Temporal Associations between Character Strengths and Civic Action: A Daily Diary Study

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Abstract

Positive youth development (PYD) models propose that character is an important antecedent to civic action, yet few studies have examined temporal links between character strengths and civic behavior. Using a daily diary design, this study tests temporal associations between character and civic behavior during the 2018 US midterm elections. Participants ($N=235$, $M_{age}=19.43$) completed seven daily assessments of three character strengths (purpose, future-mindedness, gratitude) and four types of civic behavior (volunteering/helping behavior, environmentalism, standard political behavior, social movement behavior). There were between-person weekly effects and within-person daily effects for most character strengths, volunteering/helping behavior, and environmentalism. Higher daily purpose was associated with greater daily standard political and social movement involvement. Greater social movement involvement predicted higher next-day purpose and future-mindedness. Greater volunteering/helping behavior predicted higher next-day future-mindedness. Higher purpose predicted greater next-day standard political and social movement involvement. Findings support PYD models by documenting nuanced associations between character and civic action.

Keywords: Civic engagement; character; future-mindedness; gratitude; purpose; daily diary design; positive youth development

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Active participation in civic life through volunteering, helping others, environmentalism, and political involvement is vital for community and democratic health (Flanagan, & Bundick, 2011). Recent advances in positive psychology have highlighted that civic engagement also provides individuals with personal benefits including greater health and well-being (e.g., Wray-Lake, DeHaan, Shubert, & Ryan, 2017). Understanding individual characteristics that undergird civic engagement may therefore simultaneously improve the lives of young people and their community. Theory and research on positive youth development proposes that character strengths—defined as virtuous personal attributes and aptitudes that enable or promote well-being—are a central component of positive development that motivate civic action (Lerner & Schmid Callina, 2014; Peterson & Seligman, 2004). Youth recognize the relevance of certain character strengths, including purpose, future-mindedness, and gratitude, for civic life (Metzger, Syvertsen, Oosterhoff, Babskie, & Wray-Lake, 2016). Some research has shown that these character strengths are cross-sectionally associated with higher civic engagement (Malin, Ballard, & Damon, 2015; Metzger et al., 2018). However, less is known about how purpose, future-mindedness, and gratitude predict civic behavior or whether civic activities serve as a context that promote character strengths. Daily diary research designs may be especially useful to examine associations between civic behavior and character given the ability to examine bi-directional within-person processes over time. The current research uses a daily diary design to test temporal associations between character strengths (purpose, future-mindedness, gratitude) and civic action (volunteering/helping behavior, environmentalism, standard political behavior, social movement behavior) over the course of one week.

Civic Engagement and Positive Youth Development

Civic action encompasses a broad range of behaviors that concern the common good (Wray-Lake, Metzger, Syvertsen, 2017). Civic activities commonly include prosocial contributions to society through formal volunteering or informal helping behavior and environmentalism (Wray-Lake et al., 2017). Civic activities may also encompass different forms of political participation (Oosterhoff & Metzger, 2016), including both standard types of political involvement (i.e., those that seek to uphold the political system such as voting or discussing politics) and social movement forms of political behavior (i.e., those that seek to change the political system such as protesting or boycotting). Volunteering/helping behavior, environmentalism, standard political, and social movement behaviors represent distinct dimensions of civic action that are independently correlated with indicators of health, well-being, and positive functioning (Ballard, Hoyt, & Pachucki, 2019; Wray-Lake et al., 2017).

Scholars have long recognized civic engagement as an important component of positive youth development (PYD; Lerner, 2005). PYD is a strength-based perspective of youth development that seeks to promote adolescent thriving (Lerner et al., 2005). The 5-C's model of PYD outlines a specific set of characteristics that are theorized to compose positive youth development, including competence, confidence, character, connection, and caring (Lerner et al., 2005). According to this model, the 5-C's represent functionally valued aspects of development that are cultivated by positive contexts and lead to greater social contribution (e.g., civic engagement) and reduced risk taking.

The 5-C's model of positive youth development recognizes character strengths as an important antecedent to civic action. Character is thought to direct personal decisions and actions and because personal agency is a fundamental aspect of civic participation, character strengths may guide decisions to participate in civic behavior (Lerner, Wang, Champine, Warren, &

Erickson, 2014). Others have highlighted that civic experiences themselves are positive contexts that provide youth with access to supportive non-parental adults, prosocial peers, and opportunities to exercise autonomy, relatedness, and competence (Wray-Lake et al., 2019). Thus, not only does civic action represent a vital component social functioning, but participation in civic activities may enhance character development. Understanding the nexus between civic engagement and character strengths may therefore help identify potential avenues to promote PYD and improve community and democratic functioning.

Examining the intersection between character and civic engagement may be especially important during late adolescence and emerging adulthood. Adolescence is a developmental period characterized by substantial social, cognitive, and biological changes (Blakemore, 2012; Casey et al., 2008) and has been identified as a potentially sensitive period for civic and character development (Metzger et al., 2018). Accordingly, interventions targeting civic engagement and character strengths are common in educational settings (Galtson, 2001; Noddings, 2002) including high schools and college campuses (Flanagan & Bundick, 2011). Further, late adolescence and emerging adulthood represents a time when young people are becoming more integrated into the political system, which is likely due to the ability to vote in national elections (Oosterhoff & Wray-Lake, 2020). Late adolescence and emerging adulthood represent an ideal developmental period to examine the intersection between civic action and character strengths.

Civic Engagement and Character Strengths

Several models of character have been proposed in past research, which has resulted in considerable variability in taxonomy and terminology (Peterson & Seligman, 2004; Seider, 2012). The broad operationalization of character calls for careful consideration of which types of

character strengths may be most relevant in the context of civic action. Some research has examined perceptions of which character strengths are important for different forms of civic engagement and represent attributes of civic actors (Metzger et al., 2016). Although participants ascribed a variety of character strengths to different civic actors, young people consistently viewed that civic actors are *purposeful*, *future-minded*, and *grateful* (Metzger et al., 2016). Thus, the current study focused more specifically on purpose, future-mindedness, and gratitude given that these character strengths are recognized as important for civic action.

Purpose is broadly defined as the meaningful and committed intention to contribute to the world beyond the self (Malin, Liauw, & Damon, 2017). Having a higher purpose is thought to motivate engagement in activities that work toward the betterment of society (Damon, Menon, & Bronk, 2003). Civic action involves participating in behaviors that concern the greater good, including volunteering/helping, environmentalism, or political action (Wray-Lake et al., 2017). Thus, those who are motivated by purpose may pursue opportunities to participate in these activities as a means of giving back to their others in their community and society. Scholars have recognized the importance of purpose for civic life and have proposed “civic purpose”—defined as a commitment to contribute to the world beyond the self through civic action—as a central aspect of civic development (Malin et al., 2015). Prior research has shown that purpose is an often-recognized motivator for youth civic action (Malin et al., 2015) and that young people view that acting purposefully is a quality of voters, protesters, volunteers, and environmentalists (Metzger et al., 2016). An elevated purpose may therefore motivate participation in civic action and conversely, participating in civic action may prompt individuals to experience a higher purpose.

Future-mindedness represents the ability to think about the future and what it may hold (Metzger et al., 2018). Developmental theorists have proposed that future-mindedness is an important antecedent to civic engagement (Metzger et al., 2018). Civic actions often entail personal efforts to benefit the future. Envisioning longer-term goals and commitments may lead some individuals to participate in civic action as a means of working towards these goals. It is also possible that participation in civic activities may lead some people to consider what the future will hold and how their actions may benefit either themselves or others over time. Past research has shown that youth recognize future-mindedness as an important quality of political and environmental exemplars (Metzger et al., 2016) given that political and environmental actions have clear implications for the future. Further, higher trait-level future-mindedness is associated with greater volunteering/helping behaviors, higher voting intentions, and greater news consumption among adolescents (Metzger et al., 2018). Thus, future-mindedness may be a character strength that undergirds or results from a wide variety of civic behaviors.

Gratitude refers to a feeling of thankfulness that often manifests after receiving something of value (Nowak & Roch, 2007). State-level gratitude is thought to motivate prosocial behavior as a means of directly or indirectly repaying an act of kindness in the form of upstream reciprocity (McCullough, Emmons, & Tsang, 2002; Yost-Dubrow & Dunham, 2018). Thus, state-level feelings of gratitude may be especially relevant for civic action. Past volunteers report that gratitude was a key motivator for their involvement (Chacón, Pérez, Flores, & Vecina, 2011) and higher trait gratitude is associated with greater charitable giving (Yost-Dubrow & Dunham, 2018). Further, some research suggests that individuals who feel more grateful towards past others were more willing to pay higher taxes in order to improve the well-being of future generations (Markowitz, 2012). Others have recognized that civic participation may be

intrinsically gratifying and thus prompt greater feelings of gratitude (Flanagan & Bundick, 2011). Exposure to the plight of others through civic action may prompt recognition of relative privilege and enhance gratitude (Emmons & McCullough, 2003). Thus, gratitude may both motivate and result from civic participation, especially if such action concerns directly helping others.

Methodological Considerations

Examining associations between character strengths and civic action requires certain methodological considerations. PYD models propose that character strengths precede civic engagement, but this link is not well-established and civic engagement may precede character strengths. Indeed, ecological systems models of development conceptualize organized activities and civic behaviors as a context that shapes personal skills, abilities, and qualities (Fredricks & Eccles, 2006). Links between civic engagement and character strengths may therefore be bi-directional. Understanding the temporal sequencing between civic engagement and character strengths provides important guidance to practitioners who design interventions to promote either civic engagement or character strengths. Additionally, connections between character strengths and civic engagement may occur on different timescales. Although the majority of research on character strengths has examined long-term changes, others have advocated for the need to examine short-term within-person variability and model how these attributes change over the course of the day or week (Fleeson, 2004). Some character strengths may motivate immediate same-day forms of engagement, while others may carry over into the following-day. Daily diary designs allow for the test of links between character strengths and civic engagement within the same day while also examining temporal sequencing among character strengths and civic engagement for next-day effects. Daily diary designs with three or more measurement

points also allow for the separation of within-person from between-person effects in dynamic processes (Berry & Willoughby, 2017), which is essential for building theory.

Measuring daily forms of civic engagement also poses methodological challenges. Opportunities for civic behavior vary widely across different activities, time-periods, and developmental age spans (Oosterhoff & Wray-Lake, 2020). Prior research has demonstrated meaningful variability in college students' daily participation in volunteering/helping behavior and environmentalism over the course of one week (Wray-Lake et al., 2017). However, young adults likely participate in political activities less frequently relative to adults and relative to other civic activities, which may be due to the intersection between the novelty of politics to young adults, the cyclical nature of political elections, and limited opportunities to engage in many forms of politics. Assessing daily-levels of civic behavior therefore requires careful consideration of the developmental period of the population, the type of activity measured, and the historical timing of assessment. National elections are one reoccurring historical event characterized by higher rates of daily standard political and social movement forms of political participation. Specifically, national elections provide greater opportunities to engage in daily forms of standard political involvement including offline public discourse on politics, posting or sharing political messages on social media, talking to others about political candidates, and writing politicians about political issues. National elections also provide opportunities to support political candidates by donating to campaigns. For some, elections may provide opportunities to engage in social movement forms of political action protests and boycotts designed to influence election results (Oosterhoff & Wray-Lake, 2020). Prior longitudinal research has used national elections to examine how political action affects personal health and well-being (Fuller-Rowell, Burrow, Ong, 2011; Scheibe, Mata, Carstensen, 2011; Stanton, LaBar, Saini, Kuhn, & Beehner,

2010). Similarly, the current study examined temporal associations between civic action and character during and after the 2018 US mid-term election as a means of capturing daily variability in political participation.

Current Study

The purpose of this study was to examine temporal associations between civic action and character strengths over the course of one week. Based on prior research (e.g., Metzger et al., 2016), we hypothesized that those who have higher weekly purpose, future-mindedness, and gratitude relative to others will be more engaged in civic action (i.e., volunteering/helping behavior, environmentalism, standard political behavior, and social movement behavior). Additionally, we expected that higher same day and next day purpose, future-mindedness, and gratitude relative to one's own weekly average will be associated with greater civic action. Lastly, we expected that greater civic engagement relative to one's own weekly average will predict higher next-day purpose, future-mindedness, and gratitude.

Method

Participants and Procedures

Participants were recruited through the psychology subject pool at a public university in the northwest United States. The initial survey was completed by 235 college students (50% female) ages 18–25 years ($M = 19.24$, $SD = 1.80$). On the seventh day, 95% ($n = 223$) were still participating. The sample was 91.1% White, 3.8% Native American, 3.4% Black, and 1.7% were another race or ethnicity. A total of 5.1% of participants were Hispanic. Participants were primarily freshmen (55.1%) or sophomores (26.5%), with fewer juniors (15.8%) and seniors (2.6%). Participants reported their political affiliation, with most people identifying as a Democrat (34.9%) or Republican (32.8%) and fewer identifying as Independent (18.8%),

Libertarian (8.5%) or Other (4.7%). Participants reported their political ideology using a sliding scale ranging from 1 (very conservative) to 100 (very liberal) with the average being 51.18 (SD = 22.96).

All participants were recruited during the Fall 2018 semester. Most ($n = 157$) participants began their seven days of assessments the Thursday prior to the midterm elections and ended the Wednesday after the elections. The remaining participants ($n = 78$) started the daily diary assessments two days after the election and ended nine days after the election. Participants provided informed consent and completed an initial 30–45 min survey online assessing demographics, values, attitudes, and behaviors. Participants also provided their phone numbers to receive text message reminders to complete the daily diary portion of the study. Participants completed the initial survey during a sign-up week; then all participants were sent the first daily survey on the following Thursday. Daily survey links were sent at 8:00 PM for seven consecutive days. Participants received course credit for their involvement if they completed at least 80% of surveys. Exact item wording for the daily survey instrument can be found the supplemental material.

Measures

Purpose. Purpose was assessed with two items (daily α 's ranged from .85 to .88) from past research (Syvertsen, Metzger, & Wray-Lake, 2015). Participants rated the extent to which they felt a purpose and felt like they understood their life's meaning in the past 24 hours on a 1 (*not at all*) to 7 (*very often*) scale. Mean scores were calculated with higher values indicating greater purpose.

Future-Mindedness. Future-mindedness was assessed with a single item adapted from prior research (Metzger et al., 2018). Participants rated the extent to which they thought about

the future in the past 24 hours on a 1 (*not at all*) to 7 (*very often*) scale. Higher values indicate greater future-mindedness.

Gratitude. Gratitude was assessed with three items (daily α 's ranged from .85 to .93) taken from prior research (Syvertsen et al., 2015). Participants rated the extent to which they had felt thankful for things, thought about people who have helped them after something good had happened, and thanked someone in the past 24 hours using a 1 (*not at all*) to 7 (*very often*) scale. Scores of these items were averaged, with higher values indicating greater gratitude.

Volunteering/Helping Behavior. Volunteering/helping behavior was assessed with two items (daily α 's ranged from .67 to .73) adapted from prior research (Wray-Lake et al., 2017). Participants reported the frequency that they helped someone in need and volunteered at an organization for a cause in the past 24 hours on a 1 (*not at all*) to 7 (*almost all day*) scale. Mean scores were calculated to create a composite score, with higher values indicating greater volunteering/helping behavior.

Environmentalism. Environmentalism was assessed with two items (daily α 's ranged from .73 to .84) adapted from prior research (Wray-Lake et al., 2017). Participants rated the frequency that they worked to protect the environment and acted in a way that was environmentally responsible in the past 24 hours using a 1 (*not at all*) to 7 (*almost all day*) scale. Items were averaged, with higher values indicating greater environmentalism.

Standard Political Behavior. Standard political involvement was assessed with five items (daily α 's ranged from .82 to .83) adapted from prior research (Metzger & Smetana, 2009). Participants indicated the frequency that they had expressed their opinion to a politician on social media, posted a political message to social media, talked about politics with others, had written a politician about a political issue, and donated money to a political campaign in the past 24 hours

on a 1 (*not at all*) to 7 (*almost all day*) scale. Items were averaged to create a composite score, with higher values indicating greater standard political involvement.

Social Movement Behavior. Social movement involvement was assessed with three items (daily α 's ranged from .85 to .87) adapted from prior research (Metzger & Smetana, 2009). Participants rated the frequency that they had worked to change a law that they disagreed with, participated in a protest, and participated in a boycott in the past 24 hours using a 1 (*not at all*) to 7 (*almost all day*) scale. Items were averaged to create a composite score, with higher values indicating greater social movement involvement.

Analytic Technique

Fixed-effect autoregressive cross-lagged (FACL) modeling with structured residuals was used to examine temporal associations between character strengths and civic action. FACL was preferred over general autoregressive cross-lagged modeling given its ability to isolate within-person effects from between-person effects with cross-lagged daily diary data (Berry & Willoughby, 2017). Figure 1 displays a conceptual depiction of the primary model. Latent intercepts were fixed for each construct, which specified mean scores for day-level participation in civic activities and character strengths. Autoregressive and cross-lagged paths were specified among the residuals of the daily indicators. Consistent with prior research (Berry & Willoughby, 2017), the variances of the residuals were constrained to be equal. For parsimony, we also constrained each autoregressive and cross-lagged effect to be equal given that we did not expect differences in these estimates across days. Covariances were specified across constructs for the same day and were constrained to be equal to indicate day effects. A covariance was also specified across intercepts for the latent variables and were used to indicate an overall between-person week effect. Due to the complexity of FACLs, separate models were specified for each

character strength (purpose, future-mindedness, gratitude) and form of civic action (volunteering/helping behavior, environmentalism, standard political involvement, social movement involvement). All models accounted for age, gender, and race (coded 1 = Not White, 2 = White). Models were estimated in Mplus version 7. Missing data (<6%) was assumed to be missing at random and estimated using full-information maximum likelihood (FIML). Acceptable model fit was indicated with comparative fit index (CFI) $\geq .90$ and root mean square error of approximation (RMSEA) $\leq .08$ (Ullman & Bentler, 2003).

Results

Table 1 displays the means and correlations among character strengths and types of civic behavior. As reported elsewhere (Oosterhoff, Hill, & Slonaker, 2020), environmentalism ($M = 3.47$, $SD = 1.18$ across the week) was the most frequently reported civic behavior, and social movement participation ($M = 1.62$, $SD = 1.06$ across the week) was the least frequently reported civic behavior. Most civic activities were moderately and positively correlated, with a strong association between volunteering/helping behavior, social movement, and standard political behavior. Purpose, future-mindedness, and gratitude were strongly correlated. Greater future-mindedness and gratitude were correlated with greater volunteering/helping behavior, and greater purpose was correlated with greater environmentalism and standard political involvement. Table 2 presents model fit statistics and Table 3 presents model estimates for each of our primary models.

Purpose and Civic Action

Volunteering/Helping Behavior. A FACL model was used to estimate weekly, daily, and next-day associations between purpose and volunteering/helping behavior. The model provided an excellent fit to the data. After accounting for age, gender, and race, the two latent

intercepts were positively correlated, indicating a significant between-person weekly association among purpose and volunteering/helping behavior. Those who had higher purpose across the week were more engaged in volunteering/helping behavior across the week relative to those with a lower purpose. We also found positive and significant covariance between daily indicators of purpose and volunteering/helping behavior. Those who had a higher purpose in a given day relative to their own weekly average were more engaged in volunteering/helping behavior that day relative to their own weekly average. We did not find evidence of cross-lagged effects for purpose predicting next-day volunteering/helping behavior, nor volunteering/helping behavior predicting next-day purpose.

Environmentalism. The model examining links between purpose and environmentalism provided a good fit to the data. After accounting for age, gender, and race, we found a significant between-person weekly association among purpose and environmentalism. Those who had a higher purpose across the week were more engaged in environmentalism behavior across the week relative to those who had a lower purpose. We did not find evidence of daily effects or cross-lagged effects between purpose and environmentalism.

Standard Political Behavior. The model examining links between purpose and standard political behaviors provided an acceptable fit to the data. After accounting for age, gender, and race, we did not find evidence of a between-person weekly association among purpose and standard political involvement. However, we did find a positive and significant covariance between daily indicators of purpose and standard political involvement. Those who had a higher purpose in a given day relative to their own weekly average were more engaged in standard political involvement that day relative to their own weekly average. Further, we found a significant cross-lagged effect such that those who had a high purpose relative to their own

weekly average engaged in greater standard-political involvement the next day relative to their own average. We did not find evidence of cross-lagged effects for standard political involvement predicting next-day purpose.

Social Movement Behavior. The model examining links between purpose and social movement behaviors provided an acceptable fit to the data. After accounting for age, gender, and race, we did not find evidence of a between-person weekly association among purpose and social movement involvement. However, we did find a positive and significant covariance between daily indicators of purpose and social movement. Those who had a higher purpose in a given day relative to their own weekly average engaged in greater social movement involvement that day relative to their own weekly average. Further, we found significant bi-directional cross-lagged effects such that those who were more engaged in social movement involvement relative to their own average had higher next-day purpose relative to their own average and those who had higher purpose relative to their own weekly average engaged in greater social movement involvement the next day relative to their own average.

Future-Mindedness and Civic Action

Volunteering/Helping Behavior. The model examining associations between future-mindedness and volunteering/helping behavior provided an excellent fit to the data. After accounting for age, gender, and race, we found a significant between-person weekly association among future-mindedness and volunteering/helping behavior. Those who had higher future-mindedness across the week were more engaged in volunteering/helping behavior across the week relative to those with lower future-mindedness. We also found a positive and significant covariance between daily indicators of future-mindedness and volunteering/helping behavior. Those who had higher future-mindedness in a given day relative to their own weekly average

engaged in greater volunteering/helping behavior that day relative to their own weekly average. Further, there was a significant cross-lagged effect such that greater volunteering/helping behavior relative to one's own weekly average predicted greater next-day future-mindedness relative to one's own weekly average. We did not find evidence of a cross-lagged effect for future-mindedness predicting next day volunteering/helping behavior.

Environmentalism. The model examining links between environmentalism and future-mindedness provided a good fit to the data. After accounting for age, gender, and race, we found a significant between-person weekly association among future-mindedness and environmentalism. Those who had higher future-mindedness across the week were more engaged in environmentalism behavior across the week relative to those who had lower future-mindedness. We also found a positive and significant covariance between daily indicators of future-mindedness and environmentalism. Those who had higher future-mindedness in a given day relative to their own weekly average engaged in greater environmentalism that day relative to their own weekly average. We did not find evidence of cross-lagged effects for environmentalism predicting next-day future-mindedness or for future-mindedness predicting next day environmentalism.

Standard Political Behavior. The model examining links between future-mindedness and standard political behaviors provided an acceptable fit to the data. After accounting for age, gender, and race, we did not find evidence of weekly, daily, or cross-lagged effects between future-mindedness and standard political involvement.

Social Movement Behavior. The model examining links between future-mindedness and social movement behaviors provided an acceptable fit to the data. After accounting for age, gender, and race, we did not find evidence of a between-person weekly or within-person daily

associations between future-mindedness and standard political involvement. However, we found a significant cross-lagged effect such that those who engaged in greater social movement behavior relative to their own weekly average had higher future-mindedness the next day relative to their own average. We did not find evidence of cross-lagged effects for future-mindedness predicting next-day social movement behavior.

Gratitude and Civic Action

Volunteering/Helping Behavior. The model testing links between volunteering/helping behavior and gratitude provided a good fit to the data. After accounting for age, gender, and race, we found a significant between-person weekly association among gratitude and volunteering/helping behavior. Those who had higher gratitude across the week were more engaged in volunteering/helping behavior across the week relative to those with lower gratitude. We also found positive and significant covariance between daily indicators of gratitude and volunteering/helping behavior. Those who had higher gratitude in a given day relative to their own weekly average engaged in greater volunteering/helping behavior that day relative to their own weekly average. We did not find evidence of either cross-lagged effects for volunteering/helping behavior predicting next-day gratitude, nor for gratitude predicting next day volunteering/helping behavior.

Environmentalism. The model examining links between gratitude and environmentalism provided a good fit to the data. After accounting for age, gender, and race, we found a significant between-person weekly association between gratitude and environmentalism. Those who had higher gratitude across the week were more engaged in environmentalism behavior across the week relative to those who had lower gratitude. We also found positive and significant covariance between daily indicators of gratitude and environmentalism. Those who had higher

gratitude in a given day relative to their own weekly average engaged in greater environmentalism that day relative to their own weekly average. We did not find evidence of cross-lagged effects for environmentalism predicting next-day gratitude, nor for gratitude predicting next day environmentalism.

Standard Political Behavior. The model examining links between gratitude and standard political behaviors provided an acceptable fit to the data. After accounting for age, gender, and race, we did not find evidence of weekly, daily, nor cross-lagged effects between gratitude and standard political involvement.

Social Movement Behavior. The model examining links between gratitude and social movement behaviors provided an acceptable fit to the data. After accounting for age, gender, and race, we did not find evidence of weekly, daily, nor cross-lagged effects between gratitude and social movement involvement.

Supplemental Analyses

Three sets of supplemental analyses were conducted to examine the robustness of our models. The first set of analyses focused on understanding the appropriateness of constraining autoregressive, cross-lagged, and daily covariances across measurement point. Across all models, constraining the autoregressive, cross-lagged, and daily covariances produced a better model fit relative to a model where these parameters were freely estimated ($\Delta CFI > .01$), which suggested that the values for the constrained parameters were highly similar. The second set of analyses tested the robustness of the effects when accounting for political ideology. The continuous measure of political ideology was included as a covariate in the FACL models. Findings were consistent with and without accounting for political ideology. The third set of analyses tested the robustness of the effects when separating the helping behavior and volunteer

items. Two FACL models were estimated with each item modeled separately and findings were consistent across models.

Discussion

Character strengths represent personal assets that are thought to motivate civic action. Scholars have also proposed that civic activities may serve as positive contexts that cultivate character strengths. Despite the centrality of character to research and theory in positive psychology and civic engagement, little research has examined how character strengths and civic behavior are associated with one another over time. Purpose, future-mindedness, and gratitude have been identified as being relevant for civic action (e.g., Metzger et al., 2016), and the goal of this study was to test temporal associations between civic action and these character strengths. Using a daily diary design, findings indicate nuanced and complex associations between these character strengths and civic action that vary based on activity and time scale. These results were evident when isolating between- and within-person effects and after accounting for demographic characteristics.

Consistent with hypotheses and prior research (Malin et al., 2015; Metzger et al., 2016), we found significant between-person weekly, within-person daily, and within-person next-day associations between multiple forms of civic behavior and a greater purpose. Prior research has identified civic engagement as an especially relevant context to express purpose given that many forms of civic action involve personally meaningful experiences that also contribute to broader society (Malin et al., 2017; Malin et al., 2015). In this study, higher daily levels of purpose were associated with greater participation in each form of civic action. Volunteering/helping behavior, environmentalism, and political participation may represent meaningful avenues for college students to give back to their community. Young people may recognize the broader social benefit

of civic engagement and experiencing a higher purpose in a given day may lead some to seek out civic action. It is also possible that participating in civic engagement more frequently than usual may promote greater purpose within the same day. We also found between-person weekly effects such that those with a higher purpose engage in greater volunteering/helping behavior across the week compared to those with a lower purpose. Potentially, being consistently elevated in purpose may be conducive to more stable volunteering/helping behavior participation or vice versa. This finding aligns with theory and research which proposes that civic purpose may be especially important for sustained civic action (Malin et al., 2015).

In addition to consistent daily effects, findings from this study suggest that links between political behavior and purpose may be bi-directional. Those who felt a greater purpose relative to their own weekly average were more involved in standard political and social movement action the following day relative to their own weekly average. Feeling greater purpose may motivate young people to become more engaged in a variety of different political behaviors even when feelings of elevated purpose subside. These effects may span multiple days, especially during national elections when people have greater opportunities to participate in political action and political engagement is heightened on a national level. Further, those who were more involved in social movement activities relative to their own average endorsed greater purpose the following day. Social movement forms of participation—including protesting and boycotting—involve working against the status quo and are often accompanied by a shared sense of identity among participants (Alvis & Metzger, 2019). The solidarity, shared identity, and collective effort to improve society may facilitate greater purpose that spans multiple days. These findings are especially notable among college students who may be gaining initial or increased exposure to politics (Flanagan & Levine, 2010). Potentially, the novelty of politics among young adults may

strengthen connections between political action and politics. Together, these findings suggest that a purpose may be an especially relevant character strength that motivates and is cultivated by political action.

Consistent with hypotheses and prior research (e.g., Metzger et al., 2018), we also found that within-person daily future-mindedness was associated with greater daily levels of volunteering/helping behavior and environmentalism. Considering the future may motivate individuals to engage in volunteering/helping behavior or environmentalism as a means of improving society in the long-term, whether for themselves or others. Critical consciousness theories propose that civic experiences may increase awareness of structural inequality (Watts, Diemer, & Voight, 2011). It is also possible that participating in volunteering/helping behavior or environmental action prompts young people to consider the current state of society and what that may mean for their future or the future of others, ultimately prompting greater participation in civic action. We also found more general between-person weekly associations between volunteering/helping behavior, environmentalism, and future-mindedness. Similar to purpose, within-person daily links among future-mindedness, volunteering/helping behavior, and environmentalism may accumulate over time to produce more general individual differences in these constructs across young people.

Participation in volunteering/helping behavior and social movement civic action were also found to precede future-mindedness. Those involved in greater volunteering/helping behavior and social movement civic action relative to their own weekly average had higher next-day future-mindedness relative to their own weekly average. Research on service learning suggests that the personal benefits of youth civic engagement are stronger for those who reflect on their experiences (Strage, 2000). Young people may reflect on their volunteer and social

movement experiences in the days following participation, and this reflection may prompt consideration of the future, including recognition of systematic inequalities and ways to address these broader social issues and improve society. It is important to note that participants in this study were largely first- or second-year college students. It is possible that participants in this study volunteered to gain personal or professional credentials, and subsequently considered how their volunteer experience contributed to their future goals and aspirations. Even so, these findings demonstrate that civic action may serve as a context to promote future-mindedness.

Between-person weekly and within-person daily associations were found among gratitude, volunteering/helping behavior, and environmentalism. Gratitude is thought to motivate prosocial behavior as a means of repaying an act of kindness in the form of upstream reciprocity (Yost-Dubrow & Dunham, 2018). Experiencing greater gratitude in a given day may lead some young people to participate in volunteering/helping behavior or environmentalism in the same day as a means of expressing thankfulness or appreciation for their current circumstances. Additionally, participating in volunteering/helping behavior and environmentalism may increase awareness of how an individual's personal circumstances compare to those less fortunate, therefore promoting feelings of gratitude (Flanagan & Bundick, 2011). Similar to purpose and future-mindedness, these within-person daily level links may accumulate over time and ultimately lead to between-person differences.

We did not find evidence of links between political behavior and gratitude. Some evidence suggests that adolescents view volunteering and environmentalism as moral issues that directly concern the welfare of others, whereas standard political and social movement participation are viewed as social conventions or personal choices (Krettenauer, 2017; Metzger & Smetana, 2009). It is possible that links between gratitude and civic behavior are limited to

issues that concern the welfare of others (Grant & Gino, 2010) rather than personal or conventional behaviors. Additionally, although this study was conducted during an election period, opportunities to participate in politics are typically less common relative to other forms of involvement. It is possible that volunteering/helping behavior and environmentalism are more accessible and thus may be more salient when considering possible avenues to express gratitude. We also did not find evidence that gratitude preceded or followed civic behavior the next day. Links between gratitude and civic engagement may occur more rapidly than other character strengths. Future research is needed to examine such connections within the same day.

Implications for Theory

Findings from this study have important implications for theory and practice. PYD models propose that character strengths represent important antecedents to contribution. Findings from this study extend PYD theory by demonstrating that civic action may also serve as a context to enhance character strengths among young people. These findings align with efforts to document the potential benefits of youth civic action (Ballard et al., 2019) by suggesting that expression of character strengths may serve as an important motivator for engaging in civic behavior while also representing a personal benefit of civic participation.

Findings also raise questions concerning the scaling of change between character strengths and civic engagement during late adolescence. To date, most longitudinal research on civic development has utilized year-long measurement waves and has examined change over the course adolescence and emerging adulthood (e.g., Ballard et al., 2019). Findings from this study add to the literature by highlighting weekly, daily, and next day connections between character and civic behavior, thus demonstrating that links between civic engagement and character may unfold over both shorter and longer time-scales. The scaling of change is rarely considered in

longitudinal designs, yet it is necessary to build comprehensive theory concerning civic engagement and character. Indeed, many of our findings suggest that links between character and civic behavior occur within a given day, though little research has examined the more immediate, short-term effects of character expressions or civic engagement. It is possible that young people connect their daily behaviors with their character strengths within a given day or moment, and these dynamic connections accumulate to result in long-term changes in character strengths and civic action.

Findings also have implications for public policy. Considerable efforts have been made to design educational curricula centered on enhancing character strengths (Noddings, 2002). Our findings suggest that participation in civic action may be one way to compliment these efforts, particularly given that civic engagement is often already integrated within many academic settings (Galtson, 2001). Similarly, there have been calls for efforts to increase student civic engagement within high schools and on college campuses (Flanagan & Bundick, 2011). Targeting character strengths may be one way to increase civic engagement among students. Such efforts may be particularly important to consider during election years when certain forms of civic engagement such as political involvement are necessary for democratic health. Our cross-lagged findings suggest that policy makers seeking to improve young people's political engagement may benefit from emphasizing connections between political action and purpose as means of motivating political participation. It is important to note that the effect sizes for the cross-lagged effects appeared generally small. It is difficult to evaluate the size of these effects given that few studies have separated within and between-person effects when examining temporal correlates of civic engagement. The magnitude of these effects and impact on public

policy should continue to be evaluated as new knowledge emerges regarding within-person change in civic action and character.

Limitations and Future Directions

Findings should be taken in light of certain limitations. Although a daily diary design can offer reliable information about dynamic, within-person associations between civic behavior and character strengths, this study cannot determine causality. Third variables may account for the results found in this study. For example, past research has connected both civic engagement and character strengths with greater well-being (Wood, Froh, & Geraghty, 2010; Wray-Lake et al., 2017), which may account for the associations found in this study. Additionally, the sample used in this study was composed of primarily White freshman and sophomore college students and lacks generalizability to other ages and demographic groups. Future studies should examine links between civic behavior and character strengths among those from diverse demographic backgrounds. Examining age differences in links between civic engagement and character strengths may be especially fruitful given opportunities and experience with political engagement may increase with age. To reduce response burden, this study used abbreviated measures of character strengths and future-mindedness was measured with a single item. Further, some character strengths such as purpose and future-mindedness may be multidimensional (Bronk, 2013). Although these measures demonstrated adequate psychometric properties in this study, future research should consider utilizing the full assessments of character strengths. Additionally, character strengths examined in this study were selected based on young people's perceptions of which strengths are relevant for civic action (Metzger et al., 2016), and other character strengths not examined in this study may have implications for civic behavior. Future

research should examine a wider-variety of character strengths that may be relevant to civic action.

A particular strength of this study was leveraging of the 2018 US mid-term election to capture daily variability in political participation. However, findings should be considered in light of the specific sociohistorical context from which this study occurred. It is possible that links between character strengths and civic engagement differ during election versus non-election historical periods and during historical periods with varying levels of political polarization. Future research may benefit from utilizing larger sample sizes to capture daily variability in political engagement and character strengths during non-election times and when political polarization is low to better understand possible period effects. Additionally, the daily diary assessments were completed over seven consecutive days, which may limit the generalizability of our findings. Future research may consider capturing daily assessments over a longer time span (e.g., semester) to examine how links between civic engagement and character strengths may vary based on close versus more distal proximity to elections. Collectively, these limitations in study design and potential constraints on generalizability highlight the need to replicate this research.

Conclusion

Character strengths are thought to be an important developmental asset that undergirds youth civic action. Findings from this study highlight the dynamic and highly nuanced relation between various civic experiences, purpose, future-mindedness, and gratitude. Future research should continue to examine the intersection between character strengths and civic engagement using within-subject study designs. Such queries will advance theory on civic engagement and provide direct guidance for programs seeking to enhance the well-being of people and their community.

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Table 1

Means, Standard Deviations, and Bivariate Correlations among Week-Level Study Variables

	Range	M	SD	2	3	4	5	6	7
1. Volunteering / Helping Behavior	1-7	2.87	1.24	.60**	.73**	.72**	.18**	.23**	.26**
2. Environmentalism	1-7	3.47	1.40		.40**	.37**	.20**	.23**	.06
3. Social Movement	1-7	1.62	1.06			.90**	-.02	-.08	.12
4. Standard Political	1-7	1.85	1.03				.02	-.04	.15*
5. Future-Mindedness	1-7	5.31	1.44					.70**	.58**
6. Gratitude	1-7	4.38	1.63						.63**
7. Purpose	1-7	5.34	1.25						

Notes: * $p < .05$, ** $p < .001$

Table 2

Model Fit Statistics for Fixed-Effect Autoregressive Cross Lagged Models.

Model	S-B χ^2 (df)	CFI	TLI	RMSEA [90% CI]	SRMR
Purpose					
Volunteering / Helping Behavior	158.58 (113)	.98	.98	.04[.02,.06]	.05
Environmentalism	161.89 (113)	.98	.97	.04[.03,.06]	.05
Standard Political	220.46 (113)	.95	.94	.06[.05,.07]	.06
Social Movement	240.23 (113)	.94	.93	.07[.06,.08]	.05
Future-Mindedness					
Volunteering / Helping Behavior	175.68 (113)	.97	.96	.05[.03,.06]	.06
Environmentalism	195.55 (113)	.96	.95	.06 [.04, .07]	.06
Standard Political	234.19 (113)	.93	.91	.07 [.06,.08]	.07
Social Movement	256.90 (113)	.92	.90	.06[.07,.08]	.06
Gratitude					
Volunteering / Helping Behavior	205.41 (113)	.95	.94	.07[.05,.08]	.08
Environmentalism	209.48 (113)	.95	.94	.06[.05, .07]	.07
Standard Political	247.16 (113)	.92	.91	.06[.07,.08]	.08
Social Movement	270.35 (113)	.92	.90	.08[.06,.09]	.07

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

Table 3

Unstandardized Estimates and Standard Errors for Fixed-Effect Auto-Regressive Models Examining Temporal Associations between Character Strengths and Civic Action

	Civic Action (CA)							
	Volunteering / Helping Behavior		Environmentalism		Standard Political		Social Movement	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Purpose								
Purpose ↔ CA Weekly Intercept Covariance (d)	.43**	.12	.08	.16	.12	.09	.14	.09
Purpose ↔ CA Daily Covariance (a)	.09**	.03	.11**	.03	.04**	.03	.05**	.02
CA Autoregressive Path (e)	.31**	.06	.28**	.06	.36**	.10	.35**	.09
Purpose Autoregressive Path (f)	.18**	.06	.18**	.06	.18**	.06	.18**	.06
CA → Purpose. Next-Day Cross-Lagged (b)	.05	.06	.04	.04	.08	.06	.11*	.05
Purpose. → CA Next-Day Cross-Lagged (c)	.01	.03	.05	.04	.06**	.03	.06**	.03
Future-Mindedness (FM)								
FM ↔ CA Weekly Intercept Covariance (d)	.25*	.10	.31**	.14	-.09	.08	-.09	.08
FM ↔ CA Daily Covariance (a)	.08**	.03	.12**	.04	.02	.03	.00	.02
CA Autoregressive Path (e)	.31**	.06	.28**	.07	.36**	.10	.36**	.09
FM Autoregressive Path (f)	.18**	.05	.18**	.05	.19**	.05	.19**	.05
CA → FM Next-Day Cross-Lagged (b)	.13*	.06	.05	.05	.09	.06	.14*	.06
FM → CA Next-Day Cross-Lagged (c)	.00	.03	.01	.03	.02	.02	.03	.03
Gratitude								
Gratitude ↔ CA Weekly Intercept Covariance (d)	.30**	.10	.34**	.12	-.13	.07	-.14	.07
Gratitude ↔ CA Daily Covariance (a)	.08**	.03	.11**	.03	.00	.02	-.02	.02
CA Autoregressive Path (e)	.33**	.06	.28**	.06	.36**	.10	.36**	.06
Gratitude Autoregressive Path (f)	.22**	.06	.23**	.06	.24**	.07	.24**	.07
CA → Gratitude Next-Day Cross-Lagged (b)	-.01	.04	-.01	.04	.06	.05	.08	.05
Gratitude → CA Next-Day Cross-Lagged (c)	.05	.06	.06	.04	.01	.03	.04	.04

Notes: CA = Civic Action. Separate models were used for each form character strengths and form of civic action (12 total). Letters in parentheses correspond to pathway depicted in Figure 1. * $p < .05$, ** $p < .01$.

Figure 1. *Conceptual model for fixed-effect auto-regressive cross-lagged model.*

Notes: Parameters denoted with an (a) represent daily effects, (b) represent civic engagement → character cross-lagged effects, (c) represent character → civic engagement cross-lagged effects, (d) represent between-person weekly effects, (e) civic engagement autoregressive effects, and (f) character autoregressive effects.

Supplemental Material

Character Strengths

In the last 24 hours, rate how often you....

Response options: 1 (*not at all*) to 7 (*very often*)

Sense of Purpose

Felt a sense of purpose.

Felt like you understood your life's meaning.

Future Mindedness

Thought about your future.

Gratitude

Felt thankful for things.

Thought about people who have helped you after something good has happened.

Thanked someone.

Civic Actions

Response options: 1 (*not at all*) to 7 (*almost all day*)

In the last 24 hours, how often did you participate in the following:

Volunteering/Helping Behavior

Help someone in need.

Volunteer at an organization for a cause.

Environmentalism

Work to protect the environment.

Act in a way that was environmentally responsible.

Standard Political Behavior

Write a politician about a political issue.

Donate money to a political campaign.

Post a political message to social media.

Express your opinion to a politician on social media.

Talk about politics with others.

Social Movement Involvement

Participate in protest.

Participate in a boycott.

Work to change a law you disagree with.