

Longitudinal Associations of Hope and Prosocial and Civic Behaviors in Emerging  
Adulthood

by

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A Dissertation Presented in Partial Fulfillment  
of the Requirements for the Degree  
Doctor of Philosophy

Approved March 2021 by the  
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May 2021

## ABSTRACT

Within a positive youth development framework, Lerner and colleagues posited that youth and young adults are societal assets that support the pillars of democracy and incite community contribution through the development of individual character strengths. Strengths might include hope and civic attitudes, which researchers have linked to numerous positive outcomes; however, connections to civic behaviors are largely unknown. Developmentally, shifting identities, excitement about the future, and an introduction into formal citizenship within U.S. society characterize the emerging adulthood period. Emerging adulthood is also characterized by burgeoning relationships and service opportunities, particularly on college campuses. These factors make emerging adulthood a prime context in which to investigate the aims of the current study, which centered on investigation of the development of hope and civic attitudes, and how each contributed to civic engagement including interpersonal prosocial behavior, community volunteering, and political behaviors. Effortful control was hypothesized to play a role in relations as an intrapersonal factor that implicated relations between hope and civic attitudes and outcomes, and was therefore included as a moderator. Sample consisted of 217 emerging adults (~ 67% female, 58% White, 30% Pell-grant eligible, 19-20 years old) across three time points at a major university in the southwest U.S. from spring 2019 to spring 2020. Path models, structural equation models, and moderation analyses evidenced direct relations between hope and interpersonal prosocial behavior. Civic attitudes directly predicted community volunteering and political engagement. Transactional relations between hope and civic engagement were not apparent. Similarly, moderation analyses showed no interactive effects between hope and civic attitudes and

effortful control on study outcomes. Findings evidenced stability in hope and civic attitudes across early emerging adulthood and invited future work investigating the development of each in early adolescence and later emerging adulthood. Future interventions might prioritize the development of hope in efforts to increase interpersonal prosociality and civic attitudes to increase volunteering and political engagement among emerging adults, where civic engagement has been historically low. Overall, findings supported hope and civic attitudes as hallmarks of positive youth development with the potential to uniquely contribute to community enhancement in emerging adulthood.

## DEDICATION

For all the angels, seen and unseen, who have seen me through. But mostly for Bowen, my rock, my wings, my best friend.

## ACKNOWLEDGMENTS

Countless individuals have made this moment possible. Thank you to my parents for teaching me the value of persistence, grit and humor. To my siblings and extended family for cheering me on. To my mentors, Tracy Spinrad, and Crystal Bryce, and Laura Padilla-Walker, who have held my hand through the hard times, pushed me, and have been guiding lights of academic and personal excellence. Thanks also to Nancy Eisenberg and Stacy Morris who have lent their time, talents, and expertise to this dissertation and to my personal development. I recognize these five women, and many others, who came before me and blazed the trail to follow. Thanks to my fellow grads, friends, and lab-mates for all your support, mentoring, and love over the last 11 years: Stephanie, Laura, Sarah, Carly, Holly, Frank, Lena, Ana Maria, Daye, Brandon, Matthew, Madi, JV, Wen, Diana J., Brittany, Jayley, Sonya, Jingyi, Xioye, Diana G., Hillary, Brenna, Anny, Julie, Jack, Jay and especially Jamie, who laughed and cried with me along the exhilarating and harrowing dissertation journey. Finally, thanks to my kids: Luke, William, Evelyn, and Seamus, who have patiently waited for me to come home each night and give the best hugs, giggles, and kisses.

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## CHAPTER 1

### INTRODUCTION

Young people age 18 to 29 are an important group as they represent about 23% of the U.S. voting-eligible population. Many young people also contribute significantly to their communities through volunteer service (Hart & van Goethem, 2017). Recent polls have shown that young adults increased their civic behavior in the 2020 election year compared to 2016 and 2018 (CIRCLE, 2020), which reflects research showing political participation among young people ebbs and flows, depending on the current political issues of the time (Wray-Lake et al., 2019). Indeed, this upward trend may be due to the profound societal issues that have surfaced in the year 2020 including the Coronavirus pandemic, police brutality/the Black Lives Matter movement, and natural disasters connected to climate change. In fact, in a recent Gallup study (Keisa, 2020) on civic behavior, 70% of young adult participants reported talking to friends about political issues or the election, 65% reported helping others who were in need including neighbors and friends, and 33% had advocated for local, state or national policies. Despite the recent uptick in political activity, historically, researchers have shown that young adult political engagement tends to be lower than engagement among older Americans (Snell, 2010; Twenge et al., 2012; Wattenberg, 2015), and emerging adults had the lowest voter turn-out rates compared to middle-aged and older Americans in the 2018 mid-term elections (McDonald, 2020). Although exact rates of political engagement in the 2020 election remain to be seen, the Center for Information and Research on Civic Learning and Engagement (CIRCLE) estimated that approximately 53% to 56% of young voters turned out (CIRCLE, 2020), which outpaces 2016 young adult turnout (estimated at 45%

to 48%). This finding supports Gallup's (2020) suggestion that many young adults are hopeful to make a difference in their communities and country through engagement in civic behavior.

Although hope has often been framed as a general positive outlook or as baseless wishes (e.g., "I hope it doesn't rain today"), Snyder (2002) outlined hope as a cognitive-motivational process that provides individuals with concrete goals for the future combined with the personal belief that one can reach those goals through the construction of viable routes toward them. Snyder's conceptualization posits hope as a potential precursor to young adults' desires and willingness to be civically engaged. Indeed, the ability to imagine a viable, positive future may motivate young adults to take part in positive behaviors that represent steps toward that future. These behaviors may include interpersonal prosocial behaviors such as defending or comforting others in their immediate social circles, as well as dedicating specific time to community volunteering and/or engaging in formal political processes. Although researchers have positively linked hope to academic and extra-curricular engagement (Curry et al., 1997; Marques et al., 2017), the longitudinal relations between hope and *civic* engagement are largely unknown, particularly among young adults. As such, moderators of these relations are additionally undiscovered.

Civic attitudes also may underpin prosocial behavior, including that of an interpersonal nature (e.g., comforting, helping, sharing others), and particularly community volunteering and political engagement. Civic attitudes are presently defined as personal beliefs that one can and should make a difference in enhancing his/her community (Doolittle & Faul, 2013). Similar to hope, civic attitudes may represent a

cognitive-motivational construct that propels individuals toward civic behavior. If a young adult feels an obligation to better their community and holds the belief that her or his actions will make a real difference, it follows that she or he would be more likely to engage in actual volunteering and civic behaviors compared to individuals who do not hold such beliefs. It is additionally possible that relations will differ by socio-emotional factors such as effortful control because the ability to temper emotional response may allow for behavioral expression (Eisenberg et al., 2004; Rothbart & Bates, 2006).

Although hope and civic attitudes may both represent cognitive-motivational constructs that can lead to civic behaviors, their relation to one another is unknown. Further, effortful control may be implicated in these relations as a moderating mechanism. Thus, the present study includes a hypothesized model of proposed relations between hope, civic attitudes, and civic engagement behaviors (Figure 1). The aim of the current study is to test the relations therein. **First**, the study aims to test the potentially transactional relations between hope and civic attitudes. Because hope can be applied broadly across contexts (e.g., work, school), it could be that having relatively high levels of general hope lays a foundation for more focused and contextualized cognitive beliefs such as civic attitudes. Conversely, it could be that holding specific civic attitudes (i.e., I believe I should make a difference in my community) encourages individuals to adopt broader cognitive skills including goal-setting, agentic thinking, and route planning (i.e., hope) in order to make their beliefs actionable. In this way, civic attitudes may be positively associated with hope. Regardless of direction of effects, it is likely that these two constructs are related in some way because both represent cognitive-motivational constructs that can be oriented toward future behavior.

The **second** aim of the theoretical model is to test direct relations of hope and civic attitudes to interpersonal prosocial behaviors and civic engagement outcomes including community volunteering and political behavior. Knowing the relations between these constructs may highlight how young adults' hope and civic attitudes contribute to positive societal outcomes. Uncovering connections between hope, civic attitudes, and civic participation may give rise to proactive strategies in bolstering civic engagement in early adulthood, when political participation in particular has been historically low (Twenge et al., 2012; Vandermass-Peeler et al., 2018).

**Thirdly**, I will longitudinally test whether civic attitudes indirectly mediate the relations between hope and civic and prosocial behaviors. And conversely, I will examine whether hope mediates the relations between civic and prosocial behaviors. As mentioned, it could be that hope is related to civic and prosocial behaviors because it lays a foundation for civic attitudes, which subsequently underlie civic and prosocial behavior. Likewise, civic attitudes could engender agency and pathway thinking (i.e., hope), which then relate to civic and prosocial behavior. The model will test these indirect paths to understand if either cognitive-motivational construct (i.e., hope; civic attitudes) represents a mediating step in the relations from the other to civic and prosocial behaviors.

**Fourth**, as seen in the model, it is additionally possible that individual differences in effortful control moderate the relations between hope and/or civic attitudes and prosocial and civic behavior. Effortful control comprises a set of control functions that offer individuals the ability to modulate emotions and behaviors in ways that allow them to pursue goal-directed behavior (Eisenberg et al., 2004; Rothbart & Bates, 2006).

Effortful control has been robustly related to prosocial behavior (Eisenberg et al., 2015) and has been theorized as a developmental strength that contributes to positive youth development competencies, which subsequently predict positive and active civic engagement (see Lerner et al., 2014). Therefore, effortful control could represent a sort of turn-switch that allows an individual to effectively process the affective and cognitive complexities of hope and civic attitudes and translate them into actual prosocial and civic behavior. Taken together, the current study investigates the potential relations between young adults' hope, civic attitudes and interpersonal prosocial behavior, time volunteering and political behavior, with consideration toward hope and civic attitudes as potential mediating variables, and effortful control as a moderating variable between hope and civic attitudes and each outcome.

## CHAPTER 2

### LITERATURE REVIEW

Theoretical and empirical evidence support the hypothesized relations in Figure 1. In attempts to provide background and justification, the following literature review will first include a discussion of multiple theoretical foundations and developmental frameworks, with particular attention to how each relates to the present model. Next, the literature review will include sections outlining empirical evidence relevant to relations between hope and civic attitudes and community volunteering, political behavior, and interpersonal prosocial behavior respectively, with consideration toward both direct and indirect (mediated) relations. Finally, the review will discuss relevant literature on effortful control, in support of the hypothesized moderating influence of effortful control on the relations between hope and civic attitudes and each outcome.

#### **Relevant Theoretical Foundations and Developmental Frameworks**

As noted, relations between hope and civic attitudes and behaviors are largely untested, despite the considerable bodies of concomitant work on positive youth development, hope, political engagement, and prosocial behavior. Therefore, multiple theoretical approaches lay the foundation for this study. A positive youth development (Lerner et al., 2009) approach perhaps gives an overarching framework for the proposed model as it is interested in how individual character strengths lead to civic contribution in young adulthood. A deeper dive into hope theory is additionally warranted (Snyder, 2002), as well as an understanding of a model of prosocial action (Eisenberg et al., 2016). The period of emerging adulthood also provides a salient developmental context where



the hypothesized relations are particularly relevant. Each of these theoretical foundations and developmental frameworks helps explain the proposed relations between hope, civic attitudes, and civic and prosocial behaviors, and therefore will be discussed in turn.

### ***Positive Youth Development***

A recent surge in the study of positive development across adolescence and early adulthood has highlighted the ways that American youth and young adults are flourishing (Lerner et al., 2012; Padilla-Walker & Nelsen, 2017). For example, in the positive youth development (PYD) framework, Lerner (2005) critiqued the prevailing “deficit perspective” from which many researchers were studying youth, and instead argued that youth should be treated as societal assets who will “thrive” when given responsibility, independence, and roles in which they can actively serve and contribute to their communities. Utilizing the PYD lens, Lerner and colleagues (Lerner et al., 2009) developed the six “C’s,” which constitute core positive youth outcomes. They include *competence, confidence, connection, character, caring*, and the sixth, *contribution*, which can be predicted from the first five C’s (Figure 2).

Positive youth development theory frames the currently proposed model. Primarily, the theory posits that individual character strengths will drive individuals to contribute to their larger communities in ways that support the pillars of a democracy including freedom, liberty, and social justice (Lerner, 2004). Progressing toward the lofty ideals of a healthy democracy requires individuals to extend personal time, energy, and investment into the community and country through individual contributions that will then work for the collective good (Lerner, 2005). Interpersonal prosocial behavior, time spent volunteering, and engaging in the political process surely resemble the

“contributions” that PYD researchers have designated as essential to a thriving democracy. Within the PYD theoretical model, it follows that individual character strengths undergird these behaviors. Hope, civic attitudes, and effortful control constitute promising candidates to represent the character strengths Lerner discussed, as each could likely map onto dimensions of *competence*, *confidence*, and *character* (using PYD terminology). Therefore, hope and civic attitudes are positioned as longitudinal predictors in the current model, with effortful control situated as an implicating variable between each predictor and the prosocial and civic contribution outcomes. Another pertinent strength of the PYD model is that it focuses on the developmental period of adolescence, which can encompass emerging adulthood, and emphasizes how character development and civic contribution during these important years can lay a foundation for community engagement across the life course (Hart et al., 2007).

### ***Hope Theory***

Spearheaded by Richard Snyder and colleagues in the early 1990s, Hope Theory (Snyder 2002) situated hope as an important construct within the positive psychology family. Hope Theory centers on a cognitive-motivational thinking-process that propels an individual toward personal goals. Snyder posited that hope was not an emotion, but that it may bring about secondary emotions (e.g., frustration when a path to a goal is blocked, pride when a milestone is reached). Snyder grounded the hope construct in an individual’s cognitive abilities to craft multiple routes to a chosen goal (pathways) paired with agentic thinking and determination that characterized a personal volition to utilize those pathways (agency). Specifically, hope comprises three components: (a) goal-setting, (b) pathways thinking (goal-oriented planning), and (c) agency thinking (energy

and efficacy toward the goal). Goals can be short- or long-term, but should be specific, attainable (even if difficult), and valued by the individual. Critical to pathways thinking is the generation of multiple paths to a given goal (e.g., equifinality), particularly as individuals may need to pivot course when obstacles hinder the original pathway. Snyder viewed both pathways and agency thinking as iterative and additive, feeding each other in positive reciprocal associations in the pursuit of specific goals (Snyder et al., 2002).

Whereas hope contains elements of other agentic and future-oriented constructs like self-efficacy and optimism, hope remains a distinct theoretical construct with unique predictive power (see Rand, 2018). For example, in contrast to hope's emphasis on personal agency and abilities, optimism can center on external forces like superstition, fate, or luck, and could apply to any future circumstance instead of specific goals. Similarly, self-efficacy corresponds to hope's tenants of personal agency and express abilities to engage in future-oriented behaviors. Yet, the main focus of self-efficacy is that one *can* do something, not necessarily that one *will* (Bandura, 2006; Rand, 2018). Indeed, self-efficacy involves one's belief in their capabilities rather than their intentions to leverage individual willpower and then actively progress toward goal attainment along envisioned pathways, which describes hope.

Work by Snyder and his predecessors have positioned hope as an essential and robust predictor of well-being in multiple forms, including positive relationships, academic achievement, and personal growth in the face of obstacles (Kashdan, 2018). Hope is about envisioning promising future possibilities and then energetically pursuing goals that will turn those possibilities into reality across multiple domains. In addition to relational and academic contexts, hope can be applied to social and civil contexts.

Democratic systems are concerned with creating and reshaping governments and communities in ways that will serve citizens into the future. Hope can contribute to this process by affording individuals the skills to envision promising futures for their country and local community, set realistic goals, construct pathways toward goals, and then confidently pursue pathways, revising when necessary. Thus, hope is likely a precursor to community- and socially-oriented behaviors including interpersonal prosociality, time volunteering, and political engagement. Additionally, a major strength of the hope construct as conceptualized within Hope Theory is that it represents a malleable cognitive skill that can be taught and learned (Pedrotti, 2018). Thus, teaching agency and pathway thinking to youth and emerging adults may represent a realistic way to bolster community engagement and community-strengthening prosocial behaviors in the pursuit of a stronger democracy.

### ***A Heuristic Model of Prosocial Behavior***

Prosocial behavior is broadly defined as voluntary behavior intended to benefit another, and may include helping, sharing, comforting, and donating (Eisenberg et al., 2007). Prosocial behavior is a multidimensional construct encompassing multiple kinds of behavior with various correlates and predictors (Carlo & Randall, 2002; Padilla-Walker & Carlo, 2014). In the heuristic model of prosocial behavior outlined by Eisenberg and colleagues (2006; Eisenberg & Fabes, 1998; Figure 3), prosocial action is seen as the consequence of a multiplicity of interpersonal factors including dispositional characteristics, attitudes, appraisals of a current situation, and personal goals. Each of these factors can influence one another and ultimately contribute to prosocial action. The heuristic model pertains to the present study in that it depicts how multiple interpersonal,

component parts (e.g., hope, attitudes, effortful control) may be necessary in predicting an individuals' propensity to act prosocially (e.g., interpersonal helping; volunteering). Indeed, in the heuristic model, "personal goals specific to the situation at hand" preclude the intention to assist, which subsequently leads to prosocial action (Figure 3). If one's goals are concerned with civic outcomes including a stronger democracy or assisting the poor, those goals could then lead to prosocial intentions (potentially civic attitudes) and actions including interpersonal prosocial behaviors, community volunteering, and engagement in the political process. It is likely that prosocial goals such as these are more evident in emerging adulthood compared to younger ages because other-oriented values connected to capacity for abstract thinking and perspective taking increase with age (Eisenberg, 1986).

Other key components within the heuristic model are individual biological and dispositional characteristics, which can translate to "relevant personal characteristics" shown to implicate the pathway between "intentions to assist" and "prosocial action" (Figure 3). Effortful control represents the "relevant personal characteristic" in the current study. Prosocial children tend to be higher in effortful control (or self-regulation) as the capacity to engage in prosocial action is often dependent on the ability to control one's own emotions or participate in actions that help regulate others' emotions (Bergin et al., 2003; Eisenberg et al., 2006). Effortful control may modulate one's hopeful aspirations and civic attitudes, allowing an individual to hone and reappraise their goals and beliefs to align with what is behaviorally possible. This added level of cognitive control may be an essential characteristic that links beliefs and aspirations to action, which is why it is included as a moderating variable in the proposed model. In sum,

interpersonal prosocial behavior and volunteering represent different facets of helping behaviors. However, each can lead to the betterment of civil society as they intend to help specific individuals and larger communities for good. In alignment with Eisenberg's heuristic model of prosocial behavior, hope, civic attitudes, and effortful control may undergird prosocial action and civic engagement, each of which represent important emerging adulthood outcomes.

### ***Emerging Adulthood as a Contextual Framework***

Hope and civic attitudes and behaviors may be particularly salient in the developmental period described as emerging adulthood. Emerging adulthood characterizes the developmental period from ages 18 to 29 (Arnett, 2000, 2019). Arnett originally conceptualized the period of emerging adulthood in response to researchers' recognition that the historically normative experiences within this age range had drastically changed in the late 20<sup>th</sup> century. Higher levels of college participation, extended length of educational pursuit, and delayed entrance into marriage and parenthood created a unique developmental space where young adults described themselves as neither adolescents nor adults (Arnett, 2000; Arnett et al., 2019; Zorotovich & Johnson, 2019). Arnett outlined five key features of this time to be identity exploration, instability, self-focus, feeling optimistic about many possibilities for the future, and feeling "in-between" adolescence and adulthood (Arnett et al., 2019). Notably, entry into emerging adulthood coincides with increased expectations to be civically engaged in U.S. civil society. However, the five features of emerging adulthood pose interesting implications for civic engagement. For example, some young people may not feel motivated to invest their time and effort into volunteering in a specific

community due to instability in residence, a focus on the self rather than larger communities, and the perception that political participation is a marker of adult status, which they have not yet reached. Alternatively, robust optimism, and the freedom to explore and construct new identities during this time may promote increased involvement in multiple organizations, including those that focus on political movements or humanitarian efforts like volunteering (Padilla-Walker & Nelson, 2017). Emerging adulthood also offers new opportunities to be interpersonally prosocial as young adults are frequently forming new relationships with friends or romantic partners in college settings away from family (Padilla-Walker et al., 2017). Because emerging adulthood is such a unique period of exploration and transition, the proposed study seeks to understand how hope for the future and civic attitudes relate to prosocial and civic behaviors, despite shifting identities and circumstances during this important time.

### **Relations between Hope, Civic Attitudes and Civic and Prosocial Behaviors**

In the PYD framework, contribution is conceptualized as having a commitment to give of one's thoughts, time, and talents to the positive development of self, family, and community (Alberty et al., 2006). In the proposed study, I focus on community contribution through civic engagement and prosocial actions. Civic engagement has been defined in many ways across disciplines (see Sherrod et al., 2010; Youniss et al., 2002); however, some developmental researchers have argued for two main domains of civic engagement: community volunteering and political citizenship (e.g. Conway, 2000; Flanagan, 2004; Hart et al., 2007; Obradovic & Masten, 2007; Serek et al., 2017). Indeed, researchers (Obradovic & Masten, 2007) have posited that volunteering and political behavior should not be composited into a single construct, as a National Association of

Secretaries of States (Walker, 2002) report found that volunteer behavior and voting behavior were not correlated. Other researchers posit that these constructs should be differentiated empirically because young adults report that they feel more capable of generating social change through local community volunteering than by utilizing more formal political channels, inferring that young adults themselves separate these two types of behaviors in their own minds (Andolina et al., 2002; Flanagan & Faison, 2001). Thus, the proposed study will conceptualize and investigate the relation of hope to volunteering and political behavior separately. As mentioned, interpersonal prosocial behavior will additionally be included as a third outcome as it benefits a community in similar ways to volunteering through extension of time and effort toward the benefit of other citizens within society. For the present study, *interpersonal prosocial behavior* is conceptualized as specific positive actions aimed at helping specific individuals in a social setting (e.g., I listen to people who are upset; I stand up for people being made fun of). Conversely, *community volunteering* is conceptualized as time spent freely giving labor and service to a community organization and could include helping behavior applied to a broad context (e.g., organizing a community food drive) and involves a more formal time commitment. Although these two kinds of prosocial behaviors differ, they may share common motivational underpinnings as each is concerned with helping others. Within the proposed model, hope and civic attitudes each have direct relations to community volunteering behavior, interpersonal prosocial behavior, and political behavior. As each outcome is distinct and important, justification of the hypothesized direct and indirect paths toward them are worthy of further discussion.



### *Hope, Civic Attitudes, and Volunteering Behavior*

For the purposes of this study, volunteering behavior is described as “a person’s commitment to community service and to improving the well-being of others” (Obradovic & Masten, 2007, p. 5) and will be measured by time spent in community volunteering activities. In the U.S., and within many civil societies throughout history, great value has been assigned to voluntary labor on behalf of others (Hart & van Goethem, 2017). Volunteer behavior is a sign of contribution to one’s society and fellow citizens, and thus serves as a hallmark of democracy (Lerner, 2004). Of note, meta-analyses on youth community service and positive youth outcomes evidence gains in students’ knowledge, academic achievement, achievement motivation, and positive attitudes toward school (Celio et al., 2011; Conway et al., 2009). Other researchers have shown volunteering to be associated with higher adolescent self-esteem (Johnson et al., 1998), social skills (Celio et al., 2011), educational attainment and earnings (Kim & Morgul, 2017). Overall volunteering seems to have positive implications for both the individual and communities.

In line with the heuristic model of prosocial action mentioned previously (Eisenberg et al., 2006; Eisenberg & Fabes, 1998), many researchers have examined internal and external factors to explain why adolescents and emerging adults volunteer, including genetics and personality, family and religious influences, and high school service requirements (Greenstein, 1971; Gregory et al., 2009; Hart et al., 2007; Hart & Sulik, 2014; Hill & Den Dulk, 2013). Whereas this impressive body of literature lends insight into the precursors and outcomes associated with volunteering behavior, the vast majority of this work is correlational, and the field is in need of deeper inquiry on internal

motivational mechanisms that promote volunteering in emerging adulthood. Emerging adulthood may in fact be a prime developmental period to study community volunteering because many emerging adults have fewer commitments to others compared to older adults (e.g., marriage, children), but also have less structured, daily time-commitments than high school students. Thus, they may have more opportunity to volunteer. Notably, high school volunteering may also be mandatory for graduation (e.g., external factor), whereas motivation for volunteering in emerging adulthood may be due to internal factors because it is not required (Stukas et al., 1999).

In regards to volunteering behavior, researchers have shown that hope is associated with contribution, helping, and willingness to participate in community-benefitting goals and activities (Braun-Lewensohn, 2016; Callina et al., 2014; Damon, 2003; Ferrari et al., 2014; Mariano & Going, 2011). Indeed, PYD researchers have shown that those with higher hopeful future expectations were more likely to show patterns of contribution (Lerner et al., 2005). These findings support the tenants of hope theory, wherein Snyder and colleagues (1997) argued that individuals with higher hope will have the capacity and motivation to realize shared goals of a group, and will therefore engage in the community in ways that will promote the group's well-being. This could include volunteering behaviors designed to benefit the local community and the citizens within it (e.g., food drives, community clean-ups, service to youth organizations). Indeed, cognitive skills inherent to hope may allow emerging adults to envision a more positive future for their neighborhood, college campus, or the country at large and commit to volunteer hours in various community organizations as a means of making progress toward their community goal. This would be particularly relevant if emerging adults,

many of whom are concerned about poverty, social equity and environmentalism (Padilla-Walker & Nelson, 2018), set goals surrounding such social and moral issues. Longitudinal evidence for the relations between hope and volunteering are sparse, giving us a very limited picture of the developmental processes leading up to community volunteer behavior. Additionally, extant literature ignores the potential of interpersonal characteristics such as civic attitudes and effortful control in the relations between hope and civic contribution, although there is theoretical justification for their relevancy.

Civic attitudes, personal beliefs that one can and should make a difference in enhancing his/her community (Doolittle & Faul, 2013), are likely related to time spent volunteering in the community. Individuals' attitudes often guide subsequent behavior (see Ajzen & Fishbein, 2005; Fazio, 1990). It follows that individuals who believe that they *should* contribute to their communities are more likely to engage in volunteering compared to individuals lacking dutiful feelings toward their community, or the self-efficacy to believe their actions can make a difference. Accordingly, researchers studying Canadian youth used a cluster analysis to classify adolescence as political activists, community helpers, or uninvolved youth. Analyses showed that political activists and community helpers scored significantly higher on social responsibility attitudes compared to uninvolved youth (Pancer et al., 2007). This finding supports attitudes as relevant to community-benefitting behavior, although these relations have not been tested longitudinally. Youth and young adults may feel an obligation to their community for a number of reasons including moral ethics or parental socialization (Karniol et al., 2003; Whitlock, 2007). In addition, it is likely that if an individual holds strong civic attitudes, they may see spending time volunteering as a viable way to fulfil their perceived

responsibility to their community. This notion aligns with research showing that emerging adults feel that spending time in local charities is more productive than participating in formal political processes in affecting social change (Andolina et al., 2002; Flanagan & Faison, 2001). The self-efficacy dimension of the civic attitude construct also relates to research showing that political self-efficacy is a significant predictor of political behavior because those with confidence in their ability to make a difference are more likely to engage in civic behavior compared to those who feel powerless (Reichert, 2016; Vecchione & Caprara, 2009).

In sum, community volunteering is positive, prosocial behavior that may have advantageous implications for both the actor and the community. Both hope and civic attitudes may be directly associated with community volunteering as hope may afford individuals the cognitive ability to envision and make a plan toward community contribution, and civic attitudes may motivate an internal feeling of obligation to do so. As previously mentioned in aim three of the present student, it is also possible that hope and/or civic attitudes represent intervening steps in the pathway to volunteering, inferring a mediating process. The present study will test transactional relations longitudinally while controlling for stability in hope and civic attitudes, to address interpersonal predictors and potential developmental processes related to community volunteering in emerging adulthood.

### ***Hope, Civic Attitudes, and Political Behavior***

For the purposes of this study, political behavior is described as involvement in public behaviors related to an institution or government that may include voting, lobbying, and staying informed about national or international processes or issues

(Obradovic & Masten, 2007). In the U.S., emerging adults are legally qualified and expected to participate in civil processes such as voting, lobbying, affiliating with a political party, and being more aware of national political events/processes compared to adolescents. Like volunteering, in a wide body of literature, researchers attempt to explain why individuals engage in political behaviors, and findings on the topic discuss an array of reasons, including marginalized social circumstances, personality characteristics, religiosity, and more (Brown-Iannuzzi et al., 2017; Mondak et al., 2010; von Essen et al., 2015). However, there is a notable dearth of studies on how internal cognitive-motivational constructs, such as hope, may be associated with political behavior. Further, intervening mechanisms between hope and political behavior are largely unexplored. It is apparent that many emerging adults are apathetic toward or mistrusting of political institutions and many do not participate in formal political behaviors including campaigning or voting (Kiesa, 2020; McDonald, 2020; Saad, 2020; Snell, 2010). Uncovering some of the cognitive-motivational constructs associated with political engagement may provide avenues for increasing participation among emerging adult populations in the U.S. through emphasized development of cognitive-motivational skills that potentially relate to political behavior both directly and indirectly.

First, hope could be directly related to political behavior. Hope is concerned with envisioning future possibilities, identifying actionable pathways toward future goals, and utilizing belief in oneself to intentionally progress along planned routes. Political behaviors such as voting for a certain candidate, working for a campaign, or participating in social activism could represent tangible pathways toward civic goals. Indeed, political action might be fueled through future hopes for local communities or U.S. society more

broadly. In fact, Metzger et al. (2018) postulated that future-orientation, which aligns closely with the socio-cognitive conceptualization of hope, may be even more salient to political engagement than emotion-based competencies because a great deal of abstract reasoning is needed to contemplate future possibilities. Indeed, many issues related to politics require that an individual consider long-term impacts across multiple layers of social structures, including individuals, families, communities, institutions, and even global relations. Hope could assist in this cognitive work. In support, Metzger and colleagues (2016) found that future-orientation was a particularly important attribute of individuals who were politically involved and intended to vote. Kirshner's (2009) ethnographic research further showed that future-orientation was key to young activists' social activism and civic engagement. In related work, self-efficacy, which is strongly related to the agency component of hope, has been positively related to engagement in political behavior (Vecchione & Caprara, 2009), as has IQ and positive emotionality (Dawes et al., 2015). Since IQ may relate to executive abilities underlying the ability to create routes toward a goal, and positive emotionality may contribute to the envisioning of a brighter future, there may be overlap with the hope construct. Thus, this potentially overlapping work suggests that both agency and pathways components of hope may be important in driving youth to make tangible future plans and confidently move toward political action.

It is additionally possible that hope relates to political behavior indirectly through civic attitudes. Hope may provide the ability to envision a better future and the efficacy needed to progress along pathways; however, hopeful future envisioning and goal setting specific to democratic principles could imbue an attitude that prioritizes commitment to

the civic process as a means of goal attainment, which in turn leads to actualized political behaviors. Thus, the present model will test civic attitudes as a partially mediating variable in the relations between hope and political behavior.

In support, researchers have tied civic attitudes to political participation directly. For example, Eckstein and colleagues (2013) showed that attitudes and intentions toward participating in political behaviors did in fact increase political behavior among emerging adults in Germany, including working for a political party, supporting a political candidate, attending political debates, and contacting politicians. In related work, Castiglioni et al. (2019) showed that civic attitudes were significantly related to desires for accessibility (i.e., making the common good available to everyone and meeting every citizen's basic needs), which were subsequently related to charitable giving and paying taxes versus evading them. Although paying taxes is markedly different from voting or working for a political campaign, paying taxes does represent behavior that supports the governing municipality and is supportive of democracy. Like the associations described between civic attitudes and volunteering behavior, it holds that individuals who feel efficacious in their ability to make an impact in the political arena would be more likely to engage in political behavior. Conversely, some researchers have theorized and shown that high levels of individualism and materialism are associated with less political involvement (Bekkah et al., 1985; Snell, 2010). This result could be due to materialism and individualism being focused on the self, which is contrary to the basis of civic attitudes, which comprises a focus on contributions to others and society. This work implies that perhaps civic attitudes tap into strong other-oriented feelings that can propel

individuals to engage in political processes, despite inconveniences, if they feel it will make a difference in others' lives.

### ***Hope, Civic Attitudes, and Interpersonal Prosocial Behavior***

As mentioned, general prosocial behavior is defined as voluntary behavior primarily aimed at benefitting another (Eisenberg et al., 2015), and interpersonal prosocial behavior is presently conceptualized as defending behaviors, emotional helping, and inclusivity directed toward specific individuals in one's social circles. This action could be spontaneous or reactive to an unexpected social situation (e.g., witnessing bullying). Interpersonal prosocial behavior may not qualify as civic, as it does not relate specifically to a municipality. However, interpersonal prosocial behaviors likely contribute to community cohesion and accord as individuals help those around them, which improves civil societies (see Stürmer & Snyder, 2009, Part 4). Emerging adulthood is an interesting time to study interpersonal prosocial behavior because many young adults have left home and entered new communities and social settings. Emerging adults may thus have more opportunities to be interpersonally prosocial as they seek to establish or maintain burgeoning positive relationships and encounter new contexts for helping (e.g., study groups, new roommates, work settings). Notably, prosocial behavior has been associated with higher levels of sympathy and moral reasoning, higher job satisfaction and job performance, reduced risk-taking, and reduced aggression in emerging adulthood (Anik et al., 2013; Carlo & Randall, 2002; Eisenberg et al., 2002; Nelson & Barry, 2005). These positive associations, as well as the contribution that emerging adults can make to their immediate communities through helping behavior, invite a closer look at potential links between hope and interpersonal prosocial behavior.



Hope may be directly associated with interpersonal prosocial behavior. For example, hope could pertain to envisioning and planning for new relationships, which are characteristic of emerging adulthood. Because prosocial behaviors are related to both relationship formation and maintenance (Padilla-Walker et al., 2014; Stavrova & Ehlebracht, 2015) hopeful emerging adults may use interpersonal helping as pathway toward new, positive relationships. The ability to forecast and set goals may particularly set the stage for prosocial action if an emerging adult's goals include high quality relationships and multiple friendships. Emerging adults who experience relatively high levels of hope may also engage in prosocial behavior because many developmental hallmarks of emerging adulthood (e.g., new jobs, group work in educational settings, clubs and extra-curricular activities) may require prosocial action as a pathway toward success across contexts. Additionally, hope contains elements of self-efficacy (i.e., agency thinking), which is important for prosocial development because confidence in one's ability to help another person increases the odds of helping behavior (Caprara & Steca, 2007). Because hope's agency component has to do with beliefs that one can progress toward goals, hope might add to an emerging adult's confidence that their helping is warranted and valuable, and prompt prosocial action, even if they are unsure how help will be received. Indeed, individuals' feeling of inadequacy or their inability to think of how to help someone in need can thwart prosocial action (Staub, 1995). Hope skills can directly counter these tendencies. In combination with agency thinking, the pathways component of hope provides individuals with the cognitive skills to formulate solid plans of prosocial action. For example, if a co-worker is mistreated at work, a fellow emerging adult worker with high hope may be able to think of multiple, tangible

ways to address the mistreatment, as well as plan how to best comfort the co-worker individually. They may then efficaciously pursue those prosocial plans. In support, Padilla-Walker and colleagues (2011) found that adolescent hope positively related to prosocial behavior in adolescence, although the study was cross sectional. The proposed study will extend these findings to understand if hope is associated with interpersonal prosocial behavior longitudinally in emerging adulthood.

Contrary to the link between hope and interpersonal prosocial behavior, the link between civic attitudes and interpersonal prosocial behavior is less substantiated because civic attitudes are thought to be specific to democratic governance and social participation in municipal processes. Although the heuristic model of prosocial action (Eisenberg et al., 2006) does include intentions to perform prosocial behavior as a precursor to prosocial action, and civic attitudes are similar to intentions, *civic* intentions may not be a salient motivational force for such behaviors as sharing, defending, or comforting a specific individual. Notably, there may be overlap between one's civic attitudes and their prosocial intentions because each are based in the desire to contribute to something other than oneself (i.e., a friend's mental state, community wellness), however there are a large number of other non-municipal predictors of interpersonal prosocial behavior (i.e., sympathy, moral values) that are likely more salient than civic attitudes. Thus, a direct relation between civic attitudes and interpersonal prosocial behavior in the proposed model is unapparent. However, it is possible that civic attitudes relate to interpersonal behavior indirectly through hope. Indeed, if holding civic attitudes characterized by an internally felt obligation to contribute to one's community leads individuals to adopt general hope (i.e., agency and pathway thinking), and hope

subsequently relates directly to interpersonal prosocial behavior, a mediated path may be evident. The model will test this association as well as the direct longitudinal relations between hope and prosocial behavior.

### **Effortful Control: A Moderating Influence**

As mentioned, effortful control comprises a set of control functions that offer individuals the ability to modulate emotions and behaviors in ways that allow them to pursue goal-directed behavior (Eisenberg et al., 2004; Rothbart & Bates, 2006). Effortful control contains elements of executive functioning (e.g., detecting errors, planning abilities, information processing), and can be subdivided into activation control (i.e., the capacity to perform an action when there is a strong tendency to avoid it) and inhibitory control (i.e., the capacity to inhibit inappropriate behavior when situations demand it). Effortful control is very important to emerging adults' social and emotional health (Fosco, 2012). Indeed, higher levels of effortful control likely allow emerging adults to more efficiently appraise or reappraise complex situations and cope with obstacles or negative emotional reactions (Carver & Conner-Smith, 2010; Gross, 2002; Rueda & Rothbart, 2009). Effortful control has been robustly linked to prosocial behavior (DeWall et al., 2008; Eisenberg et al., 2013; Kennedy & Kramer, 2008) as well as to civics skills, environmental activism, and voting intentions among adolescents (Metzger et al., 2018). This is likely the case because effortful control assists an individual in modulating their emotional reactions, sorting through their thoughts and intentions, and organizing cognitions into feasible plans.

The relations between an emerging adult's hope and civic and prosocial behaviors may be moderated by effortful control. Hope is concerned with visualizing the future, setting goals, and then agentially planning and progressing along pathways toward goals (Snyder, 2002). Although hope is not strictly an emotion, there may be affective components to hope, including moods, attitudes, and feelings, when one is considering their future and their efficacy in pursuing it. Effortful control may be needed to temper an ambitious affective response like initial excitement before realistic route planning can take place. Specifically, effortful control's component of appraisal and reappraisal may additionally allow emerging adults to organize abstract, hopeful ideas into logical, practical ordered steps, thus making the jump from cognitive hope to tangible behavior possible. Cognitive appraisal and reappraisal may be integral in allowing individuals to choose new routes to a goal when the initial ones did not work out. Practically, prosocial and political behaviors can be challenging, requiring an individual to step out of their comfort zone. Effortful control can tame fears and tendencies to withdraw from novel situations so that hopeful goals and plans will translate into actual political and prosocial behaviors, even if they are arousing and require the individual to stretch and experience discomfort. In this way, effortful control could modulate one's adverse responses and cognitions so that hope can be expressed as actual behavior. Taken together, effortful control may be requisite to translating hopeful feelings into cognitive routes and then additionally converting those routes into actual prosocial and political behaviors, even if they are difficult. Thus, effortful control could be key to the mental processes involved in hope as well the translation of hopeful plans to actionable behaviors toward a goal.

Effortful control, and particularly activation control, may also be an important moderating construct between believing one *should* do something to benefit their community (i.e., civic attitudes) and actually *doing* it (i.e., civic behavior). Believing one should engage in their community may not be enough on its own, and intentions do not always lead to behavior. Similar to hope, effortful control may be essential in the link from internal attitudes to socially responsible behavior because volunteering and political behaviors may incite high levels of emotional arousal that impede engagement, goal-setting, problem solving, or future envisioning (Metcalf & Mischel, 1999; Wray-Lake et al., 2011). Indeed, effortful control may help individuals cope with negative emotions or competing ideas and subsequently increase the likelihood that an emerging adult will actively participate in volunteer and political behaviors (e.g., attending rallies, debating with others). Thus, the present model will explore effortful control as a moderating variable in relations between hope and civic attitudes and civic engagement (i.e., volunteering and political behavior). Activation control and inhibitory control will be combined into a single construct comprising “effortful control.” Activation control will also be tested alone as a moderator as it may be particularly important in translating cognitive motivational constructs such as hope and attitudes into prosocial and political action.

## CHAPTER 3

### CURRENT STUDY

Taken together, there is evidence that emerging adults' hope may be related to their civic engagement, including time volunteering, political behavior, and interpersonal prosocial behavior. Additionally, the relation between hope and civic attitudes and the outcomes of interest may be moderated by effortful control, meaning that the translation of cognitive-motivational constructs to behavior may be conditional upon an individuals' level of effortful control (and activation control in particular). These relations are important to investigate given the historic lack of political behavior among emerging adults in the U.S. These relations have not been previously studied to my knowledge, and the related research has primarily used cross-sectional work to investigate specific paths in the proposed model rather than the longitudinal relations of these items over the salient years of emerging adulthood. Studying hope, civic attitudes, and effortful control as possible promotive factors toward civic and prosocial engagement may incite strategies for ultimately increasing emerging adults' participation and investment in their communities, particularly as hope represents a teachable set of skills. Thus, the aims of the present study are as follows:

#### **Research Question 1**

To test transactional relations between hope and civic attitudes across two time points spaced approximately one year apart in emerging adulthood utilizing cross-lagged and stability paths. Hypotheses include positive significant cross-lag and stability relations between hope and civic attitudes at time 1 and hope and civic attitudes at time 2.

I expect that hope may be more strongly predictive of civic attitudes relative to civic attitudes predicting hope because the ability to envision thoughts of the future may engender the desire to improve it.

### **Research Question 2**

To test direct effects between hope and civic attitudes at times 1 and 2, and civic and prosocial outcomes (i.e. time volunteering, political behavior, and interpersonal prosocial behavior) at time 3. Hypotheses include significant direct positive relations between hope and all three outcomes, and significant direct positive relations between civic attitudes and time volunteering and political behavior, but non-effects between civic attitudes and interpersonal prosocial behavior.

### **Research Question 3**

To test indirect effects of hope (T1) on political and volunteer behavior (T3) as mediated by civic attitudes (T2). And to test indirect effects of civic attitudes (T1) on political, volunteer, and prosocial behavior (T3) as mediated by hope (T2). Hypotheses include indirect paths wherein civic attitudes partially mediate the positive relations between T1 hope and T3 political and volunteer behavior, controlling for stability in hope. Mediating paths between T1 civic attitudes and T3 political, volunteer, and prosocial behavior at T3 utilizing T2 hope as the mediator are exploratory.

### **Research Question 4**

To test the potential moderating effect of effortful control and activation control alone on relations between hope and civic attitudes and prosocial and civic behaviors. Hypotheses include a significant moderating effect of effortful control, such that emerging adults with higher levels of effortful control will show a stronger positive

relation between hope and civic attitudes and each outcome, excepting the relation between civic attitudes and interpersonal prosocial behavior, which is less theoretically substantiated. I also expect that activation control alone will moderate these same paths, and perhaps show stronger mediation than effortful control (combined activation and inhibitory control).



## CHAPTER 4

### METHODS

#### **Participants**

Data for the present study were collected as part of a larger longitudinal study on associations between student hope and positive outcomes among emerging adults in the U.S. As the goal of the larger study was to understand the development and implications of hope among university students from first semester across the college experience, students had to be in their first semester of enrollment and between 18 and 20 years old to participate in the first wave. To date, data has been collected at four time points, in the Fall and Spring semesters of the freshman and sophomore years. The present study will utilize data collected at three time points, Spring of freshman year (2019; Time 1; T1), Fall of sophomore year (2019; Time 2; T2), and Spring of sophomore year (2020; Time 3; T3). Of students who received recruitment emails, 217 students completed the survey at T1, 104 students completed the survey at T2, and 107 students took the survey at T3 (including follow-up). Students came from 11 different colleges and represented more than 60 different majors. Of note, the majority of the analytic sample was female at T1, T2, and T3 (64%, 66%, 71%). Approximately a quarter (24%) of students were first generation college students. At each wave, a portion of the participants were Pell-grant eligible (32%, 34%, 28%), average age at T1 was 19.2 years old (range =18.5 to 21.3), T2 was 19.6 years old (range =19.0 to 21.8), and T3 was 20.4 years old (range =19.8 to 22.3). Participants' racial composition matched approximately the overall racial composition at the university and included White (~57%, 60%, 56%), Hispanic/Latinx

(~19%, 21%, 17%), Asian (~13%, 8%, 17%), Black/African American (~4%, 5%, 4%), American Indian/Alaska Native students (<1%, <1%, 0%), and students who identified with two or more races (~6%, 6%, 7%).

## **Procedures**

Students were recruited out of large, introductory courses in the social sciences department at a major Southwest U.S. university. Consenting participants self-reported on their hope, civic attitudes, effortful control, and civic behaviors through an online survey across multiple semesters. Hope, civic attitudes, and effortful control scores will be utilized from T1 and T2 data collections, and political and prosocial behavior data will be used out of the T3 data collection. Participants also consented to giving access to all of their university records, which included demographic and performance information. I will use demographic data from university records acquired at T1. The students were recruited via class announcements and an email sent to all first-year students taking a class in the social sciences department, which as noted attracts students from all majors across the university. Students took the survey by accessing a personalized link to a Qualtrics survey. If the survey was completed, participants were entered into a random drawing to win a prize (Amazon.com gift cards ranging from \$10-\$100 with odds ranging from 1-in-3 to 1-in-10 winning across waves). Students who participated in the T1 survey were contacted through email each subsequent semester and were asked to participate in the survey again. At T3, the vast majority of students in the study had major disruptions in their education and personal living situations due to the onset of the Coronavirus (COVID-19) pandemic in the U.S. Participation was uncharacteristically low at this time point (March 2020), presumably due to these disruptions. Thus, in July of 2020,

participants who did not complete the Spring 2020 survey were emailed again and asked to take the survey in exchange for being entered into a drawing for one \$75 gift card. This T3 follow-up resulted in 34 more participants taking the T3 survey at that time (follow-up participation will be controlled for in analyses). All study components were approved by a university Institutional Review Board.

## **Measures**

### ***Hope***

Students' hope was assessed using the 8-item Adult Hope Scale (Snyder et al., 1991), which used an 8-point Likert-type scale (*1 = definitely false* to *8 = definitely true*) to measure agency thinking (e.g., "I energetically pursue my goals.") and pathways thinking (e.g., "I can think of many ways to get the things in life that are important to me"). The Adult Hope Scale has shown good reliability in previous work (Cheavens et al., 2019). Higher mean composite scores indicated more hope (Cronbach's alphas T1 and T2= .94 and .94). For some analyses, agency and pathway thinking subscales were composited separately (Cronbach's alphas agency/pathway T1 and T2= .91/.91 and .90/.90).

### ***Civic Attitudes***

Analyses utilized the attitude subscale (CEA) of the Civic Engagement Scale (Doolittle & Faul, 2013) to assess personal beliefs/feelings about involvement in one's community and the perceived ability to make a difference there. The CEA consisted of four items measured on a 5-point Likert scale ranging from strongly disagree to strongly agree (e.g., "I believe I should make a difference in my community"). The CEA has

shown good reliability in previous work (Sunil & Verma, 2018). Higher mean composite scores indicated stronger personal feelings/beliefs (Cronbach's alphas T1, T2 = .88, .92).

### ***Interpersonal Prosocial Behavior***

At T3 only, Prosocial behavior was measured using the Multidimensional Measure of Prosocial Behavior (Nielson et al., 2017), which includes prosocial actions that are both instrumental and empathic (e.g., "If I see someone being given a hard time, I stand up for that person" and "I accept others for who they are, even if they are different"). There were 11 items and responses ranged from 1 (not like me at all) to 5 (very much like me). This measure has shown good reliability in previous (Nielson et al., 2017) as well as the present sample (Cronbach's alpha = .90). Higher mean composite scores indicate higher levels of prosocial behavior.

### ***Political Behaviors***

Emerging adults' conventional and alternative political behaviors were surveyed using multiple measures at T3. Using scales developed by Syvertsen and colleagues (2015), we assessed participants' News Consumption and Political Engagement. Scales utilized questions such as, "In a typical week, how often do you access information about politics and current events on TV, the radio, in the newspaper, or on news websites?" and "How likely is it that you will vote on a regular basis." The Ways of Expressing Political Voice (Flanagan et al., 2007) questionnaire addressed alternate forms of expressing political voice such as through poetry slams, online forums, and door-to-door canvassing. Each of the scales was compiled using existing measures in closely related studies of civic engagement in adolescence, where they have shown adequate reliability (Flanagan et al., 2007; Kahne et al., 2005; Keeter et al., 2002). Reliability for the present study was

adequate (Cronbach's alpha = .81). Higher mean composites indicated more political behavior.

### ***Volunteering***

In line with much of the extant literature, which utilizes questions asking participants how often they volunteer (Hart et al., 2007; Lopez & Brown, 2006) we asked participants to report how many hours they spent volunteering in a typical month.

Whether or not the volunteering was required (e.g. court order, class assignment) can have implications for the predictive power of the behavior (Kim & Morgül, 2017).

Therefore, we asked students to only report on volunteer hours that were not part of any school or legal requirements.

### ***Effortful Control***

To assess effortful control, we used the Activation Control (AC, seven items) and Inhibitory Control (IC, six items) subscales of the Effortful Control portion of the Adult Temperament Questionnaire-Short Form (ATQ-EC) assessed at T1 and T2 and mean-composited. The questionnaire consisted of 13 items (6 items are reversed coded). The AC subscale assessed the ability to perform an action despite a strong desire to avoid it (e.g., "I can keep performing a task even when I would rather not do it."). The IC subscale measured the ability to fight off impulses and to withstand approach tendencies (e.g., "I can easily resist talking out of turn, even when I'm excited and want to express an idea.") (Evans & Rothbart, 2007). All questions were answered on a 7-point Likert scale with responses ranging from 'extremely untrue of you' to 'extremely true of you'. At each timepoint, the two scales (activation and inhibitory control) were averaged to

create an effortful control variable, with higher averages indicating higher levels of effortful control (T1 Cronbach's alpha = .75, T2 Chronbach's alpha =.67).

### ***Control Variables***

Participants consented to giving access to university records including demographic information as part of the larger study. We obtained sex/gender, race/ethnicity, and socio-economic status (Pell-grant eligibility) from these records. Additionally, as prosocial and political behavior are often seen as socially desirable, we included a short measure of social desirability adapted from Crowne & Marlowe (1960) (5 items, T/F,  $\alpha = .40$ ) to be included in analyses as controls. As mentioned, a variable accounting for follow-up survey respondents at T3 (summer versus spring respondents) was also collected as a control.

### **Plan of Analysis**

Preliminary analyses including means, standard deviations, ranges, correlations and distributional properties (e.g., skew, kurtosis, outliers) were conducted using SPSS 27. Correlation analyses helped determine stability in hope and civic attitudes across time points. ANOVAs were run to determine whether there were mean differences by gender, Pell-grant eligibility, and race/ethnicity on all study variables. This helped determine which control variables were used in final models, particularly when low sample size precluded the models from having enough power to include all hypothesized relations. Attrition analyses were conducted where I tested for key demographic differences between participants who were in the study for each wave of data collection versus those that attrited (e.g., sex/gender, age, SES). Control variables were utilized wherever possible and I employed established missing data techniques (Enders, 2010) through use

of a maximum likelihood robust estimator (MLR) in MPLUS, which accounted for both missing data and non-normality. I then used structural equation modeling (SEM) in Mplus 8.1.7 (Muthén, & Muthén, 2020) to test the main research hypotheses. Considering that sex/gender, race/ethnicity can influence participation in civic behaviors, these variables were included as covariates in the model. Social desirability was also accounted for. The aforementioned follow-up variable accounting for the difference in timing for some T3 participants was included as a covariate when appropriate. Additional attrition analyses tested for significant demographic differences between those that took the survey at the first attempt and those who participated in the follow-up.

An initial measurement model including all indicators for latent variables (i.e., hope, civic attitudes, prosocial behavior, political behavior, effortful control) was estimated. Model fit was assessed using the chi-square statistic (should be non-significant for good model fit -- although this statistic is highly sensitive to sample size and is often disregarded as a basis for unequivocal rejection of a model; Schlermelleh-Engel et al. 2003, Lance & Vandenberg, 2009). To achieve a more holistic view, I also consulted the comparative fit index (CFI) and Tucker Lewis Index (TLI), the root-mean-square-error of approximation (RMSEA) and standardized root-mean-square residual (SRMR). Adequate model fit was measured using CFI and TLI scores greater than .95, and RMSEA and SRMR scores less than .08 (Hu & Bentler, 1999).

To answer RQ's one through four, a SEM model was estimated including stability and cross-lagged paths between hope and civic attitudes at T1 and T2 (this addressed RQ1), direct paths between hope and civic engagement behaviors at time 3 (this addressed RQ2), and indirect paths testing potential mediation of civic attitudes and hope

(addressed RQ3). After calculating direct, indirect and total effects in this model, the final model explored the moderating effect of effortful control on the association between civic attitudes and civic engagement behaviors within the larger model (addressed RQ4). All interaction terms were centered prior to running the analysis to assist in interpretation. Significant interactions were probed to further test for significance of simple slopes. All analyses used full information maximum likelihood (FIML) estimates to account for any non-normality (Arbuckle et al., 1996), and missing data (Enders, 2010).



## CHAPTER 5

### RESULTS

#### **Preliminary Analyses**

I first examined all study variables for outliers, skew, kurtosis, and other descriptive data including means, standard deviations, and ranges. Results can be seen in Table 1. Distributions for all variables were normal (i.e., skewness  $< 2$  and kurtosis  $< 7$ ; Tabachnick & Fidell, 2012) except for the volunteering variable, which had high positive skew and kurtosis (skew = 3.48, kurtosis = 18.13). The variable had a proportionally large amount of responses in the 1 and 2 hour ranges (59% of the sample). Upon further investigation, it appeared that 25 students had complete or nearly complete data at T3, but did not answer this one question, which was worded as, “Before spring break 2020, about how many hours did you spend, on average per month, VOLUNTEERING (not part of a class project, graduation requirement, or court-ordered requirement) to help other people or to help make your community a better place?” Additionally, it appeared that the item, which asked how many hours students spent community volunteering in a typical month, did not have either a “zero” or a “not applicable” answer option in the original survey. I therefore concluded that these 25 students likely did not answer because their chosen response was zero hours, and recoded the data to reflect responses of zero. After recoding, I found that there was one outlier 3 standard deviations (responded 40+ hours) above the mean ( $M = 3.58$  hours,  $SD = 5.63$ ) and recoded this response to be the highest answer in the dataset, but to be one unit above the next highest answer, which was 19 hours (Dixon, 1960; Ghosh & Vogt, 2012). Recodes led to a more normally distributed

variable (skew = 1.69, kurtosis = 2.37) that would assist in achieving more accurate results in hypothesized models.

I then computed zero-order correlations between each construct (all composites and subscale composites in Table 1). Hope at T1 and T2 were correlated at  $r(199) = .61$  ( $p < .001$ ), and agency and pathway were strongly correlated with one another at each timepoint (T1  $r(199) = .80, p < .001$ ; T2  $r(93) = .80, p < .001$ ). T1 and T2 civic attitudes were correlated at  $r(76) = .54, p < .001$ . Of note, hope composites (both composited and subdivided into agency and pathway thinking at T1 and T2) were consistently and positively correlated with civic attitudes ( $rs(77-193) = .23 - .38, p < .01$ ), with correlations stronger within time. Hope was also positively correlated with interpersonal prosocial behavior, activation control, and effortful control combined ( $rs(54-199) = .27-.44, ps < .05$ ). Positive correlations were additionally seen between civic attitudes and interpersonal prosocial ( $rs(54) = .08 - .25$ ) and political behavior ( $rs(54) = .25 - .27, ps < .05$ ). The three outcome variables, interpersonal prosocial behavior, community volunteering, and political behavior, were not significantly correlated with one another.

I next computed zero-order correlations between all control variables (i.e., gender, Pell-grant eligibility, first generation student status, and ethnicity) and each major study variable (Table 2). Concerning correlations between control and study variables, the only significant correlation was between T1 civic attitudes and Pell-grant eligibility ( $r(193) = .20 < .01$ ), indicating that being Pell-grant eligible was associated with higher civic attitudes scores.

I conducted a number of attrition and sensitivity analyses to determine whether demographic variables needed to be included in the hypothesized models pertaining to the specific research questions. Out of the 387 students who participated in the larger study at some point, 136 did not have any data for any timepoints used in the present study. Attrition analyses showed no significant demographic differences across these groups  $\chi^2$ s (1,136) = .02 - .05,  $p$ s = .83 - .95. For the current study sample, 217 students had data at T1, 104 students had data at T2, and 107 took the survey at T3 (see Figure 4 for attrition graphic). Different students participated at different time points, with 53 students having “complete” data because they participated at every time point used in the current study. Within time points, missing data on study variables ranged from 8% to 12%, with the exception of volunteering at T3, which as investigated and recoded as mentioned above. Attrition analyses employed  $\chi^2$  difference tests and one-way ANOVAs to determine if participants who participated in each wave of data collection differed from those who attrited from the previous wave (130 students attrited from T1 to T2; 34 students attrited from T2 to T3). Multiple demographic variables were used including gender, Pell-grant eligibility, first generation student status, and ethnicity (coded white/non-white due to low sample size). Attrition analyses also revealed that there were no differences in either demographic variables or on T1 hope and civic attitudes by those remained in the study versus those that attrited between T1 and T2. When comparing those who attrited between T2 and T3 versus those who remained in the study on demographic data and on the T2 hope and civic attitudes scores, there was only one significant finding that showed that more males than females attrited from T2 to T3 ( $\chi^2$  (1, 87) = 5.66,  $p$  = .02). Thus, I included gender as a control in hypothesized models.

I also tested for demographic differences across all study variables to determine whether additional demographic variables needed to be included in the hypothesized models. Specifically,  $\chi^2$  difference tests and one-way ANOVAs were used to test whether hope (T1 & T2), civic attitudes (T1 & T2), interpersonal prosocial behavior, community volunteering, political behavior, and effortful control (activation and inhibitory control tested separately and combined) differed by each demographic category specified above. Notably, there were no significant differences found by ethnicity or first-generation student status on any study variables, and few differences emerged across the other demographic variables. Pell-grant eligible students scored significantly higher on T1 civic attitudes than non-Pell-grant eligible students ( $F(1,193) = 7.50, p = .01$ ). Additionally, unexpectedly, males had marginally higher scores on inhibitory control (male  $M = 4.65$ , female  $M = 4.43$ ) and effortful control (male  $M = 4.80$ , female  $M = 4.59$ ) compared to females,  $F(1,211) = 3.06, p = .08$ ;  $F(1,206) = 3.41, p = .07$ ). These control variables were included in hypothesized models accordingly.

### **Amended Analysis Plan and Hypothesized Models**

After preliminary analyses were completed, I attempted to answer the four main research questions through the utilization of structural equation modeling in MPLUS version 8.3 (Muthén, L. K., & Muthén, 2020). A measurement model was fit using latent variables for hope, prosocial behavior, and effortful control. For example, T1 and T2 hope constructs were indicated by agency and pathway thinking subscales and interpersonal prosocial behavior was indicated by four helping behavior subscales that I created based on a close theoretical reading of each item in the measure (i.e., defending, comforting, including, and dire helping). Effortful control was indicated by separate,

established activation and inhibitory control subscale composites. Civic attitudes were only measured with four items at each time point, with no clear subscales, and the construct was therefore composited by averaging item scores at each time point (thus, civic attitudes was considered a manifest variable rather than latent). The six political behavior items were similarly composited into a manifest variable as they had no established subscales and there were few items. Latent factors for T1 and T2 hope were covaried and agency and pathway indicators were correlated across time points because they captured the same measures. The measurement model had adequate model fit ( $n = 231$ ;  $\chi^2(27) = 21.82$  ( $p = .75$ ) RMSEA = .00, CFI = 1.0, SRMR = .07). See Figure 5 for all parameter estimates. Notably, agency and pathway loaded strongly onto the hope construct at each timepoint ( $\beta_s = .84 - .94$ ,  $p_s < .001$ ). Dire helping loaded the most strongly onto the interpersonal prosocial behavior construct ( $\beta = .82$ ,  $p < .001$ ), and defending loaded the weakest ( $\beta = .32$ ,  $p = .03$ ). Comforting and including loaded strongly ( $\beta_s = .76$ ,  $p < .001$ ). For the effortful control factor, activation control loaded at  $\beta = .94$ , ( $p < .001$ ), and inhibitory control loaded at  $\beta = .50$  ( $p < .001$ ).

Using Little's (2013) methods of testing for factorial invariance across time, I utilized standard procedures to test whether constraining the factor loadings to be equal across T1 and T2 hope resulted in significantly worse model fit. Constraining the loadings to be the same did not significantly worsen model fit ( $n = 231$ ;  $\chi^2(28) = 22.06$  ( $p = .77$ ), RMSEA = .00, CFI = 1.0, SRMR = .07,  $\chi^2\Delta = .24$  ( $p = .62$ ),  $\Delta\text{CFI} = .000$ ), indicating "weak" factorial invariance. Next, the loadings as well as the indicator intercepts were constrained to be equal as a test of "strong factorial invariance." Again, the model fit did not significantly worsen ( $n = 231$ ;  $\chi^2(30) = 26.57$  ( $p = .65$ ), RMSEA =

.00, CFI = 1.0, SRMR = .08,  $\chi^2\Delta = 4.51$  ( $p = .21$ ),  $\Delta\text{CFI} = .00$ ), indicating that constraints should be retained in larger structural models.

Although measurement model fit was adequate, once it was built upon to create a full structural equation model, the model failed to converge, likely due to the large amount of measurement parameters being estimated in comparison to the limited sample size (structural paths, covariances, and appropriate control variables were also included at this point). As a next step, I attempted to create all manifest variables to run the full, hypothesized structural model, inclusive of cross-lagged and stability paths, mediation, and moderation paths hypothesized in Figure 4. Again, these models failed to converge due to low covariance coverage and the addition of more parameters than observations once all necessary control variables, covariances, and structural paths were included. To achieve the most robust parameter estimates possible, while acknowledging the limited sample and the need to include multiple control variables and theoretically justified covariances, I determined that multiple, smaller models (most using manifest variables) should be employed to answer the four research questions in turn. Each model will be described below.

### ***RQ1: Transactional Relations between Hope and Civic Attitudes***

To address the first research question, I constructed a transactional model where hope at T1 predicted hope at T2, and civic attitudes at T1 predicted civic attitudes at T2, creating stability paths (Figure 7). Transactional paths were also included in the model so that T1 hope predicted T2 civic attitudes, controlling for stability in civic attitudes. Likewise, T1 civic attitudes predicted T2 hope controlling for stability in hope.

Considering that this model would be small, I attempted to use the latent factors for hope from the measurement model (constraints from the measurement model were retained across the hope constructs). Civic attitudes variables were manifest. Pell-grant eligibility was included in the model as a covariate (T1 civic attitudes regressed on Pell-grant eligibility). The model converged and fit was good ( $n = 214$ ;  $\chi^2(11) = 7.94$  ( $p = .72$ ), RMSEA = .00, CFI = 1.0, SRMR = .05). Stability paths were significant (hope  $B = .62$ ,  $\beta = .68$ ,  $p < .001$ ; civic attitudes  $B = .62$ ,  $\beta = .58$ ,  $p < .001$ ), but transactional paths were non-significant (hope  $\rightarrow$  civic attitudes  $B = .04$ ,  $\beta = .03$ ,  $p = .73$ ; civic attitudes  $\rightarrow$  hope  $B = .04$ ,  $\beta = .04$ ,  $p = .16$ ).

In light of these findings, I decided to average T1 and T2 hope and T1 and T2 civic attitudes into single variables to use in the subsequent analyses in attempts to conserve power for model estimation. The strong invariance findings, combined with the moderately high zero-order correlations between T1 and T2 hope and T1 and T2 civic attitudes, evidenced substantial construct validity over time. I made this decision because T1 and T2 data were only collected approximately six months apart, so collapsed variables captured hope and civic attitudes across the year 2019 (I did not standardize because scales were the same at T1 and T2). Theoretically, I considered that an average score could be the most valid measure of hope and civic attitudes across the course of the year and might thus improve the robustness of the hypothesized models. Combining T1 and T2 additionally increased sample size to approximately 200 for each variable, while also capturing hope and civic attitudes close to the 2020 election year. This decision was further validated when I attempted to include both timepoints in my previous, larger path models and modification indices suggested correlations and/or reversed paths between T1

and T2 hope and civic attitudes, or that all outcomes should be correlated with T1 indicators, which did not make theoretical sense and/or led to lack of convergence. The moderately strong stability paths in the transactional model further validated my decision to collapse T1 and T2 hope and civic attitudes into one variable in larger models.

***RQ2: Direct Effects from Hope and Civic Attitudes to Study Outcomes***

To address the second research question, I estimated a path model with averaged T1 and T2 hope and civic attitudes (hereafter referred to simply as hope and civic attitudes) directly predicting interpersonal prosocial behavior, community volunteering, and political behavior (see Figure 7 for all parameter estimates). Hope and civic attitudes were allowed to correlate. Pell-grant eligibility was included as a control variable on civic attitudes and gender was included on the three outcome variables (determined through preliminary sensitivity and attrition analyses). The model had adequate fit ( $n = 231$ ;  $\chi^2 = 9.82$  ( $p = .13$ ) RMSEA = .05, CFI = .93, SRMR = .04). Results showed a significant, positive relation between hope and interpersonal prosocial behavior ( $B = .37$ ,  $SE = .07$ ,  $\beta = .21$ ,  $SD = .13$ ,  $p < .01$ ). Positive, significant relations were also present between civic attitudes and community volunteering ( $B = 1.17$ ,  $SE = .49$ ,  $\beta = .22$ ,  $SD = .09$ ,  $p = .02$ ) and political behavior ( $B = .31$ ,  $SE = .12$ ,  $\beta = .32$ ,  $SD = .12$ ,  $p < .01$ ).

**Post-hoc Analyses Testing Agency and Pathway Thinking Separately.**

Because agency and pathway thinking represent two sub-components of the hope construct with varying predictive power in previous studies (Crane, 2014), post-hoc analyses included the estimation of two additional models where agency and pathways thinking were tested separately in the model (constructs could not be included in the same



model give high correlation ( $r = .87, p < .001$ ). The agency and pathways models with all parameter estimates can be seen on Figure 7. Both models had good fit (agency model  $n = 231; \chi^2 = 9.03 (p = .17)$  RMSEA = .05, CFI = .94, SRMR = .04) (pathway model  $n = 231; \chi^2 = 9.9 (p = .13)$  RMSEA = .05, CFI = .93, SRMR = .04). Each model contained the same patterns as the model where agency and pathway thinking were modeled together, with agency and pathway significantly predicting interpersonal prosocial behavior, and civic attitudes significantly predicting volunteering and political behavior (see Figure 7 for all estimates). The results did not justify testing agency and pathway thinking separately in subsequent models.

### ***RQ3: Indirect Effects from Hope and Civic Attitudes to Study Outcomes***

Because it was determined that there were no significant transactional effects between hope and civic attitudes in response to RQ1, it was also determined that mediation would not be evident in the hypothesized models and there was no further testing of this research question.

### ***RQ4: Effortful Control as a Moderator between Predictors and Outcomes***

To address the fourth research question, I tested moderation of the relations between hope and civic attitudes on the outcomes of interest by effortful control in MPLUS interaction models. To preserve power, I ran six separate models, where each contained a main predictor (i.e., hope or civic attitudes), an effortful control variable (i.e., activation, inhibitory, or combined effortful control), and an interaction term (e.g., hope x activation control), regressed on the three outcome variables. Predictors were mean-centered in SPSS prior to bringing data into MPLUS. Next, to capitalize on MPLUS's

ability to use FIML, I defined new interaction terms in MPLUS by multiplying the centered predictors by one another. For MPLUS to use full information maximum likelihood in the models, the three predictors were correlated in each analysis. Based on sensitivity and attrition analyses, gender was used as a control in the three hope models, and Pell-grant eligibility was additionally controlled for in the civic attitude models. Parameter estimates for all interaction models can be seen in Table 3 and 4.

All models converged. Many of the model results were similar to the RQ2 SEM model, with positive, significant relations between hope and interpersonal prosocial behavior and volunteering, and positive, significant relations between civic attitudes and volunteering and political behavior. Although results also showed significant direct effects between effortful control variables and the outcomes of interest, no moderation was present in any of the six models. For direct effects, activation control was significantly negatively related to political behavior in the hope by activation control model ( $B = -.31, SE = .15$ )/ $\beta = -.33, S.D. = .15, p = .03$ ). For the civic attitudes models, activation control was again negatively related to political behavior ( $B = -.32, SE = .11$ )/ $\beta = -.33, S.D. = .11, p = .01$ )<sup>1</sup>. All other estimates can be seen in Tables 3 and 4.

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<sup>1</sup> Given the unexpected direction of relations with effortful control variables, I did multiple checks of the data, including re-pulling the raw data from Qualtrics, checking recoded items and composites, and closely investigating effortful control and its components at all timepoints where I had effortful control data. Notably, T1 effortful, activation, and inhibitory control were correlated with their corresponding T2 variables at .67, .73, .50 ( $ps < .001$ ). However, at T2, mean differences for males and females were insignificant, and when interactions were run with T2 effortful control variables, the relations reported above were all insignificant. However, to be consistent, I decided to keep T1 and T2 effortful control collapsed into one variable, as had been done with hope and civic attitudes.

In light of unexpected findings between effortful control variables and political behavior, I attempted post-hoc analyses where I removed an item from the political behavior measure (i.e., “How likely are you to Participate in a poetry slam, youth forum, live music performance, or other event where young people express their political views?”) in attempts to have a scale that more accurately depicted political behaviors that would require greater regulation, with no significant difference in outcomes. Thus, it appeared that the negative pattern between activation control and political behavior was accurate in these analyses. Further, I ran post-hoc wherein I attempted to examine moderation by both political ideology (i.e., Liberal vs. Conservative) and political affiliation (i.e., Democrat vs. Republican). Findings were either uninterpretable due to low sample size or showed no differences<sup>2</sup>.

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<sup>2</sup> Political affiliation had 91 responses within six categories: Democrat (n = 36), Republican (n = 18), Libertarian (n = 1), Socialist (n = 1), Do not claim one (n = 30), and Other (n = 5). The extremely small number of Republicans precluded me from estimating an interaction or multiple group model because results would not be robust. Political ideology was measured on a scale from 1-5 with 1 being Very Conservative, 3 being Neutral, and 5 being Very Liberal. The scale was heavily skewed toward having more Liberal participants, and breaking participants to ideological groups again led to a very small Conservative group that compromised generalizability. When I ran analyses using political ideology as part of a continuous interaction term, results were insignificant.

## CHAPTER 6

### DISCUSSION

It is a particularly salient time in the history of the U.S. because current events (i.e., police brutality, controversial presidential administration, COVID-19 pandemic) have brought large social issues to light, such as racial justice, public health, and economic disparity. Youth and young adults are taking interest and taking action (Hoyt et al., 2018; Ilchi & Frank, 2020; Kujawa et al., 2020), which aligns with past research and theory showing that young adults' political participation ebbs and flows depending on current political issues (Wray-Lake et al., 2019). Although some researchers have argued that emerging adulthood is a time of selfishness and narcissism (Twenge, 2013), countering research shows that many emerging adults in the recent generation of youth have been particularly aware and concerned with global citizenship and social equality (Arnett et al., 2013; Padilla-Walker & Nelson, 2017; Zogby, 2008). Accordingly, recent events have been all the more important to them and has often led to activism (Earl et al., 2017). In light of these trends and the current historical moment, more research on the developmental antecedents to civic engagement is needed.

A positive youth development framework posits that youth who are engaged in their communities will receive personal benefits in growth and development as well as contribute to the building of a strong democracy (Lerner, 2004). Youth and young adults can contribute to their communities in several ways, but interpersonal prosociality, volunteering, and political involvement surely represent some of the most tangible behaviors that youth and young adults can do to show active engagement and

contribution. Although levels of civic participation may be higher than usual currently (CIRCLE, 2020), historically youth and young adults have been less civically involved (particularly politically) than older Americans (Snell, 2010; Twenge et al., 2012; Wattenberg, 2015). Hence, I aimed to longitudinally investigate cognitive-motivational constructs that precede multiple kinds of civic engagement among emerging adults to better understand developmental processes that ultimately contribute to positive youth development and democratic ideals.

### **Relations of Hope and Civic Attitudes to Civic Engagement**

Although not all study hypotheses were supported, overall analyses showed that hope and civic attitudes may contribute to civic engagement, albeit in different ways. Hope positively related to interpersonal prosocial behavior, whereas civic attitudes positively related to volunteering and political engagement in statistical models. Although hope and civic attitudes may have theoretical and empirical overlap with one another ( $r=.40$ ), results showed that these cognitive-motivational constructs had distinct predictive power and that both may be important in moving emerging adults toward civic action. Interestingly, I did not find differences in prediction when I tested the two subcomponents of hope, agency and pathway thinking, separately in the primary path model. This finding supported hope as a holistic trait that included both agency and pathway thinking as valuable subcomponents that can propel individuals toward goal achievement in tandem.

Hope was a more salient predictor for interpersonal prosocial behavior. Although the positive relation between hope and prosocial behavior has been found among younger

adolescents (9- to 14-year-olds; Padilla-Walker et al., 2011), the association has not been studied longitudinally or in an emerging adult sample. The longitudinal nature of the findings presents evidence that higher levels of hope predict later helping behaviors across this developmental time period. Indeed, results showed that among emerging adults, the ability to cognitively envision and construct routes toward a better future and confidently pursue them may set the stage for increased helping behavior enacted toward others in immediate social circles.

Both agency and pathway thinking support interpersonal prosociality because hopeful emerging adults likely have more self-efficacy to leverage toward prosocial action (inherent to agency thinking), as well as a greater propensity to construct viable ideas toward helping others (pathway thinking). For example, if an emerging adult has a friend who is being mistreated in the peer group, higher hope may allow them to formulate strategies to defend the friend in future interactions (e.g., stand up for another's idea or explicate a different point of view), as well as lend a listening ear and comfort the harmed friend. Dire helping, which was included in the current measure, might also require quick planning combined with personal confidence that one can assist, which could describe hope. Emerging adults may encounter more opportunities to help others in dire circumstances because they are often more adventurous, in transit, as well as more physically capable than older adults (Arnett, 2007), making hope a valuable asset to emerging adults' interpersonal abilities. Further, the prosocial propensity to include others into new social circles is likely crucial to this time period because emerging adults are establishing relationships that will persist or advance their relational, educational, and career goals into the future. Hope can help progress personal goals by providing the

agentic confidence as well as the pathway planning skills needed to translate future possibilities into present action through interpersonal prosocial behaviors.

Hope's link to interpersonal prosociality is additionally supported by Eisenberg's heuristic model of prosocial action (Figure 3), which shows that a hierarchy of personal goals relevant to the specific situation can serve as a precursor to prosocial behavior. The motivational process of considering personal goals before helping another is aligned with hope theory, which first posits that the individual must envision the future they want before moving toward behavior. In emerging adulthood, individuals are generally interested in forming new relationships and situating themselves in more "adult" roles in new social settings. Emerging adulthood, particularly on college campuses, affords individuals new opportunities to form and maintain relationships with roommates, classmates, and romantic partners outside of parental influence. Additionally, many emerging adults are developing humanistic values and prosocial identities that prioritize generativity and other-oriented ideologies (Pratt et al., 2009), in addition to being robustly optimistic about the future in general (Arnett et al., 2019). All of these factors help explain why emerging adults who are high in hope may also show more interpersonal prosocial behavior. First, many emerging adults likely envision positive futures for themselves full of successful work relationships, friendships and a healthy romantic partnership. Being prosocial to those around them would certainly help in achieving those goals. Secondly, there are very personal dimensions to one's hopes as they are primarily concerned with the self, just as interpersonal prosocial behavior is often very personal and can be intimate (e.g., comforting behaviors). Thus, it holds that if one's personal hopes are centered on relational goals and positive current and future

relationships, interpersonal prosocial behavior among those that one is closest to may follow. Hopes for a kinder, more equitable future society likely also undergird this finding as emerging adults may consider their personal acts of relational kindness as a representation of their individual contribution toward lofty societal goals. As mentioned, results showed that agency and pathway thinking were highly correlated and did not have unique predictive power, meaning both agency and pathway thinking could help in defending, including, comforting, or assisting in a dire situation. Because both are valuable, future work should focus on the development of agency and pathway thinking and investigate how each can be bolstered in adolescence and emerging adulthood as a means of encouraging interpersonal prosociality and social cohesion.

Interestingly, hope did not significantly predict political behavior, and there was no apparent correlation between these constructs in my sample. A few implications of emerging adulthood are likely relevant to this finding. First, emerging adulthood is characterized by an “in-between” feeling, where individuals feel they are not adolescents, but are not adults either. Because this study employed data from young emerging adults, they may still feel closer to the “adolescent side” of the spectrum and not feel ready or required to be political. Or they may feel that they are too young and inexperienced for their voice to matter, so they do not engage. Second, a more tangible barrier to political action may be that many emerging adults lack transportation to off-campus political events or canvassing-type behaviors, which were included in the current conceptualization of political engagement. Third, if opportunities for political participation are not easily accessible, competing goals (e.g., social, educational) likely supersede political involvement aspirations, particularly in the busy and hyper-social



college atmosphere. One competing goal may be interpersonal prosociality, which was more prevalent in the current study than political behavior. Given the large social issues we are currently grappling with in the U.S., emerging adults may simply be turned off to the negativity, contention, and frustration with the political climate. Emerging adults may feel that doing their part to be helpful in their social circles is more manageable, in terms of increased opportunity and less personal cost, than mustering the mental and physical energy to engage in social and political movements and do that instead. Finally, it could simply be that there are other more important variables in determining volunteering and political behaviors such as affiliation with a particular charity, friend groups interests (e.g., new roommates prioritize charity work), and prior parental socialization, none of which was included in the current study. Additional emotional (e.g., empathy, moral outrage) and cognitive-motivational constructs may also hold more sway than hope when it comes to political participation.

For both volunteering and political behaviors, it appeared that one important cognitive-motivational construct was civic attitudes in the present study. Although, as expected, civic attitudes did not significantly predict interpersonal prosocial behavior, it did positively predict volunteering and political behavior. The relations made theoretical sense in multiple ways and are consistent with related work showing that attitudes precede behaviors, particularly in social contexts (e.g., racial and gender identities/attitudes predict social activism behavior (White, 2006), environmental attitudes predict environmental activism (Steele, 1996), achievement attitudes/expectations motivate school engagement (Levi et al., 2014)). Accordingly, it seems intuitive that those who are more civically involved would be those who first feel

obligation to engage in the larger community. Because civic attitudes are concerned with one feeling that they “should” help those in their community, it follows that those are the individuals who would seek out opportunities to act accordingly.

Notably, civic attitudes uniquely predicted volunteering behavior controlling for the impact of hope. Although the correlations between hope and volunteering were significant and in the positive direction, hope’s non-prediction of volunteering was likely due to civic attitudes being concurrently included in the statistical model. The finding that hope dropped out when civic attitudes was included in the model may hint that civic attitudes could serve as a mediator between hope and volunteering had these constructs been measured further apart. The positive correlations between hope and both civic attitudes and volunteering support this notion. Thus, although mediation was not found in the present investigation, the question of whether civic attitudes explains the relations between hope and later contribution remains open. Alternatively, time spent volunteering, although prosocial, may be considered less “personal” of a contribution, which may explain the non-relation with hope, once civic attitudes was controlled for. Indeed, time spent volunteering at an established charity organization, although certainly beneficial, may feel more removed from one’s personal goals to be a good friend or neighbor in immediate social circles, which may be more relevant to immediate hopes. Further, volunteering is likely done for a number of reasons, including exploration of a career path or because volunteering experience looks good on a resume. Motivations may not be all altruistic.

Although the current analyses potentially captured the predictive power of other-oriented attitudes on volunteering, future studies should take motivation into account

more explicitly. For example, hopes specific to education and career domains might predict volunteering more than the current general measure of hope. Future work might also investigate interactions between hope and moral values or on career aspirations on relations with prosocial behavior to parse out nuanced relations. Cost and type of volunteering might also matter, as an emerging adult who is volunteering to gain job experience may help with mundane tasks or non-relational work (e.g., data coding, survey collection) that is not concerned with the well-being of others or the community. Indeed, previous work on volunteering motivation has shown that there are numerous reasons why people volunteer including interest, curiosity, organizational climate, research experience, recognition, and many others (Carlo et al., 2005; Clary et al., 1998; Jennett et al., 2016, Schneider et al., 2013). Personality can also play a role, with those who are naturally more agreeable and extroverted enacting more prosocial behavior because they enjoy and excel at social interaction (Burke & Hall, 1986; Graziano & Eisenburg, 1997). Future work should take motivation and personality, how they interact with one another and potentially with hope, into greater consideration when predicting volunteering behavior. These constructs may also have implications for interventions because programs may be more successful for those with salient personality and motivational characteristics.

Civic attitudes were significantly positively related to community volunteering. This relation could be due to the tenant of civic attitudes that involves self-efficacy combined with other-oriented thinking. Indeed, empathy has been associated with volunteering behavior (Silke et al., 2018; Stiff et al., 1988), and civic attitudes assertion that one “should” care about their community relates strongly to the other-orientated

nature of empathic response. In particular, a sense of obligation to the poor and needy was included in the current measure of civic attitudes, which supports the connection of civic attitudes to other-oriented, empathic-type constructs. In contrast, Snyder's hope was more of a global measure of the ability to envision, construct, and pursue goals. Hope theory does not state that goals need to be specific to others, or to the poor and needy. Thus, the association between civic attitudes and volunteering made good sense upon deeper consideration of what civic attitudes might entail, especially in comparison to hope's broader conceptualization of agency and pathway thinking geared toward any goal. As mentioned, a future direction would be to more carefully consider the types of volunteer experiences to understand if empathic or altruistic motivations versus self-centered aspirations are more related to certain kinds of volunteer service. This goal could be met by asking participants more explicitly about their motives for volunteering.

Regarding political behaviors, higher levels of civic attitudes were associated with more political behavior. As political behavior is concerned with championing causes, policies, and candidates that center on better ideas for the future of society, it holds that those who feel an obligation to their society would also be more interested in seeking out political forums and engaging therein. Further, given the high cost of engaging in the intensive political climate, it could be that those emerging adults who are engaging politically feel an extra measure of obligation and report higher civic attitudes. As mentioned, civic attitudes also contain elements of self-efficacy and values. It may take a lot of confidence in oneself to engage politically, even more than to volunteer or help a friend, especially as an emerging adult who is just beginning to foray into formal citizenship. Thus, those with high confidence, combined with valuing the larger

community, may naturally be the emerging adults who are willing and able to engage in political spheres.

### **Stability in Hope and Civic Attitudes**

The first and third research questions in the present study were concerned with transactional relations between hope and civic attitudes. Indeed, I hypothesized that hope and civic attitudes might predict one another longitudinally, which in turn might lead to mediation of hope or civic attitudes between each variable and the outcomes of interest. Results showed that T1 and T2 hope and civic attitudes were highly correlated across time, and when included in the same models, T1 constructs predicted T2 constructs more strongly than hope and civic attitudes predicted one another. This finding is what ultimately led me to collapse T1 and T2 constructs into single variables. However, this finding is interesting in that it evidences rank-order stability in both hope and civic attitudes over time.

In the hope literature, there is evidence that hope is stable across adolescence (Ciarrochi et al., 2015; Gallup, 2015). This finding lends itself to the importance of imbuing hope in early adolescence because it seems to persist into much later development. Although hope may be taught and learned later in development, the current study shows that perhaps hope is not being emphasized enough in later adolescence or at the transition to adulthood. Although it could be that I simply did not measure these constructs far enough apart in development to get a clear picture of change or growth in hope, a pattern of stability emerged in the current results. Interestingly, hope interventions on college campuses have shown success in the past (Curry et al., 1999;

Feldman & Dreher, 2012), as have hope-promoting curriculums in junior highs and high schools (Marques et al., 2011; Pedrotti et al., 2000). However, the current findings extend the research that shows stability in hope in adolescence by showing additional stability in emerging adulthood. Findings invite future study into the inception of hope in earlier childhood considering the evidence for stability across adolescent development. Future work should also investigate mean-level continuity, intra-individual growth and change in hope to capture true hope development across time and context.

Some research supports consistency in civic attitudes across adolescence and emerging adulthood. For example, Moely and Ilustre (2013) found that mean-level scores on attitudes toward public service requirements at a university remained positive among emerging adults across two years, and interest in civic engagement at first enrollment seemed to predict later civic attitudes. Hooghe and Wilkenfield (2008) additionally found that political attitudes related to immigration and voting were stable from 14-years old to 30-years old, showing that attitudes were well-established early in adolescent development and persisted through adulthood. Although emerging adulthood may present opportunities to reevaluate priorities and consider new social ideologies, it appears that individual differences in attitudes geared toward social contribution/obligation may be fairly established by this point. In light of current and past findings, a greater emphasis on civic obligations in middle and high school government classes may have implications for future prosocial and political engagement. Additionally, future work may focus on how civic attitudes are socialized at home or discussed in organizations (e.g., youth groups, sports clubs) that hold greater weight earlier in adolescent development.

Interestingly, no transactional relations, and therefore no mediating processes, were evidenced in present findings. This was likely due to the strength of stability paths between T1 and T2 hope and civic attitudes. Although related, hope and civic attitudes seemed to lend momentum to their own perpetuation rather than predict one another. This result may have been seen because constructs were measured too temporally close to one another. Alternatively, hope's focus on one's future may be too self-oriented and general to predict specific other-oriented civic attitudes. Accordingly, civic attitudes focus outside the self may be too removed from individual hopes for the future to predict future hope, especially in the self-centered time of emerging adulthood. More research is certainly needed in this area to better understand the development of hope and civic attitudes, particularly as it seems that both constructs showed stability, yet the transitional time of emerging adulthood presents opportunities to intervene on cognitive-motivational structures. Future work should look at the development of each of these constructs from childhood on, as Lerner (2004) posits that character development starts young. Further, it stands that there are likely many other socialization and contextual factors that contribute to hope and civic attitude development that are presently unknown.

### **The Lack of Moderation by Effortful Control.**

Perhaps the most unexpected finding in the present study was the lack of moderation by effortful control in the current analyses. I fully expected that effortful control, and the subcomponent of activation control particularly, would positively predict each outcome and would potentially moderate the relations between hope and civic attitudes and political behavior. This was not the case, and puzzlingly, many correlations between effortful control variables and the three outcomes were negative, although

effortful control was positively correlated with hope and civic attitudes. Additionally, contrary to robustly supported past findings (Alessandri et al., 2014; Kochanska et al., 2000; Luengo Kanacri et al., 2013), males had higher effortful control scores than females in the current sample. And although moderations by effortful control and inhibitory control were insignificant, there was a consistent negative direct relation found between activation control and political behavior in the moderation analyses. These findings might be explained in a couple of ways. First, regarding the sample, participants were mostly female (64-71%), and although the males in the sample came from diverse majors across the university, all student participants were recruited from social science classes in the first semester of college. It could be that males who took a social sciences class in their first semester of college naturally had higher regulation than those that did not, which was reflected in the comparatively higher means. Future work should revisit these relations to verify if inconsistencies are found with past literature, or if this sample represented an outlier sample.

Regarding the unexpected, negative relation between activation control and political behavior, it could be that given the volatile and polarized nature of the current political climate, students who are highly regulated to complete the tasks they set out to do are simply putting their energies into pursuits they feel are more worthy of their efforts. Indeed, multiple news outlets as well as the APA annual stress survey (Canady, 2019) reported that the lead-up to the 2020 election was one of the most hostile and emotionally taxing political periods in American history (Gambrell & Kolson Hurely, 2020; Shapiro, 2020). Although some individuals were more emboldened to make a difference through active engagement in politics, perhaps many highly-regulated



emerging adults were “turned-off” by the contentious atmosphere of the time and turned away because it did not feel worth the emotional effort. Although I do not rule out the possibility that this was an outlier sample of sorts, I also believe that the polarized political climate, combined with emerging adults’ noted tendencies to avoid in-person conflict (Ishii, 2010; James-Kangal & Whitton, 2019) and distrust the government in general (Snell, 2010), might be contributing to this finding. If emerging adults are not wanting to bother others with their political beliefs, or do not wish to consume negatively valanced political news, or attend raucous political rallies in the pursuit of more peaceful processes, it could be that their regulation is actually dissuading them from participating.

Other explanations could involve measurement and context. It could simply be that highly regulated individuals chose to funnel their efforts into political behaviors that I did not measure. For example, protests and social media platforms were not mentioned in the measure, which likely represent the greatest ways that emerging adults are engaging. Further, although the current political behavior measure attempted to capture political debate, news consumption, voting, rallies, and campaigning, it could be that less regulation is needed to participate in some of these particular activities, particularly if the behavior is passive (listening to news or candidate) or if friends or parents take an emerging adult along with them to some of these kinds of events. Hours spent working a job were not measured in this study. It could be that students who held a job had less time to be political engaged or volunteer, despite high hope, civic attitudes, and effortful control. Indeed, those that work may have more regulation, but may funnel their limited regulatory efforts toward managing employee obligations. Future work should measure and control for work status at a minimum. Lastly, I considered that political affiliation or

ideology might moderate the relations as it could be that being extreme one way or the other changed results due to a hyper-focused commitment to one party or ideology that would translate into higher scores on the current measure. However, results did not prove this to be the case.

Another implication of the non-significant and negative findings, in light of the significant positive paths between civic attitudes and volunteering and political behavior, is that perhaps effortful control is not as necessary to the direct relation as I previously hypothesized. Indeed, it could be that having a civic attitude, a sense of obligation to one's community and larger society, is enough of a motivational force for those with high civic attitudes that emerging adults do not need the added weight of effortful control to engage. Indeed, it could be that these two constructs work with and/or against each other in complex, multidimensional ways that are in need of future study. Again, it could also be that this is truly a unique time in American history where emerging adults feel a strong obligation to help others and contribute, but do not see traditional political processes as the best ways to do.

### **Limitations and Future Directions**

Although this study fills gaps in the extant literature and contributes to our knowledge on positive youth development, it is not without limitation. The primary limitation was the small sample size, which made results ungeneralizable to larger populations. In addition, the sample was predominately female, which may have skewed results and limited the ability to generalize to general emerging adult populations. Further, the emerging adults in the present sample were all enrolled in a large, public

university in the American southwest. Even at a traditional 4-year university, the student body usually includes transfer and non-traditional students that may have different civic views and behaviors compared to the general student body because they are older, more experienced, or have extenuating circumstances that may influence civic engagement (e.g., families, full-time jobs, disabilities). Results may be different among emerging adults who do not go to college, attend community college, or attend small private universities, particularly as political ideology and opportunities for volunteering may vary widely across these contexts. The same could be said for emerging adults in more rural areas, or emerging adults in areas of the country where the Black Lives Matter movement and other social issues were more salient during the sampling time frame (e.g., inner-city, the South). We had very few Black participants in this sample. Considering that the predominate social issue of the time surrounds racial equity, results may have varied widely in a sample that was more representative of BIPOC emerging adults. Finally, post hoc analyses attempted to parse out findings by political ideology or political party affiliation; however, sample sizes were so small that analyses could not adequately test relations. Future research should seek to be more representative of all emerging adults and include political ideology or party to better understand how different moderators implicate relations.

Additional limitations were present in the variable measurement. For example, the volunteering variable simply asked students to report on how many hours they volunteered in a typical week. Although this kind of time measure has been used to account for volunteering in past studies (Hart et al., 2007; Lopez & Brown, 2006), future researchers could gather much more information about the *type* of community service

emerging adults were doing to illuminate and nuance the relations between intrapersonal constructs and volunteering. Some volunteer work may be much more intensive and have greater personal cost to the individual. For example, sorting food at a donation center for an hour might represent a qualitatively different experience than volunteering at a refugee center or personally mentoring youth through a Boys and Girls club for the same amount of time. Motives for volunteering also likely come into play here and should therefore be measured. Because personal cost matters in determining prediction of prosocial behavior (Padilla-Walker & Fraser, 2014), looking at volunteering more closely may yield a more complete picture of relations. Data on volunteering for the current study were collected prior to the start of widespread COVID-19 restrictions on community gatherings and interaction in the present state. However, COVID-19 restrictions were already in effect in other countries and concerns about the virus may have influenced some students' willingness to spend time volunteering.

Personal cost also likely comes in to play for civic attitudes, community volunteering, and political engagement. Indeed, for many minority and marginalized groups, attitudes regarding civic and political engagement may be implicated by feelings and experiences of discrimination. For example, Black Americans may not feel as strong of an obligation to engage in civil society given the unprecedented amount of systemic racism and individual prejudice that Blacks have experienced throughout U.S. history. The same might be said for other minority groups. Similarly, interpersonal prosocial behavior, community volunteering, and political engagement may involve spaces where marginalized individuals perceive and experience threats to their physical, emotional, and mental safety. It could also be that certain racial and ethnic groups of American citizens

feel safe engaging in prosocial and civic engagement in certain neighborhoods or with certain organizations but not others. Future work should contextualize prosocial and civic engagement with a specific eye toward community context, in addition to system-level discrimination and marginalization.

Political behavior could also be measured in a number of ways, and perhaps the current measure did not adequately capture the types of political engagement that emerging adults are primarily participating in. For example, the current measure asked about attending rallies or sharing political beliefs online in chat rooms or blogs, but it is much more likely that emerging adults are attending social activism demonstrations (e.g., Black Lives Matter marches) and sharing political thoughts on social media (e.g., facebook, tiktok, Instagram), which they may not have reported based on the wording of the measure items. Indeed, young adults' social activism was not included in this study, which marks a major limitation because many young adults are passionate about activist work, and also because historically, social activism has been key to bringing about actual social change. Although studying civic engagement in early emerging adulthood is a strength of the study, it would also be illuminating to study engagement in prosocial and political processes later in emerging adulthood when individuals have more independence and may have more established identities and views. More time since leaving home and more experience "adulting" may lead to different outcomes in the present relations. Finally, although the current effortful control measure (Rothbart & Bates, 2006) is an established and robustly validated scale, scores in this sample were non-typical. Having another measure of self-regulation may have been helpful in parsing this construct apart. Further, the attentional control subscale of the Rothbart measure was not included in the

current survey. Averaging attentional, activation, and inhibitory control together may have yielded different result than just having the latter two subscales.

Other major limitations of the study include a multiplicity of variables that were not included in the current analyses, but that may be relevant to interpersonal prosocial behavior, volunteering, and political engagement. Although hope and civic attitudes were relevant to these outcomes in present results, other interpersonal constructs such as self-esteem, positive affect, IQ, and empathy may have held more or additional weight for the outcomes of interest. Further, the current study did not include external factors such as parental socialization, peer influence, media exposure or other outside influences that may be related to the present outcomes. Future research should certainly investigate these other factors, potentially concurrently with one another, in determining salient factors relative to emerging adults' civic engagement.

From a developmental lens, the current study would have also benefitted from a longer sampling timeframe to get at longitudinal growth in hope and civic attitudes. Having data from early adolescence and across adolescence would have allowed me to get a richer picture of how these constructs may grow together and set the stage for civic engagement in early adulthood. Likewise, having data on actual civic behaviors beyond the college years would also be helpful in knowing if hope and civic attitudes in emerging adulthood predict a trajectory of civic involvement across adulthood, as has been theoretically hypothesized. Another limitation was that measures of hope and civic attitudes at T3 (concurrent with outcomes) were not included in the current analyses, but it is likely that the close timeframe may have precluded prediction of previous hope and

civic attitudes to the outcomes since hope and civic attitude continuity was high at T1 and T2.

Timing of data collection may also be salient in regards to election cycles. Although a strength of the current study was that data was collected during an election year, the T3 spring data collection occurred before the Democratic party had an official presidential candidate in 2020. Thus, much of the major campaigning that takes place in a presidential election had not yet begun. Primaries were underway; however, it could be that many emerging adults did not have enough interest or social resources to get significantly involved in a primary race. Considering that a presidential race attracts far more media interest and general attention from the populace, I may have failed to capture political engagement because of data collection timing. Perhaps a better approach would include multiple data collection time points with some being closer to the election (Fall). Future work might also consider the collection of post-election data to better understand how hope and civic attitudes are related to actual voting patterns and political behaviors immediately surrounding the election.

In addition to more longitudinal data, results of this study may look different at a different time in American history. Because the present data was collected in a socially and politically tumultuous time, it yields unique and valuable findings that are specific to the time. However, they may not be generalizable to all cohorts of emerging adults. Future research should investigate these relations at multiple periods of history, including election and non-election years, to better understand how civic attitudes and behaviors might shift and revolve around the relevant social issues of the time. If consistent patterns

are apparent, we may have more confidence in saying how hope and civic attitudes are related to civic engagement in emerging adulthood generally.

Finally, a great deal more work is needed on emerging adults' cognitions and patterns surrounding civic engagement generally. Interestingly, interpersonal prosocial behavior, volunteering, and political engagement were not significantly correlated with one another in the current study. This finding corroborates researchers' (Andolina et al., 2002; Flanagan & Faison, 2001) past assertions that emerging adults are thinking about civic engagement differently than past generations have, with the current generation not equating volunteer service and political behavior as related constructs. Future research could parse apart why emerging adults are thinking this way and what socialization (e.g., parents, school, media) factors may be influencing the divorce of these constructs in emerging adults' minds, despite traditional thinking and research lumping them together in the past. This data may help elucidate targeted ways in which civic participation might be bolstered more efficiently.

## **Conclusion**

Despite these limitations, the current study still holds value in understanding the relations between interpersonal cognitive-motivational constructs and civic engagement in emerging adulthood. As previously stated, emerging adulthood is an apt time to investigate these relations considering that it represents the period of the life course where young people are expected to engage in American civil society more formally as responsible, active citizens. Past trends have shown that many emerging adults are actively disengaging right when the opposite pattern should be occurring. The current



study supports the development of hope and civic attitudes in adolescence and emerging adulthood as potentially important precursors to civic engagement. Each of these constructs, hope in particular, represent malleable characteristics that might be intervened on in adolescence or early adulthood in hopes of increasing civic engagement. Although hope development may lead to more interpersonal helping of friends and neighbors, whereas civic attitudes may be more important for volunteering and political behavior, each is valuable and needed to improve civil societies and support the future of democracy. The present study evidenced active engagement by many young adults, with high scores on hope and interpersonal prosocial behavior especially. These trends certainly support Lerner's (2004) supposition that youth represent a valuable asset to any society, and that positive youth development is both possible and promising. Future empirical and applied work will hopefully build on these findings to discover how development of each construct can contribute to more active engagement across time and contexts.

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APPENDIX A  
TABLES

**Table 1**

*Correlations between all study variables and descriptive data including mean, SD, min/max, median, skew, and kurtosis.*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. T1 Hope	1													
2. T1 Agency	.95***	1												
3. T1 Pathway	.94***	.80***	1											
4. T2 Hope	.61***	.60***	.57***	1										
5. T2 Agency	.61***	.63***	.53***	.95***	1									
6. T2 Pathway	.54***	.49***	.54***	.94***	.80***	1								
7. T1 Civic Attitudes	.38***	.34***	.38***	.16	.16	.14	1							
8. T2 Civic Attitudes	.23*	.21+	.22+	.28**	.26*	.27**	.54***	1						
9. T1/T2 Effortful Control	.41***	.43***	.34***	.29**	.31**	.25*	.13+	.08	1					
10. T1/T2 Activation Control	.45***	.48***	.38***	.34**	.36**	.28**	.14+	.03	.88***	1				
11. T1/T2 Inhibitory Control	.23**	.25***	.19**	.19+	.19+	.17	.06	.07	.83***	.46***	1			
12. T3 Prosocial Behavior	.32**	.27*	.32**	.30*	.28*	.29*	.08	.25+	.01	.04	-.02	1		
13. T3 Community Volunteering	.11	.10	.09	.28*	.27*	.26+	.28*	.01	-.12	.00	-.22+	.13	1	
14. T3 Political Behavior	-.05	-.14	.04	.02	-.10	.15	.25*	.27*	-.03	-.21+	.19	.09	.16	1
Mean	6.50	6.56	6.44	6.67	6.68	6.66	3.74	3.74	4.67	4.82	4.51	4.24	3.37	2.63
Standard Deviation	1.16	1.26	1.20	0.98	1.07	1.00	0.93	0.89	0.78	0.91	0.91	0.60	4.49	0.86
Minimum/	1.00/	1.00/	1.00/	3.50/	3.25/	3.75/	1.00/	1.75/	2.15/	2.14/	1.50/	2.67/	0.00/	1.00/
Maximum	8.00	8.00	8.00	8.00	8.00	8.00	5.00	5.00	6.54	7.00	6.83	5.00	20.00	5.00
Median	6.75	7.00	6.63	6.81	7.00	6.75	3.75	4.00	4.65	4.85	4.50	4.67	1.00	4.86
Skew	-1.02	-1.08	-0.93	-0.81	-0.97	-0.71	-0.68	-0.31	-0.11	-0.19	-0.02	-0.64	1.66	0.23
Kurtosis	1.82	1.36	1.49	0.66	0.76	0.37	0.43	-0.78	0.01	-0.06	0.16	-0.39	2.18	-0.26

*Note.* \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$ , + $p < .10$

**Table 2***Correlations between all control variables and major study variables.*

Variable	1.	2.	3.	4.	5.
1. Gender	1				
2. Pell-grant Eligibility	.16**	1			
3. First Generation Student Status	.12*	.43***	1		
4. Ethnicity (white/non-white)	-.03	-.15**	-.09+	1	
5. Social Desirability	.12	.14	-.04	-.01	1
6.T1 Hope	-.03	.08	-.03	.06	.38**
7.T2 Hope	-.11	.01	-.10	.14	-.01
8.T1 Civic Attitudes	.10	.19**	.06	-.12+	.10
9.T2 Civic Attitudes	.09	.10	-.06	-.09	.10
10. Effortful Control	-.13+	.07	.01	.04	.14
11. Activation Control	-.09	.04	-.06	.01	.15
12. Inhibitory Control	-.12+	.08	.08	.05	.05
13. Prosocial Behavior	.16	.07	-.05	.15	.24*
14. Volunteering	-.05	-.16	-.02	.10	-.07
15. Political Behavior	.02	-.04	.09	.01	-.13

*Note. \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$ , + $p < .10$ ; Gender was coded 0=male, 1=female; Pell-grant eligibility was coded 0=non-eligible, 1=eligible; Financial Need Level was coded 1=low, 2=moderate 3=high, 4=very high; First Generation Student Status was coded 0=non-first gen, 1=first gen; Ethnicity was coded 0=white, 1=non-white. Correlations between all major study variables (items 6-16) can be seen in table.*

**Table 3**

*Estimates for three multiple regression models testing moderation by effortful control (RQ4). Models included hope as the first predictor, effortful control, activation control, or inhibitory control as the second predictor and the interaction term as the third predictor (e.g., hope by EC). Controls were gender and social desirability.*

Predictor	Outcome: Interpersonal <b>Prosocial Behavior</b>	Outcome: Community <b>Volunteering</b>	Outcome: <b>Political Behavior</b>
<u>Model 1: Hope x Effortful Control</u>			
Hope	B (S.E)/ $\beta$ (S.D) = <b>.23 (.09)*/.43 (.15)**</b>	B (S.E)/ $\beta$ (S.D) = 1.25 (.65)+/.31 (.15)*	B (S.E)/ $\beta$ (S.D) = -.05 (.14)/-.06 (.18)
Effortful Control	-.12 (.13)/-.15 (.16)	-1.41 (.83)+/-.24 (.14)+	-.03 (.22)/-.03 (.20)
Hope x EC	.03 (.15)/.05 (.21)	.12 (.85)/.02 (.17)	.02 (.23)/.02 (.23)
Gender	.21 (.14)/.16 (.11)	-.52 (1.07)/-.06 (.11)	.03 (.20)/.02 (.11)
Social Desirability	.36 (.24)/.15 (.10)	N/A	N/A
<u>Model 2: Hope x Activation Control</u>			
Hope	<b>.28 (.09)**/.50 (.15)**</b>	1.12(.67)+/.28 (.15)+	.10(.14)/.12(.17)
Activation Control	-.16(.11)/-.24 (.15)	-.66(.63)/-.13 (.12)	<b>-.31 (.15)*/-.33 (.15)*</b>
Hope x AC	.14(.14)/.25 (.24)	.56(.73)/.14 (.18)	.03 (.16)/.04 (.19)
Gender	.22(.14)/.17 (.10)+	-.36(1.06)/-.04 (.11)	.02 (.20)/.01 (.11)
Social Desirability	.31(.25)/.12 (.09)	N/A	N/A
<u>Model 3: Hope x Inhibitory Control</u>			
Hope	<b>.20 (.08)*/.36 (.14)*</b>	.95(.56)+/.24 (.13)+	-.08(.12)/-.10 (.15)
Inhibitory Control	-.03(.09)/-.04 (.13)	-1.03(.67)/-.21 (.13)	.16 (.15)/.17 (.16)
Hope x IC	-.04(.09)/-.06 (.15)	-.35(.68)/-.08 (.15)	.05 (.16)/.06 (.19)
Gender	.19(.14)/.15 (.11)	-.65(1.06)/-.07 (.11)	.07 (.20)/.04 (.11)
Social Desirability	.38(.25)/.15 (.10)	N/A	N/A

*Note. \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$ , + $p < .10$ ; B=unstandardized weight (SE),  $\beta$ =standardized beta (SD). EC= effortful control, AC= activation control, IC=inhibitory control. Significant paths are bolded.*

**Table 4**

*Estimates for three multiple regression models testing moderation by effortful control (RQ4). Models included civic attitudes as the first predictor, effortful control, activation control, or inhibitory control as the second predictor and the interaction term as the third predictor (e.g., hope by EC). Controls were gender, Pell-grant eligibility and social desirability.*

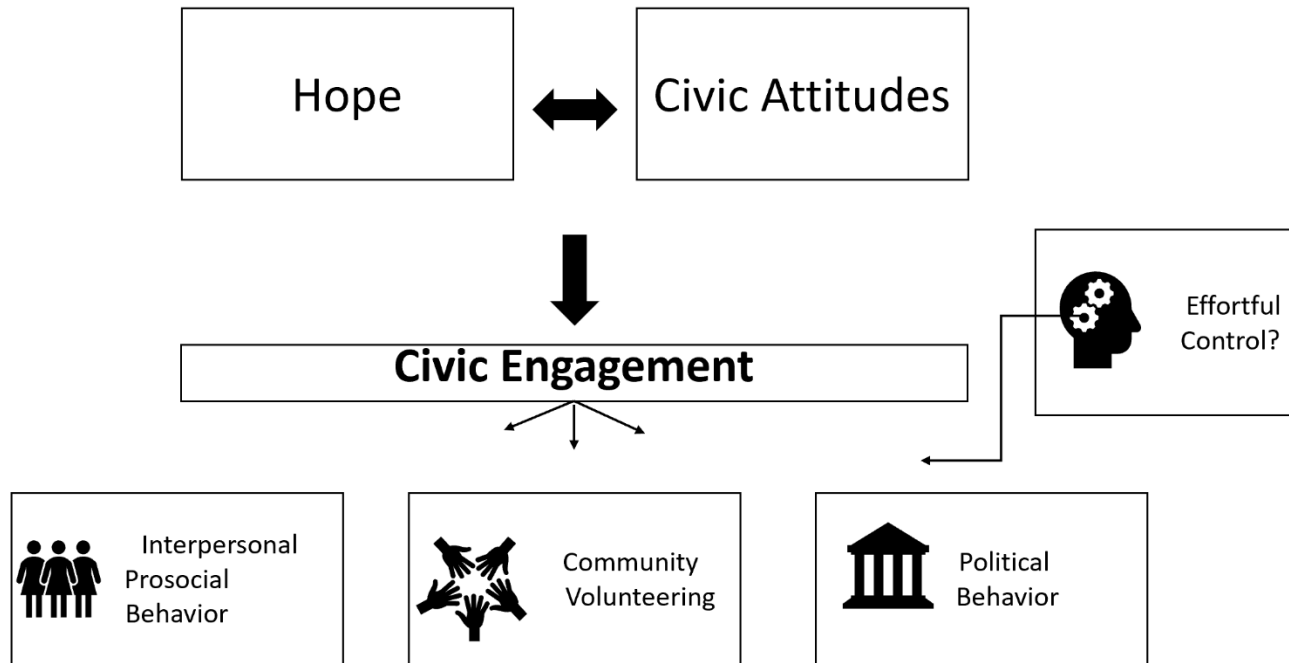
Predictor	Outcome: Interpersonal <b>Prosocial Behavior</b>	Outcome: Community <b>Volunteering</b>	Outcome: <b>Political Behavior</b>
<u>Model: Civic Attitudes x Effortful Control</u>			
Civic Attitudes	.11 (.08)/.17(.12)	<b>1.41 (.57)*/.27 (.10)**</b>	<b>.30 (.11)**/.31 (.11)**</b>
Effortful Control	.02 (.11)/.02 (.15)	-.65 (.74)/-.11 (.13)	-.11 (.15)/-.10 (.14)
Civic Att. x EC	.05 (.13)/.06 (.16)	-.84 (.83)/-.13 (.13)	-.04 (.18)/-.03 (.15)
Gender	.18 (.14)/.14 (.11)	-.27 (1.01)/-.03 (.11)	.02 (.19)/.01 (.11)
Pell-Grant Elig.	.01 (.13)/.01 (.10)	-1.78 (1.00)+/-.18 (.10)+	-.13 (.19)/-.07 (.10)
Social Desirability	.55 (.25)*/.23 (.10)*	N/A	N/A
<u>Model: Civic Attitudes x Activation Control</u>			
Civic Attitudes	.12(.09)/.17 (.12)	<b>1.18(.54)/.23(.09)*</b>	<b>.34(.12)**/.35(.11)**</b>
Activation Control	.04(.10)/.06 (.14)	-0.01 (.63)/.00 (.12)	<b>-.32(.11)**/-.33(.11)*</b>
Civic Att. x AC	.04(.17)/.07 (.23)	-.79 (.78)/-.16 (.13)	.04 (.14)/.04 (.13)
Gender	.18(.14)/.14 (.11)	-.16 (1.10)/-.02 (.12)	.01 (.20)/.01 (.11)
Pell-Grant Elig.	.02(.14)/.01 (.11)	-1.75 (.94)+/-.18 (.09)*	-.15 (.21)/-.08 (.11)
Social Desirability	.53(.26)*/.22 (.10)*	N/A	N/A
<u>Model: Civic Attitudes x Inhibitory Control</u>			
Civic Attitudes	.10(.10)/.15 (.14)	<b>1.44(.51)**/.28(.09)**</b>	<b>.31(.12)**/.31 (.11)**</b>
Inhibitory Control	-.03(.09)/-.04 (.13)	-.99 (.63)/-.20 (.12)	.18(.12)/.18 (.12)
Civic Att. x IC	.07 (.12)/.08 (.15)	-.21 (.61)/-.04 (.10)	-.15 (.18)/-.13 (.16)
Gender	.17(.14)/.13 (.11)	-.33 (1.12)/-.04 (.12)	.07(.21)/.04 (.12)
Pell-Grant Elig.	.01(.15)/.01 (.11)	-1.69 (.90)+/-.17 (.08)*	-.12 (.21)/-.07 (.11)
Social Desirability	.60(.27)*/.24 (.10)*	N/A	N/A

*Note. \*\*\*p<.001, \*\*p<.01, \*p<.05, +p<.10; B=unstandardized weight (SE), β=standardized beta (SD). EC= effortful control, AC= activation control, IC=inhibitory control. Significant paths are bolded.*

APPENDIX B  
FIGURES

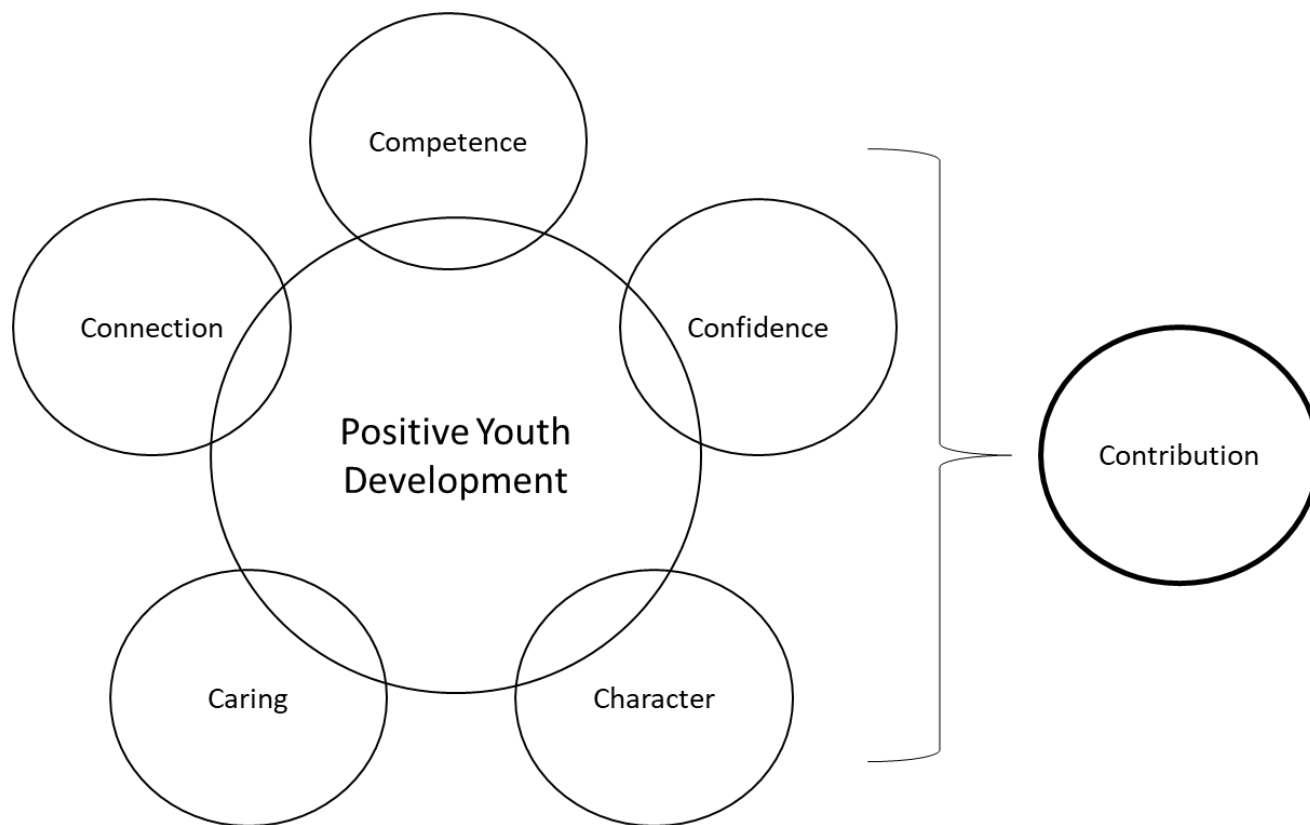
**Figure 1**

*Theoretical Depiction of Transactional Associations between hope and civic attitudes predicting prosocial behavior, time volunteering, and political behavior moderated by effortful control. Activation and Inhibitory control will be tested alone in addition to testing effortful control (inhibitory and activation control combined)*



**Figure 2**

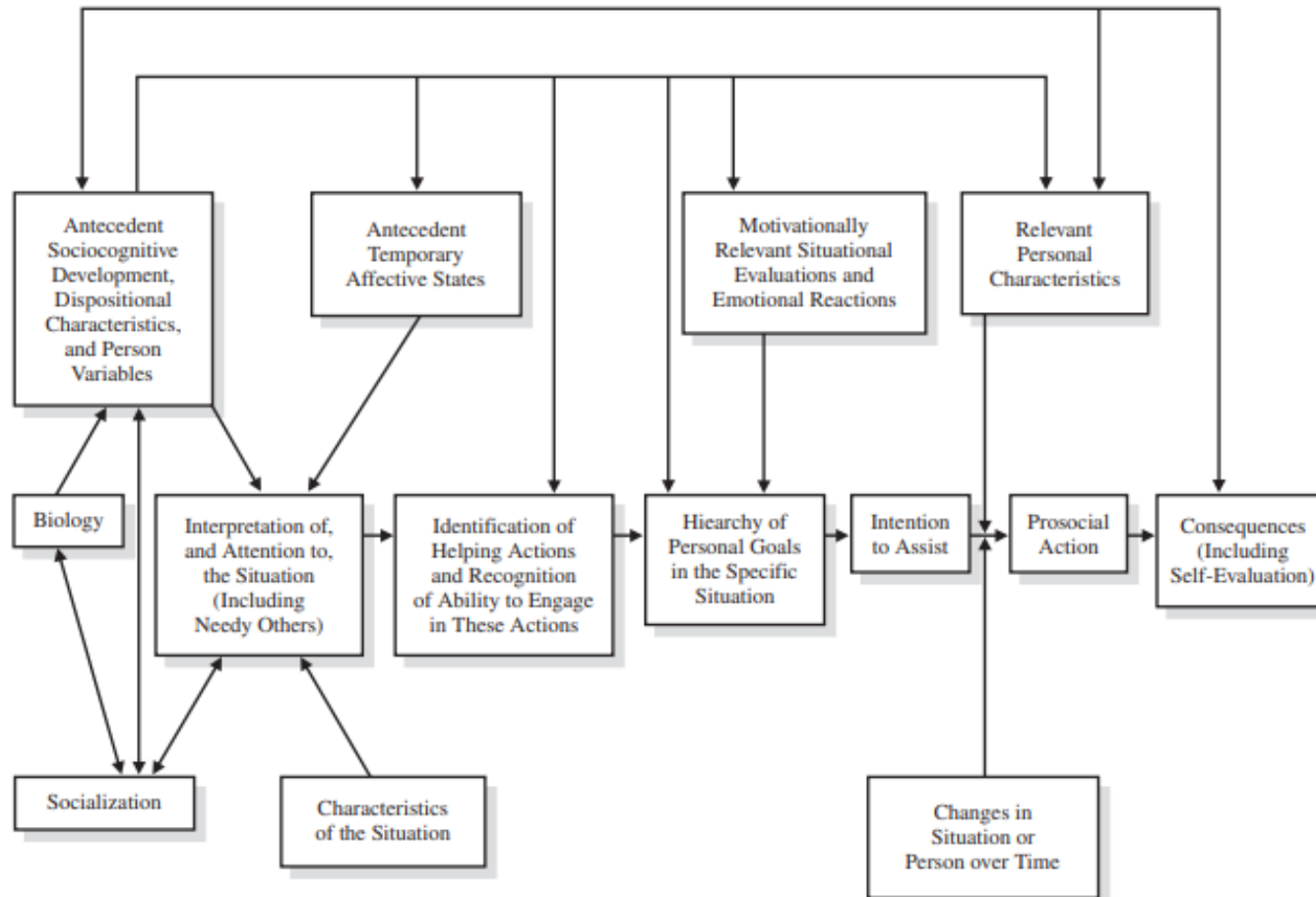
*Heuristic model depicting the relations between the 6 C's of Positive Youth Development, specifically illustrating the rise of "contribution" out of the other 5 C's (Lerner, 2002).*





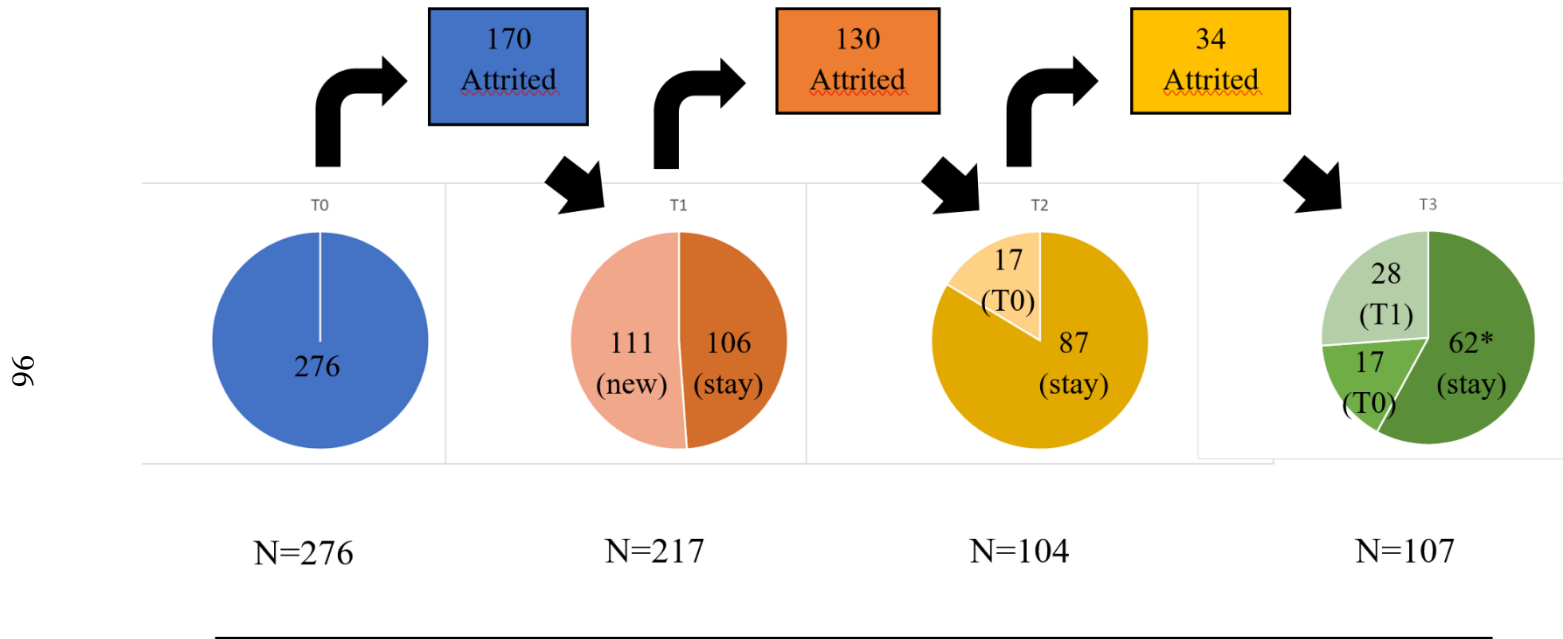
**Figure 3**

*Heuristic model of prosocial behavior (Eisenberg et al., 2006, p.699)*



**Figure 4**

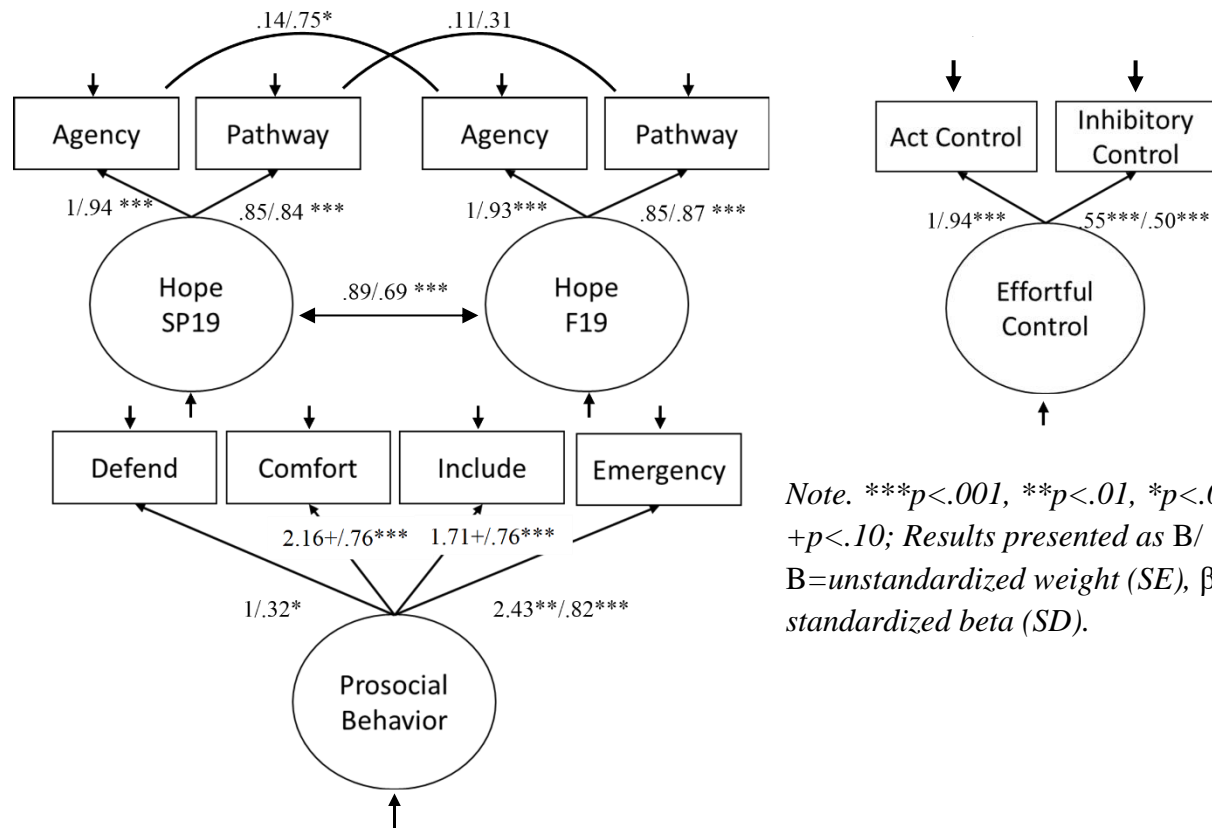
*Attrition map showing number of participants at each wave of the study.*



*Note. (T0) and (T1) indicate that participants came back into the study from T0 or T1. \*9 students who stayed from T2 to T3 did not have data at T1, resulting in 53 students with complete data T1, T2, T3. A total of 387 participated in the larger study at one or more time points.*

**Figure 5**

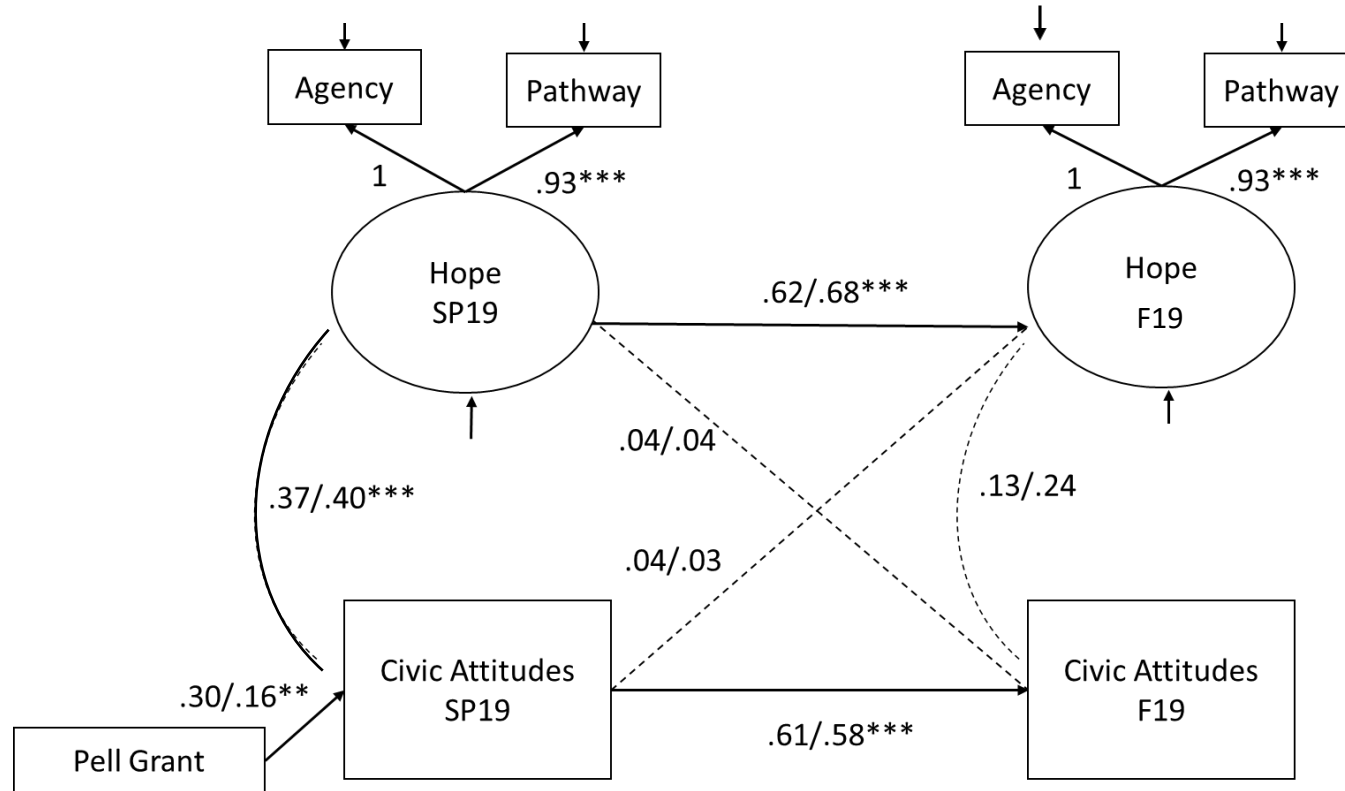
Measurement model for T1 and T2 hope, interpersonal prosocial behavior, and effortful control latent variables. Loadings are unstandardized B/standardized  $\beta$ .



Note.  $^{***}p < .001$ ,  $^{**}p < .01$ ,  $^*p < .05$ ,  $+p < .10$ ; Results presented as B/  $\beta$ , where B=unstandardized weight (SE),  $\beta$ =standardized beta (SD).

**Figure 6**

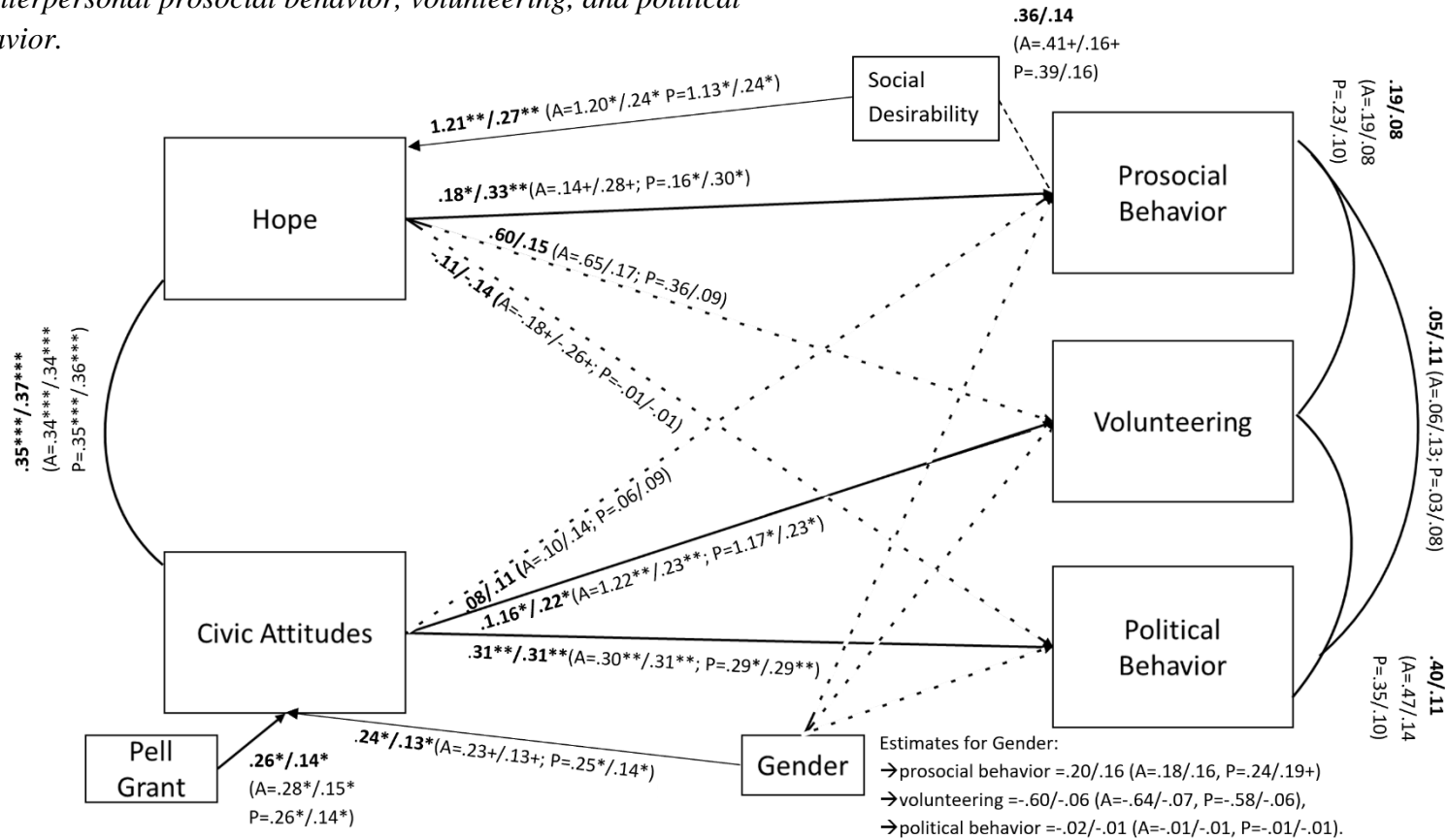
Structural equation model testing transactional relations between hope and civic attitudes controlling for stability in constructs. Pell-grant eligibility was included as a control variable for civic attitudes at T1. Residual variances not shown for parsimony.



Note. \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$ , + $p < .10$ ; Results presented as  $B/\beta$ , where  $B$ =unstandardized weight (SE),  $\beta$ =standardized beta (SD).

**Figure 7**

*Path model with hope (agency and pathway thinking) and civic attitudes on interpersonal prosocial behavior, volunteering, and political behavior.*



*Note. \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$ , + $p < .10$ ; B/ $\beta$  for hope were bolded. Post-hoc analyses included estimation of agency and pathway thinking separately in additional models. Resulting parameter estimates are indicated in the figure in parentheses (A = model using agency thinking, P = model using pathway thinking).*