.78**	4110.23		**4185.81**	4165.10
5			**3213.48**		**4094.71**	3263.45
6						**3213.15**

Note. Bolded values represent the lowest BIC value for each variance-covariance specification.

Table 43

Entropy Values for LPA Models at Time 5

		Full			Diagonal	
Profiles	Free	Proportional	Homoscedastic	Free	Proportional	Homoscedastic
1	0.00	0.00	0.00	0.00	0.00	0.00
2		0.98	0.98		0.93	0.95
3		1.00	0.99		1.00	0.98
4		0.95	1.00		0.95	1.00
5			1.00		0.96	1.00
6						0.91

Table 44

Likelihood Ratio Test Comparing the Time 5 Four-Profile Full-Proportional Model and the Time 5 Four-Profile Diagonal-Proportional Model

LL Full-Prop	LL Diag-Prop	Parameters Full-Prop	Parameters Diag-Prop	LR χ^2	df	p
-1983.71	-1996.36	41	31	25.31	10	< 0.01

Table 45

Model-Estimated Means and Standard Errors From the Time 1 Full-Proportional 2-Profile Model (*n* = 349)

Profile	Variable	Mean (SE)
Profile 1 (1.72%)	Autonomous Motivation	4.00 (0.01)
	Intrinsic Motivation	3.33 (0.02)
	Political Efficacy	4.00 (0.01)
	Prevention Focus	4.00 (0.01)
	Amotivation	1.40 (0.02)
Profile 2 (98.29%)	Autonomous Motivation	4.35 (0.03)
	Intrinsic Motivation	3.74 (0.04)
	Political Efficacy	3.53 (0.03)
	Prevention Focus	3.79 (0.04)
	Amotivation	2.14 (0.04)

Table 46

Model-Estimated Means and Standard Errors From the Time 3 Full-Proportional 4-Profile Model (n = 302)

Profile	Variable	Mean (SE)
Profile 1 (4.77%)	Autonomous Motivation	2.81 (0.08)
	Intrinsic Motivation	3.47 (0.27)
	Political Efficacy	2.54 (0.26)
	Prevention Focus	2.90 (0.27)
	Amotivation	2.93 (0.28)
Profile 2 (16.45%)	Autonomous Motivation	5.00 (0.01)
	Intrinsic Motivation	4.58 (0.05)
	Political Efficacy	4.28 (0.05)
	Prevention Focus	4.84 (0.05)
	Amotivation	1.47 (0.06)
Profile 3 (18.88%)	Autonomous Motivation	3.84 (0.03)
	Intrinsic Motivation	3.63 (0.10)
	Political Efficacy	3.22 (0.10)
	Prevention Focus	3.62 (0.10)
	Amotivation	2.59 (0.10)
Profile 4 (59.91%)	Autonomous Motivation	4.89 (0.02)
	Intrinsic Motivation	3.81 (0.06)
	Political Efficacy	3.60 (0.06)
	Prevention Focus	4.04 (0.06)
	Amotivation	2.22 (0.06)

Table 47

Model-Estimated Means and Standard Errors From the Time 5 Full-Proportional 4-Profile Model (*n* = 507)

Profile	Variable	Mean (SE)
Profile 1 (7%)	Autonomous Motivation	3.16 (0.02)
	Intrinsic Motivation	3.22 (0.17)
	Political Efficacy	2.94 (0.19)
	Prevention Focus	3.32 (0.16)
	Amotivation	2.89 (0.20)
Profile 2 (17.16%)	Autonomous Motivation	5.00 (0.004)
	Intrinsic Motivation	4.67 (0.03)
	Political Efficacy	4.44 (0.04)
	Prevention Focus	4.91 (0.03)
	Amotivation	1.53 (0.04)
Profile 3 (23.18%)	Autonomous Motivation	4.28 (0.01)
	Intrinsic Motivation	3.75 (0.09)
	Political Efficacy	3.44 (0.11)
	Prevention Focus	3.82 (0.09)
	Amotivation	2.32 (0.11)
Profile 4 (52.21%	Autonomous Motivation	5.00 (0.01)
	Intrinsic Motivation	3.92 (0.04)
	Political Efficacy	3.82 (0.04)
	Prevention Focus	4.31 (0.04)

Table 48

Relative Model Fit Statistics Comparing LPTA Models with Varying Constraints

	AIC	BIC
Unconstrained	10053.045	10601.633
Partially Constrained – T3 Profiles Constrained to equal T5 Profiles	10020.085	10387.322
Partially Constrained – T1 Profile 2 constrained to T3/T5 Profile 3	10032.661	10377.229
Fully Constrained (T1 Profiles constrained to equal their closest-matching T3/T5 counterparts)	10097.756	10419.655

Table 49

Final Means From the T1-T3-T5 Partially Constrained LPTA (n = 688)

Time, Profile	Variable	Mean
Time 1, Profile 1 (35.11%) "Moderate High Motivation"	Autonomous Motivation	4.59
	Intrinsic Motivation	4.19
	Political Efficacy	3.76
	Prevention Focus	4.17
	Amotivation	1.65
Time 1, Profile 2 (64.89%) "Moderate Motivation" Constrained to equal Time 3 and Time 5, Profile 3	Autonomous Motivation	4.28
	Intrinsic Motivation	3.75
	Political Efficacy	3.44
	Prevention Focus	3.82
	Amotivation	2.32
Time 3 and Time 5, Profile 1 "Low Motivation" (11.13%; 7.12%)	Autonomous Motivation	3.16
	Intrinsic Motivation	3.22
	Political Efficacy	2.94
	Prevention Focus	3.32
	Amotivation	2.89
Time 3 and Time 5, Profile 2 "High Motivation" (14.56%; 16.97%)	Autonomous Motivation	5.00
	Intrinsic Motivation	4.67
	Political Efficacy	4.45
	Prevention Focus	4.90
	Amotivation	1.52
Time 3 and Time 5, Profile 3 "Moderate Motivation, Low Autonomy" (26.03%; 23.50%)	Autonomous Motivation	4.28
	Intrinsic Motivation	3.75
	Political Efficacy	3.44
	Prevention Focus	3.82
	Amotivation	2.32
Time 3 and Time 5, Profile 4 "Moderate Motivation, High Autonomy" (48.28%; 52.42%)	Autonomous Motivation	5.00
	Intrinsic Motivation	3.92
	Political Efficacy	3.81
	Prevention Focus	4.31
	Amotivation	2.30

Table 50

Transition Probabilities from Latent Profile Transition Analysis (n = 688)

T1 (Fall 9th Grade)	T3 (Spring 10th Grade) Profile 1 (*n* = 76.57)	Profile 2 (*n* = 100.20)	Profile 3 (*n* = 179.07)	Profile 4 (*n* = 332.16)
	prob	prob	prob	prob
Profile 1 (*n* = 241.56)	0.000	0.415	0.094	0.491
Profile 2 (*n* = 446.44)	0.172	0.000	0.350	0.478
T3 (Spring 10th Grade)	T5 (Spring 12th Grade) Profile 1 (*n* = 49.01)	Profile 2 (*n* = 116.72)	Profile 3 (*n* = 161.66)	Profile 4 (*n* = 360.62)
	prob	prob	prob	prob
Profile 1 (*n* = 76.57)	0.145	0.028	0.417	0.410
Profile 2 (*n* = 100.20)	0.000	0.690	0.037	0.273
Profile 3 (*n* = 179.07)	0.117	0.070	0.361	0.452
Profile 4 (*n* = 332.16)	0.051	0.099	0.185	0.665

Note. At T1, Profile 1 = "Moderate High Motivation;" Profile 2 = "Moderate Motivation, Low Autonomy." At T3/T5, Profile 1 = "Low Motivation;" Profile 2 = "High Motivation;" Profile 3 = "Moderate Motivation, Low Autonomy;" Profile 4 = "Moderate Motivation, High Autonomy."

Table 51

Time 5 Commitment to Activism Predicted by Time 3 Latent Motivation Profiles (n = 221)

Profile	Count (Proportion)	Mean (SE)
Profile 1 ("Low Motivation")	8.23 (3.72%)	3.25 (0.22)
Profile 2 ("High Motivation")	38.55 (17.45%)	3.57 (0.15)
Profile 3 ("Moderate Motivation, Low Autonomy")	38.08 (17.23%)	3.04 (0.10)
Profile 4 ("Moderate Motivation, High Autonomy")	136.14 (61.60%)	3.23 (0.07)

Table 52

Pairwise Comparisons for Distal Outcome Model

Comparison	Mean Difference	Unadjusted *p*-value	Adjusted *p*-value
Profile 1 vs Profile 2	-0.32	0.25	0.75
Profile 1 vs Profile 3	0.21	0.38	0.76
Profile 1 vs Profile 4	0.02	0.94	0.94
Profile 2 vs Profile 3	**0.53**	**< 0.01**	**< 0.05**
Profile 2 vs Profile 4	0.34	**< 0.05**	0.20
Profile 3 vs Profile 4	-0.19	0.11	0.44

Table 53

T3 Full-Proportional 4-Profile Model in LPA Moderation (*n* = 220)

Profile	Count	Proportion
Profile 1 ("Low Motivation")	8.23	3.72%
Profile 2 ("High Motivation")	38.59	17.54%
Profile 3 ("Moderate Motivation, Low Autonomy")	38.08	17.31%
Profile 4 ("Moderate Motivation, High Autonomy")	135.11	61.41%

Table 54

Standardized Model Results for Cross-Time LPA Moderation Predicting Grade 12 Commitment to Activism (*n* = 220)

Effect	Profile 1	Profile 2	Profile 3	Profile 4
Intercept	7.96 (0.99)***	1.03 (0.76)	2.22 (1.06)*	1.95 (0.48)***
Grade 9 Social Analysis	0.06 (0.26)	0.20 (0.16)	0.14 (0.14)	0.03 (0.07)
Grade 9 Commitment to Activism	**-0.74 (0.19)*** **	**0.39 (0.18)***	**0.49 (0.15)****	**0.46 (0.07)*** **

Note. * = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$

Figure 1

Conceptual Model of Critical Consciousness

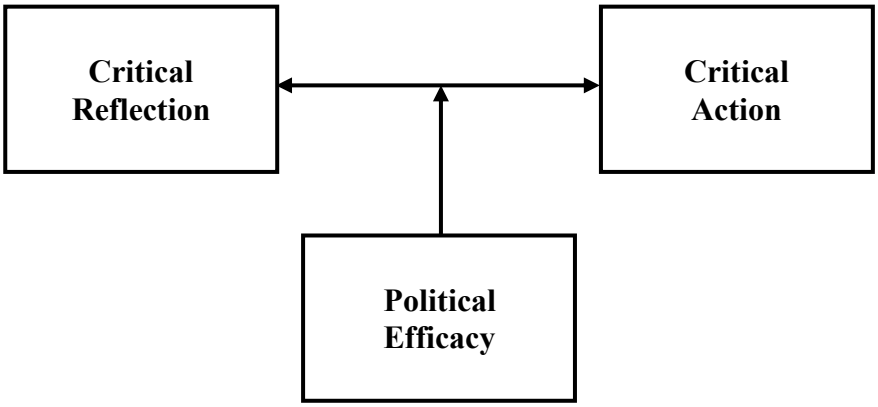
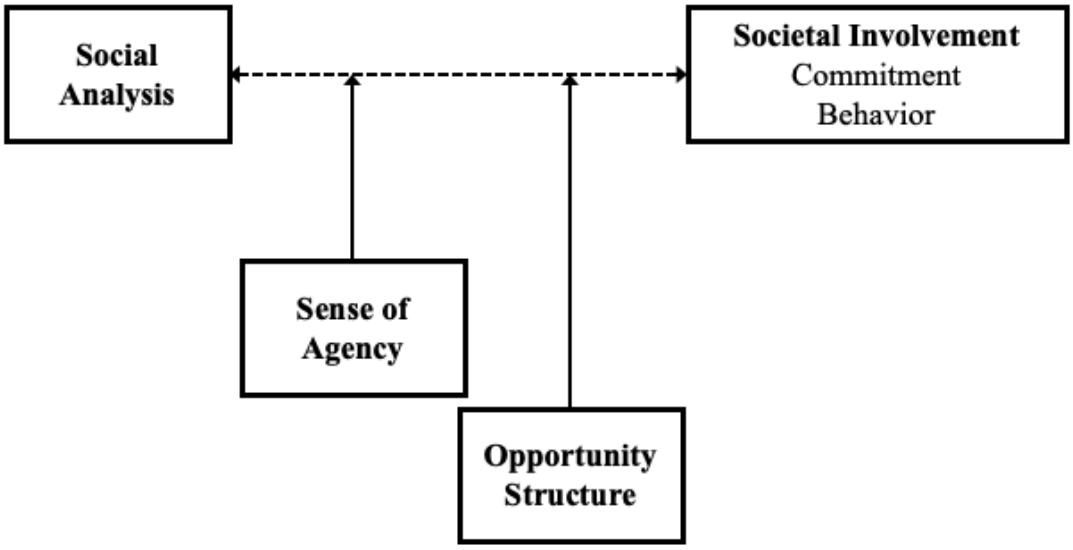


Figure 2

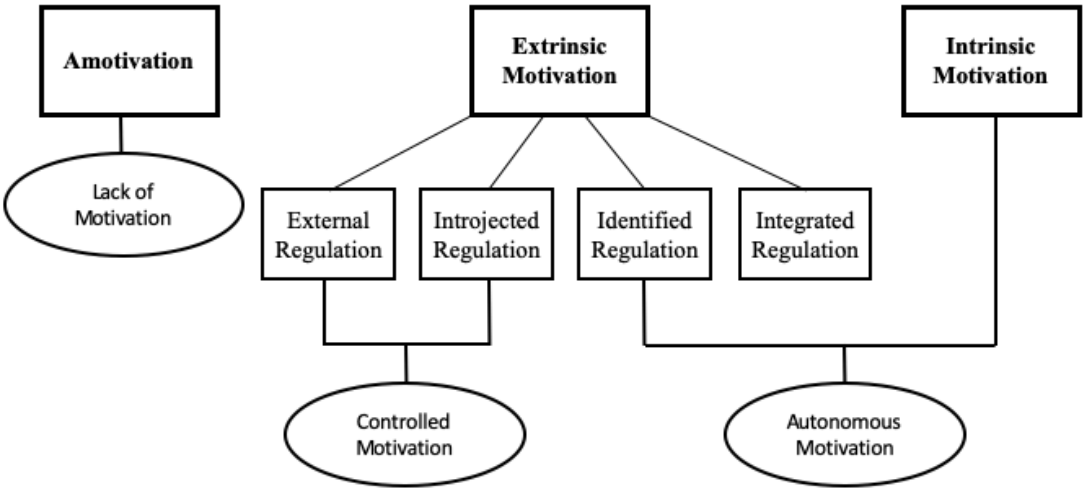
Watts and Flanagan's (2007) Model of Youth Sociopolitical Development



Note. Adapted from "Pushing the Envelope on Youth Civic Engagement: A Developmental and Liberation Psychology Perspective," by R.J. Watts and C. Flanagan, 2007, *Journal of Community Psychology, 35*(6), p. 784. Copyright 2007 by Wiley Periodicals, Inc. Adapted without permission.

Figure 3

Ryan and Deci's (2000) Self-Determination Continuum



Note. Adapted from "Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being," by R.M. Ryan and E.L. Deci, 2000, *American Psychologist*, *55*, p. 72. Copyright 2000 by the American Psychological Association. Adapted without permission.

Figure 4

Conceptual Model of Latent Motivation Profile Moderation Analysis

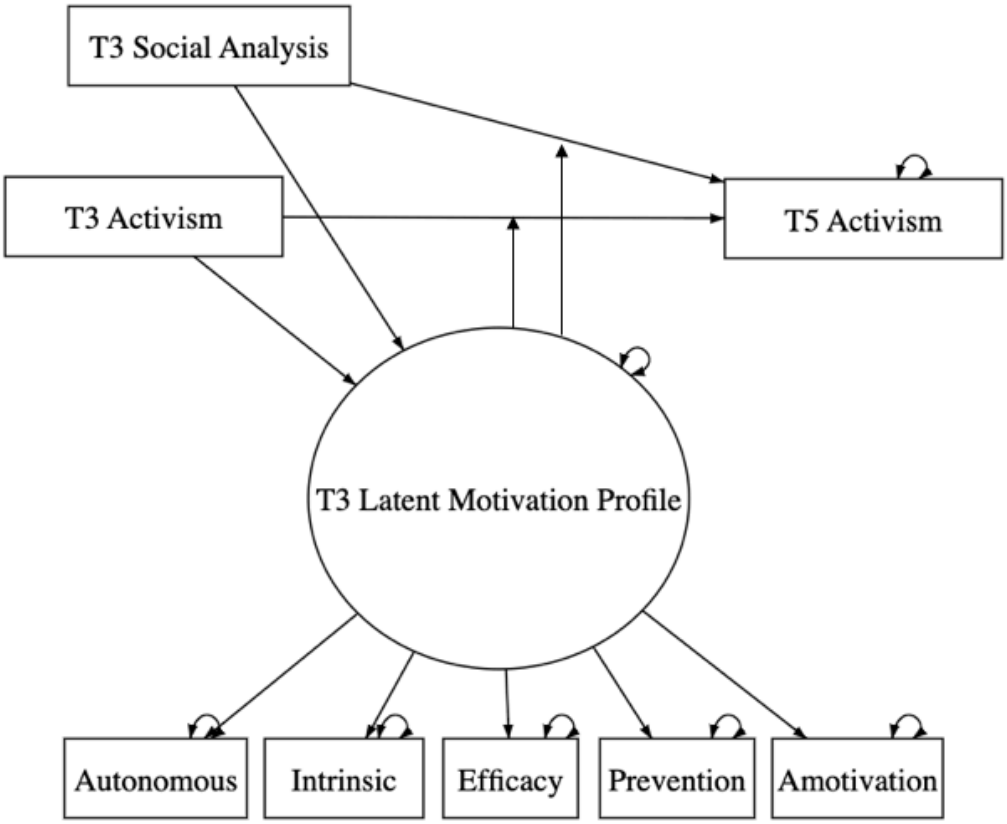
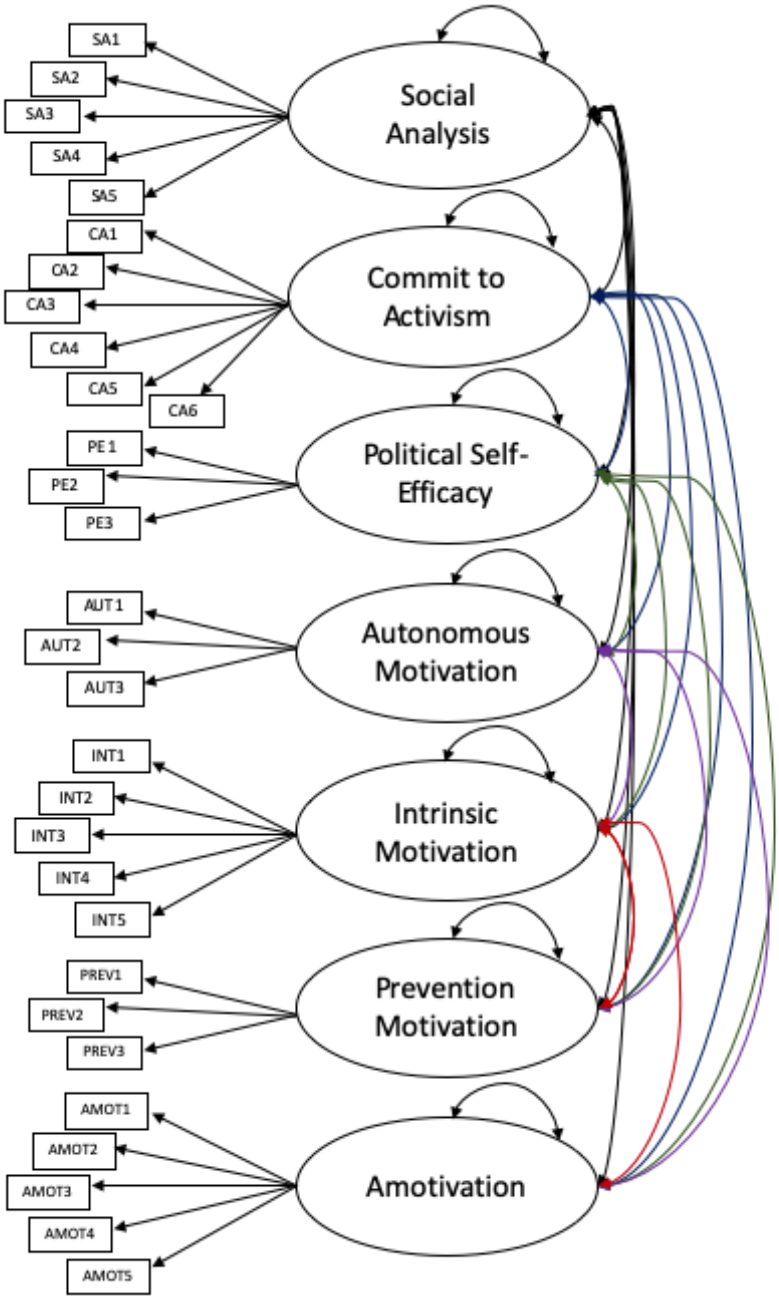


Figure 5

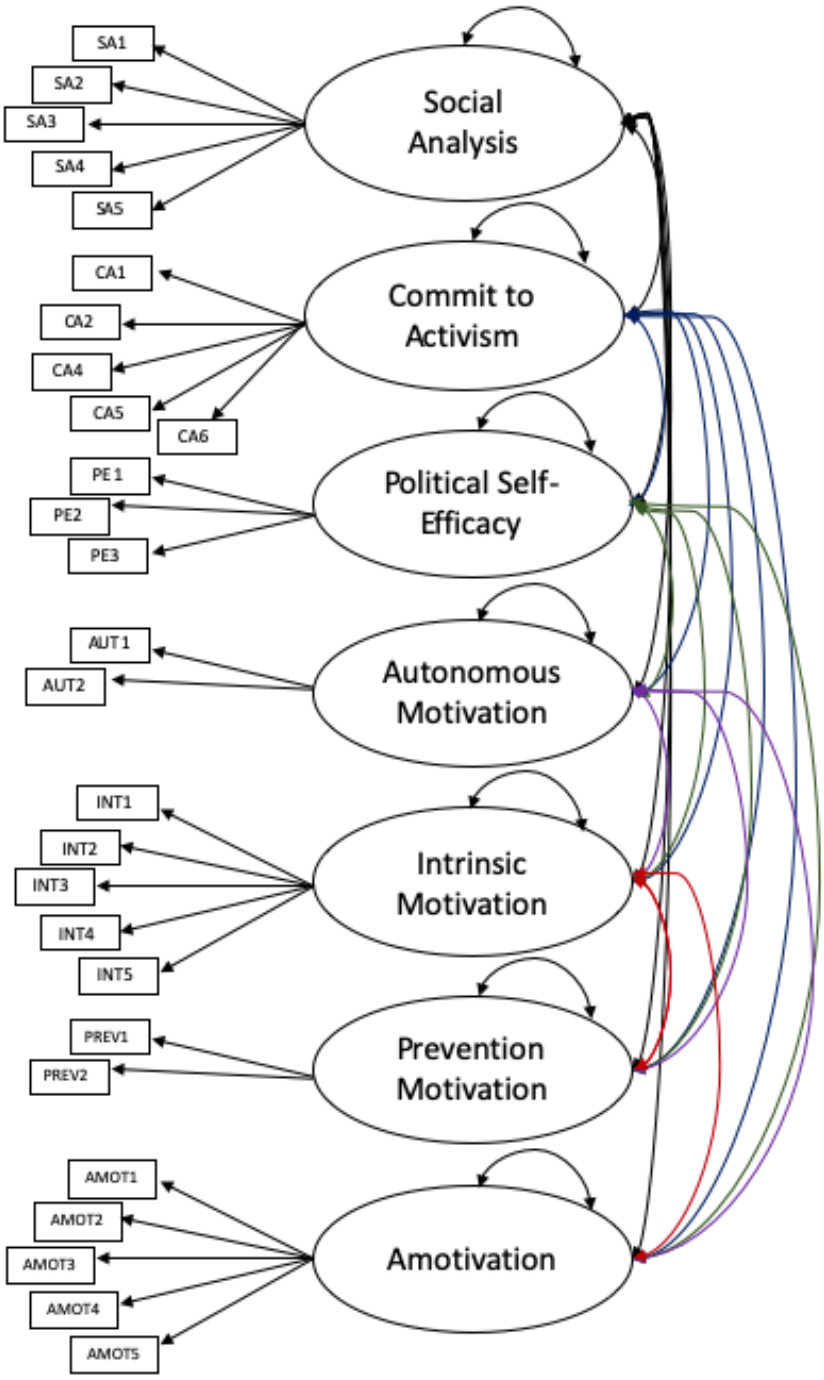
Diagram of Multifactor Confirmatory Factor Analysis for Model 1 (30 items)



Note. Error terms are not represented in this figure.

Figure 6

Diagram of Multifactor Confirmatory Factor Analysis for Model 4 (27 items)



Note. Error terms are not represented in this figure.

Figure 7

Average Raw Scores on Each Motivation Indicator for Each Profile at Time 1

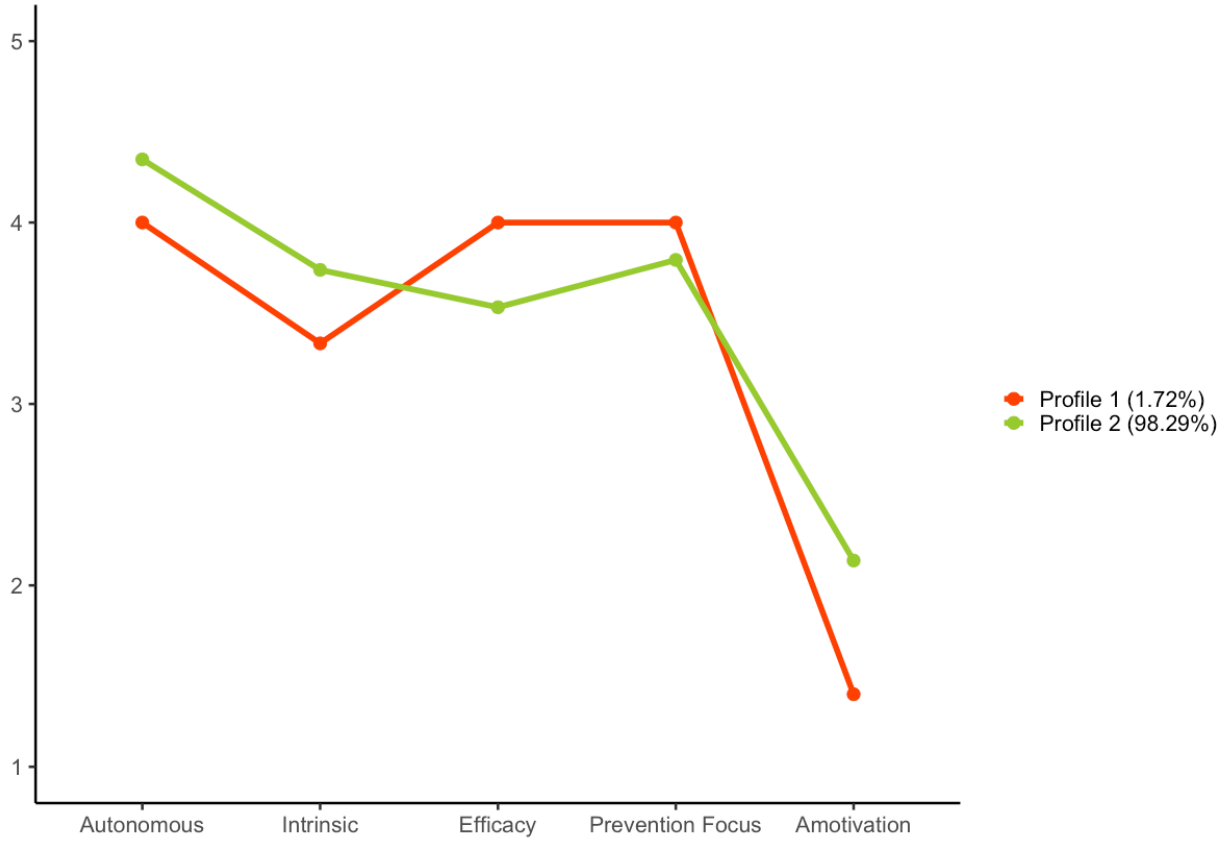


Figure 8

Average Z-Scores on Each Motivation Indicator for Each Profile at Time 1

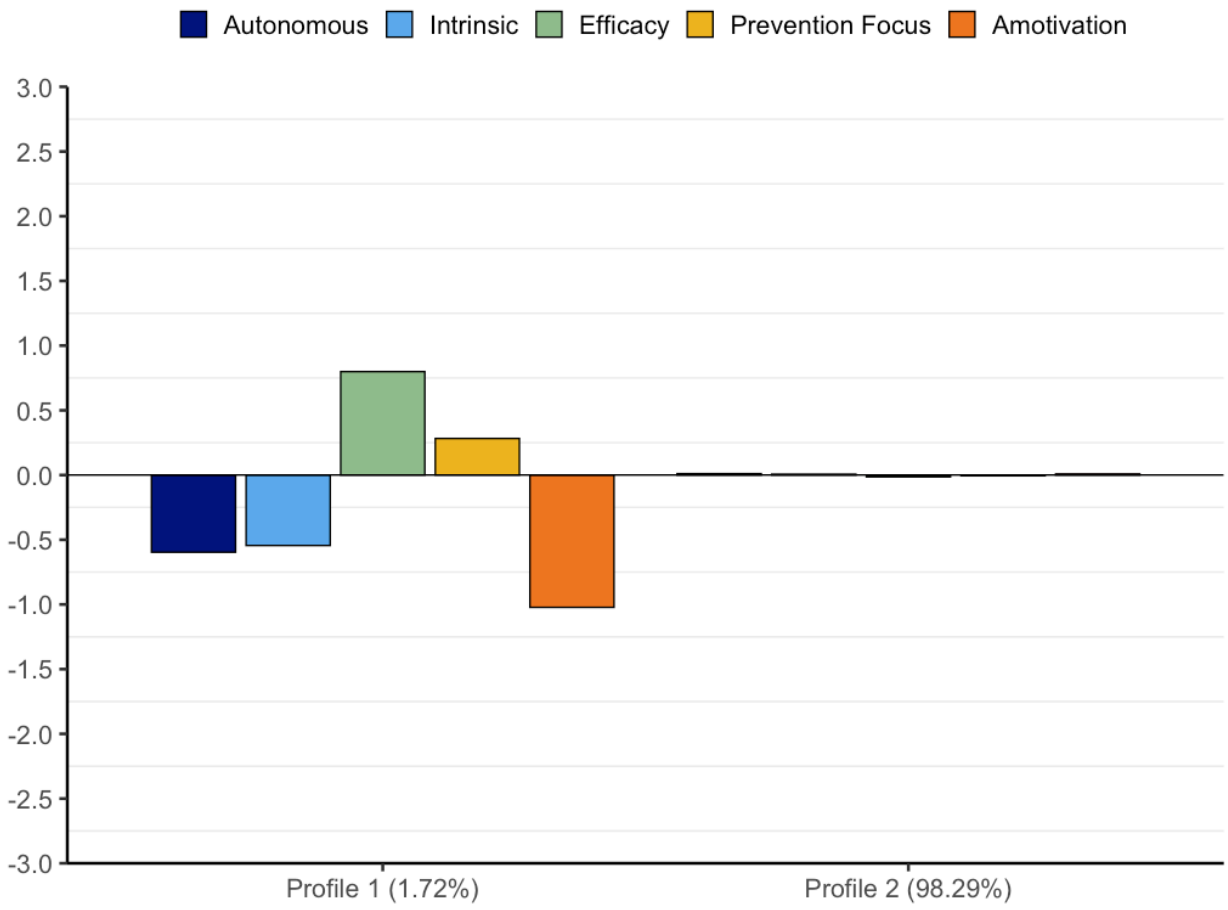


Figure 9

Average Raw Scores on Each Motivation Indicator for Each Profile at Time 3

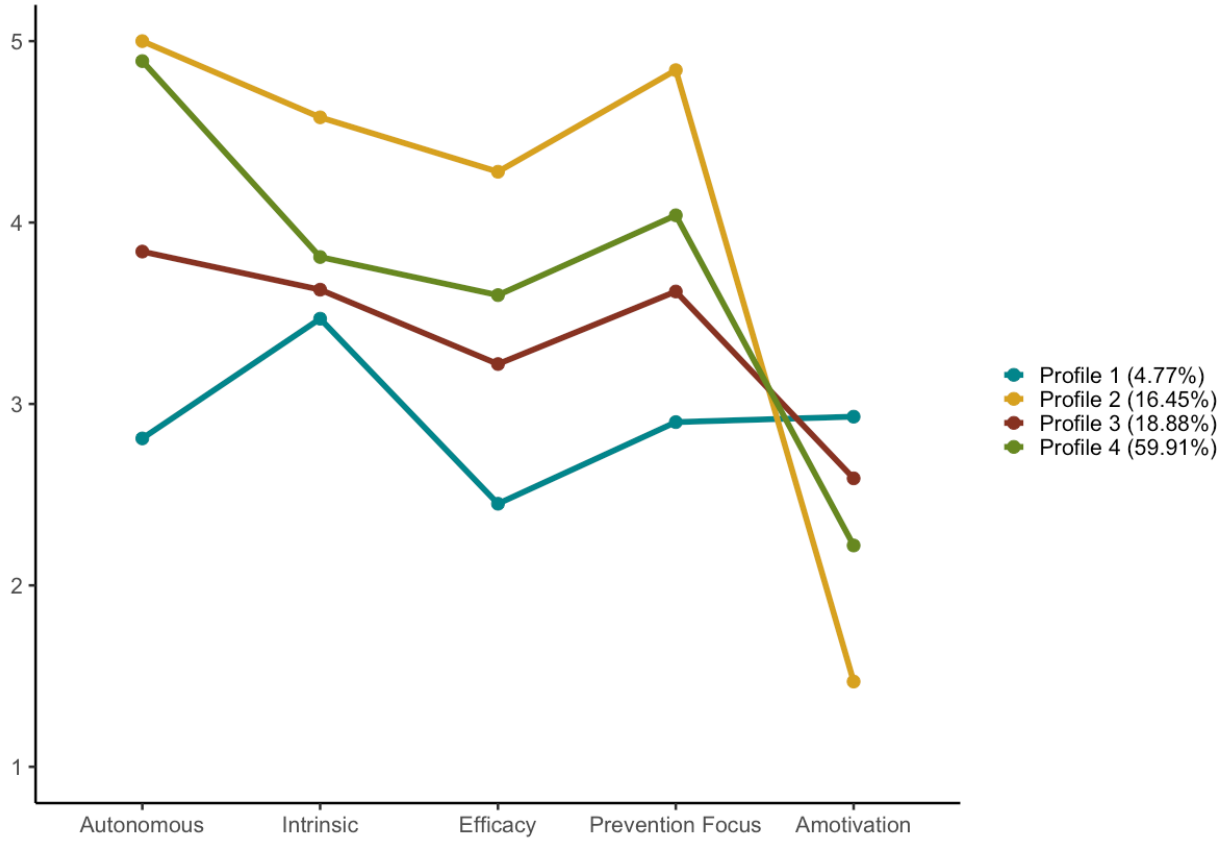


Figure 10

Average Z-Scores on Each Motivation Indicator for Each Profile at Time 3

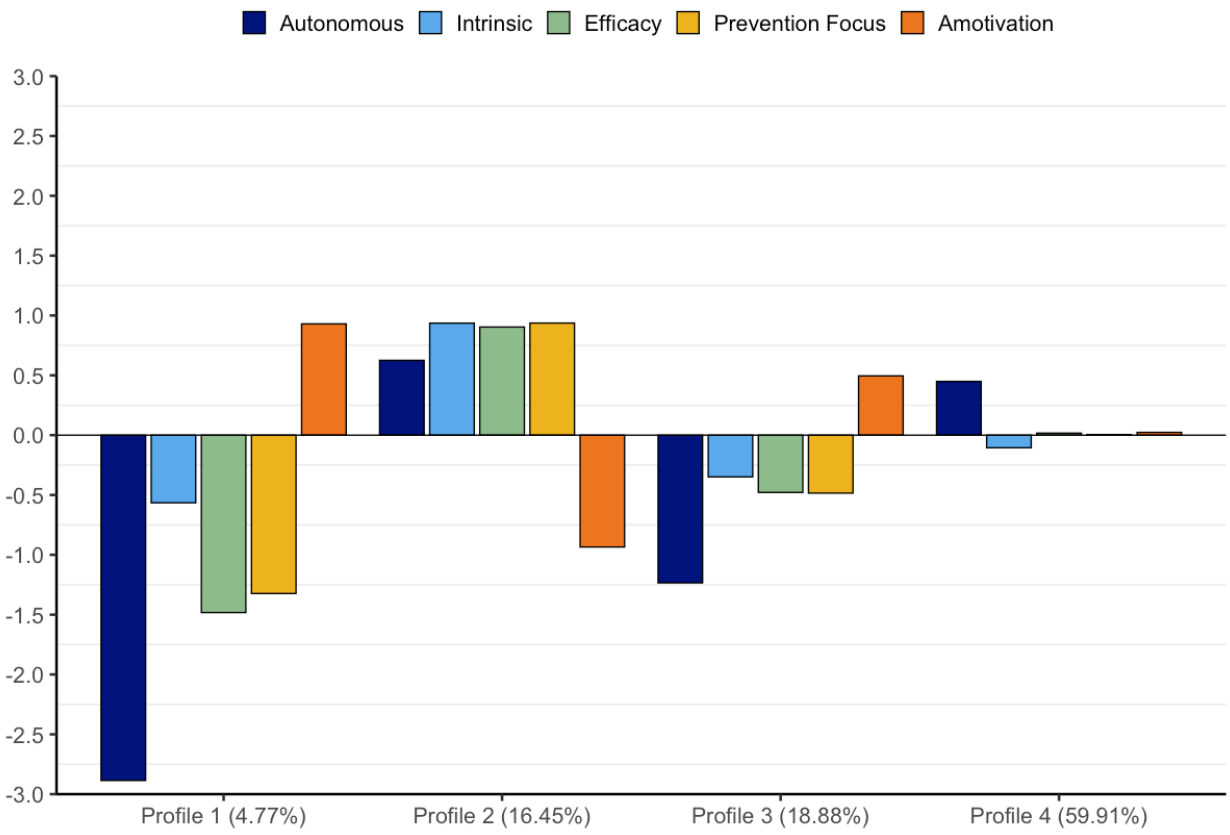


Figure 11

Average Raw Scores on Each Motivation Indicator for Each Profile at Time 5

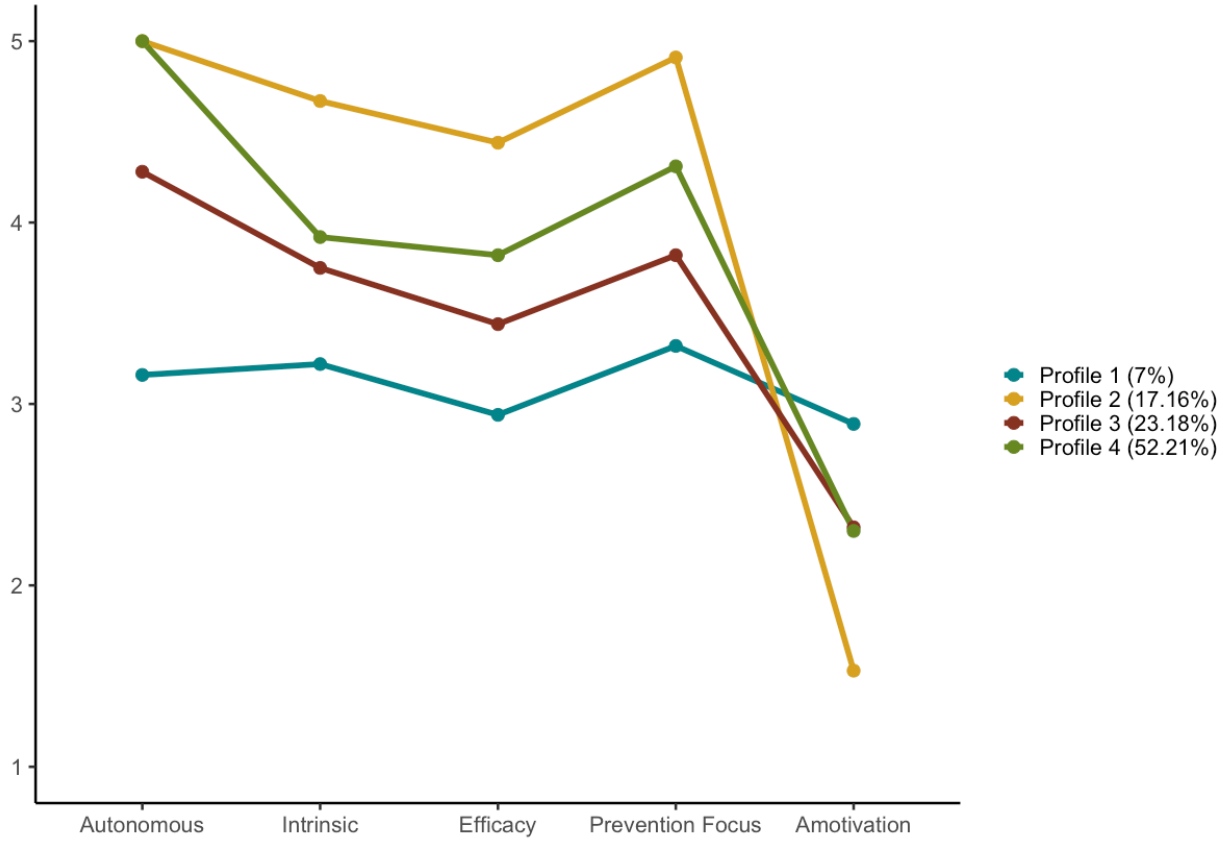


Figure 12

Average Z-Scores on Each Motivation Indicator for Each Profile at Time 5

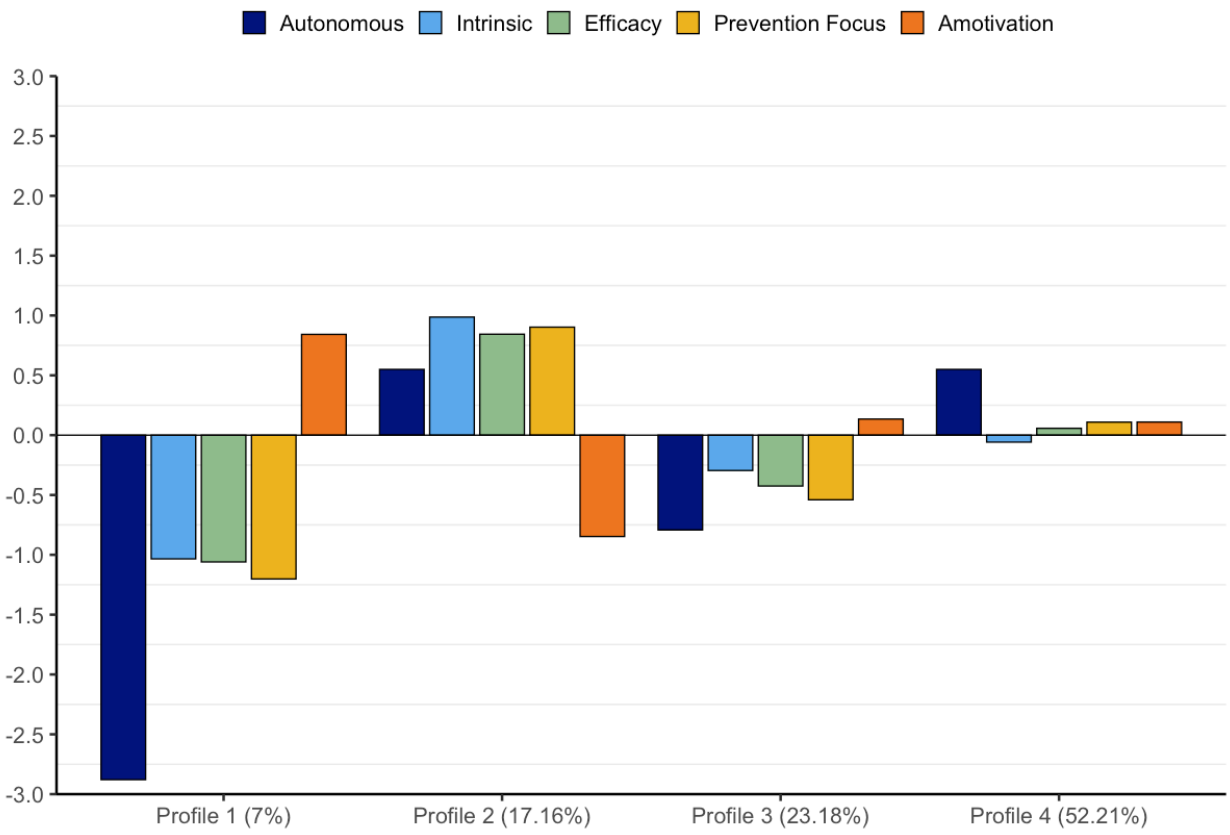


Figure 13

Average Raw Scores on Each Motivation Indicator for Each Profile in the Three-Time-Point LPTA

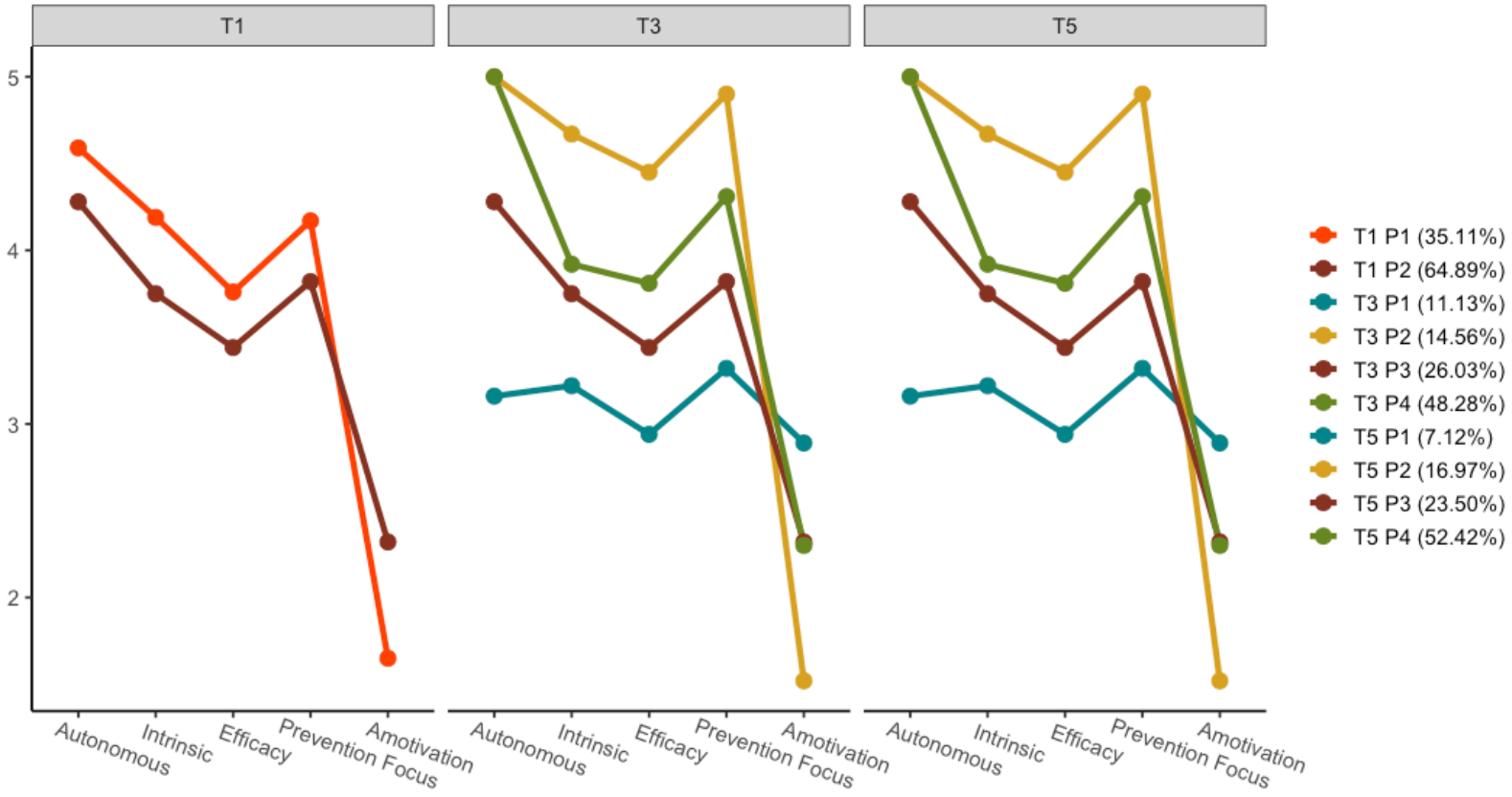
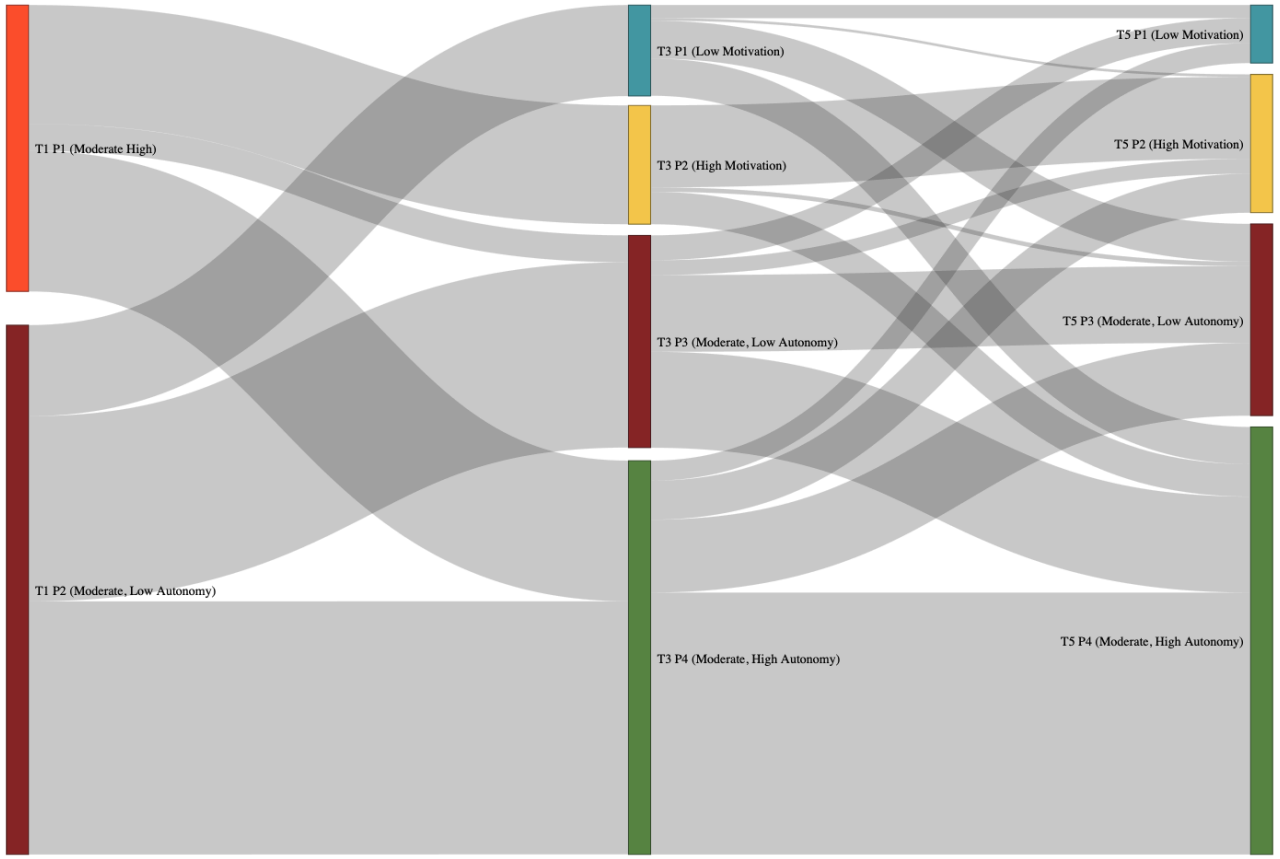


Figure 14a

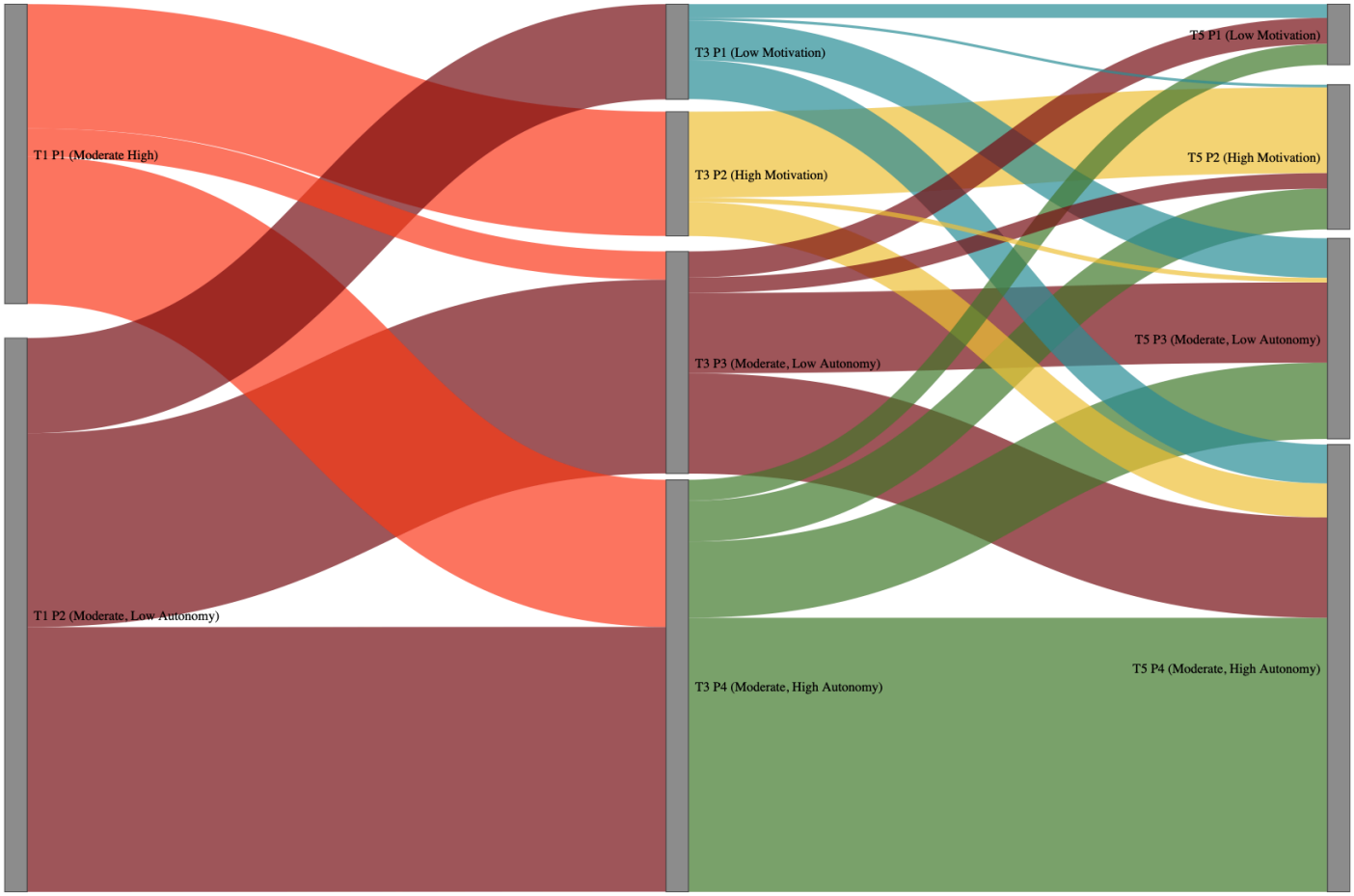
Visual Depiction of Transition Probabilities for Motivation Profile Membership at Three Time Points



Note. In this Sankey diagram, the size of the bars corresponds to the magnitude of the transition probabilities in Table 50. Thicker bars represent greater probability. Time 1 = ninth grade fall; Time 3 = tenth grade spring; Time 5 = twelfth grade spring.

Figure 14b

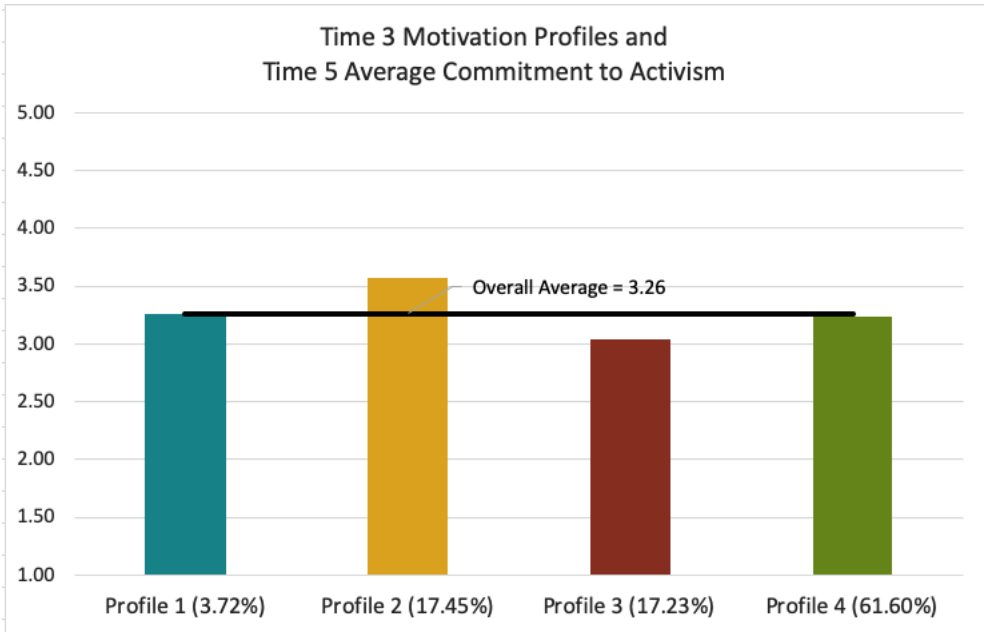
Alternative Visual Depiction of Transition Probabilities for Motivation Profile Membership at Three Time Points



Note. In this Sankey diagram, the size of the bars corresponds to the magnitude of the transition probabilities in Table 50. Thicker bars represent greater probability. Time 1 = ninth grade fall; Time 3 = tenth grade spring; Time 5 = twelfth grade spring.

Figure 15

Time 3 Latent Motivation Profiles as Distal Predictors of Time 5 Commitment to Activism



Note. Profile 1 = "Low Motivation;" Profile 2 = "High Motivation;" Profile 3 = "Moderate Motivation, Low Autonomy;" Profile 4 = "Moderate Motivation, High Autonomy." After correcting for multiple comparisons, the only statistically significant difference was between Profile 2 and Profile 3.