ABSTRACT

Title of Document: A MULTILEVEL ANALYSIS OF CONTEXT
                             EFFECTS ON ADOLESCENT CIVIC
                             ENGAGEMENT: THE ROLE OF FAMILY,
                             PEERS, SCHOOL, AND NEIGHBORHOOD

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The relations between multiple contexts of influence and adolescents' civic engagement were examined in order to facilitate understanding of how adolescents are being prepared for citizenship. This study extends previous research by simultaneously examining the family, peer, school, and neighborhood contexts, including how contexts are interrelated in their influence, and by employing multilevel regression techniques. The purpose of the study was to understand how contexts interact to produce positive outcomes for adolescents, especially those deemed at risk for poor civic outcomes. Utilizing data from the 1999 Civic Education Study and the 2000 U.S. Census, I examined a nationally representative sample of 2,729 14-year-olds from 119 schools in the United States. Access to the zip-codes for each school that participated in the study enabled the connection between neighborhood characteristics and schools and students within schools.

Given the multifaceted nature of civic engagement, the current study considered context effects on four different aspects of civic engagement: civic knowledge, support for the rights of ethnic minorities, anticipated voting behavior, and anticipated

community participation. Predictors pertain to adolescents' demographic characteristics, political discourse with parents and peers, civic experiences in school, and the demographic composition of the neighborhood.

Political discourse with parents was positively related to civic knowledge, attitudes, and anticipated behavior, indicating the consistency with which socialization occurs in the home. Across the contexts examined, student measures of civic experiences in school (or civic learning opportunities) had the most consistently positive relationships with students' civic outcomes. Civic experiences in school include student confidence in the effectiveness of school participation, perception of a classroom climate that is open for discussion, and learning about ideal civic practices.

Interactions between the school and neighborhood contexts indicate that higher levels of civic learning opportunities particularly make a difference for students attending schools in impoverished neighborhoods, sometimes substantially improving their civic outcomes. Schools, although implicated in the existence of a civic engagement gap, have the potential to narrow the gaps. Civic experiences in schools contribute to the preparation of youth for active citizenship and full access to these experiences reduces civic engagement gaps between students of different demographic groups.

A MULTILEVEL ANALYSIS OF CONTEXT EFFECTS ON ADOLESCENT CIVIC
ENGAGEMENT: THE ROLE OF FAMILY, PEERS, SCHOOL, AND
NEIGHBORHOOD

By

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DEDICATION

To Gilad, for everything.

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CHAPTER 1

INTRODUCTION

In a recent report on the 2006 National Civic and Political Health Survey,

researchers revealed that 58 percent of young people (15- to 25-years of age) are

disengaged from civic life and the majority cannot correctly answer basic questions about

politics or current events (Lopez et al., 2006). Another report, *America's Civic Health*

Index: Broken Engagement, described the fractured state of the nation as evidenced by

lower participation in voluntary associations than in the past, decreasing trust in each

other and in the government, and an increasing civic engagement gap based on

educational background. The few optimistic findings in the report pertain to the steady

increase in youth volunteering since 1975 and the recent increase in political activities

such as voting and making political donations (National Conference on Citizenship,

2006). The message of the report is that most of the progress in recent years has been

made by young people (18- to 25-years of age) and that a failure to convert this trend into

long lasting habits of civic engagement would be a missed opportunity. Successful

democracies require an engaged citizenry and American young people, though still not

highly engaged, are becoming increasingly active participants.

Competencies for civic participation are important for all young people in the

same manner that competent citizens are important for successful democracies. As Kofi

Annan, former Secretary-General of the United Nations and Nobel Peace Prize Laureate,

stated, "No one is born a good citizen; no nation is born a democracy. Rather, both are

processes that continue to evolve over a lifetime." If good citizens and democracies both

evolve over time, then each requires considerable input and opportunity for improvement.

Such inputs include learning the rights and responsibilities of citizens, having early exposure to civic experiences, and understanding how to contribute to democratic processes in society as a whole. Recognizing that preparedness for functioning citizenship necessitates these inputs leads to the question of how well young people are being prepared for informed and active civic participation. Additionally, what environments or contexts are facilitating this preparation for social awareness and civic life?

The development of competencies, such as civic knowledge, democratic attitudes, and participation in civic activities, requires educational and out-of-school experiences that foster development. Multiple contexts can provide these experiences, including families and peer groups, with whom most social interactions take place, and schools and neighborhoods where different kinds of civic activities take place. Parents can provide models of civic behavior for adolescents by participating in organizations (McIntosh, Hart, & Youniss, 2007), and peer groups can maintain norms that support participation (Harell, Stolle, & Quintelier, 2008). Although research indicates that formal and informal aspects of the school context are related to youth civic engagement (Niemi & Junn, 1998), inequalities in civic learning opportunities in schools prevent youth from disadvantaged backgrounds from being adequately prepared for citizenship (Kahne & Middaugh, 2008). Likewise, insufficient civic opportunities and experiences in disadvantaged neighborhoods are associated with inadequate preparation for civic engagement (Atkins & Hart, 2003).

The irony is that it is the students in disadvantaged schools, and adolescents in disadvantaged neighborhoods, who would benefit from being part of a more engaged

citizenry. Active citizens volunteer to improve their community, donate money and time to social and political causes, and vote for candidates who stand for policies that serve the interests of particular groups of people. The interests of disadvantaged groups are less likely to be met if group members are not active participants in civic and political processes. It is not clear whether different sections of the citizenry are gaining the knowledge and experience necessary for civic engagement and empowerment. Indeed, groups that are the most socially and economically disadvantaged (e.g., racial minorities and those of low-socioeconomic status [SES]) have the lowest levels of civic knowledge and therefore are also politically disadvantaged (Delli Carpini & Keeter, 1996; Lutkus & Weiss, 2007; Spring, Dietz, & Grimm, 2007).

In the current study I examine potential explanations for the disparities in adolescent civic engagement. Specifically, with a comprehensive examination of family, peer, school, and neighborhood contexts I assess the mechanisms by which contexts may facilitate or impede civic engagement. My explicit focus is on the role of schools and neighborhoods because schools are the context most amenable to change in policy and practice. Yet schools do not operate free of outside influence. The literature on context effects on adolescent civic engagement has failed to incorporate the school and neighborhood context in a comprehensive investigation of youth civic engagement, even though it is understood that characteristics of neighborhoods influence the schools within their boundaries. Therefore, the current study evaluates how schools can capitalize on positive neighborhood influences, or protect against negative neighborhood influences, to facilitate the development of civic competencies for all young people.

Purpose

The primary purpose of this study is to understand how multiple contexts of influence interact to produce positive outcomes for adolescents in order for these findings to be applied for all young people, especially those deemed at risk for poor civic outcomes. Not only is the engagement of citizens necessary for the sustainability of a democratic nation, but participation in civic activities is a key indicator of positive development for the individual as well. A recent report issued by economists and educational scientists stated that one of the eight goals of schools and youth-serving organizations should be readiness for citizenship and community responsibility (Rothstein, Jacobsen, & Wilder, 2008). If citizenship and civic responsibility are principal indicators of positive development then it is important to understand what contexts and experiences are contributing to this aspect of development.

A necessary first step in this study was to describe the extent of the civic engagement gap between adolescents of different demographic backgrounds (including comparisons by gender, race, immigrant status, and socioeconomic status). Prior research has demonstrated that a range of demographic characteristics are associated with civic outcomes (Dávila & Mora, 2007a; Lopez, 2003; Lopez et al., 2006; Lutkus & Weiss, 2007; Spring et al., 2007). However, most studies do not simultaneously examine key demographic characteristics, which may contribute to misleading results through an omitted variable bias. Including a comprehensive set of demographic characteristics also enables an examination of which characteristics are related to which specific outcomes.

Additionally, research on engagement gaps often employs combined samples of adolescents and young adults (e.g., Lopez, 2003; Lopez et al., 2006), thereby grouping

participants who are in distinctly separate developmental periods. The current study

solely examines the civic engagement of adolescents, specifically 14-year-olds, so as to

avoid issues with age-related changes in the outcomes.

Research on the influence of demographic characteristics associated with civic

outcomes has not considered other factors that could be related to the civic engagement

gap. For instance, the racial minority civic engagement gap found by some researchers

may be evidence that minority youth have fewer opportunities to participate in civic

activities and that schools and neighborhoods are failing to provide such experiences

(Rothstein et al., 2008). For this reason, it is essential to examine the opportunities for

learning provided by different contexts to see if these factors are responsible for the civic

engagement gap. Therefore, the second step in this study involved an examination of the

role of four salient contexts of influence in the lives of adolescents. I examined social

interactions within close relationships with parents and peers, civic-related experiences

and the overall civic environment in schools, and neighborhood structural characteristics.

Prior research indicates that each of the investigated contexts is associated with at least

one aspect of civic engagement (Andolina, Jenkins, Zukin, & Keeter, 2003; Atkins &

Hart, 2003; Baldi et al., 2001; Campbell, 2007; Da Silva, Sanson, Smart, & Toumbourou,

2004; Flanagan, Bowes, Jonsson, Csapo, & Sheblanova, 1998; Harell & Stolle, 2008;

Harell et al., 2008; Hart, Atkins, Markey, & Youniss, 2004; Hart & Fletcher, 2008;

Kahne & Sporte, 2008; Lay, 2006, 2007; McIntosh et al., 2007; Niemi & Junn, 1998;

Theokas & Lerner, 2006; Torney-Purta, Barber, & Wilkenfeld, 2007; Vieno, Perkins,

Smith, & Santinello, 2005; Zaff, Malanchuk, Michelsen, & Eccles, 2003). However, prior

research has generally focused on one or two of the contexts, instead of examining a

comprehensive model of youth civic engagement that includes predictors from all four contexts.

The third step in my investigation, and the primary purpose of the study, involved examining interactions between adolescents and their environment, as well as interactions between school and neighborhood contexts. Examining how youth are differentially responsive to environmental influences can provide evidence for how adolescents actively contribute to their own civic development. In the current state of the literature, studies usually do not distinguish whether there are aspects of the environment that are more beneficial for students of different demographic characteristics. To illustrate, female gender is generally related to higher instances of volunteerism. However, characteristics or experiences provided by an environment (e.g., a school civics curriculum that focuses on teaching topics that relate to making societal contributions) may influence the typical relationship between gender and volunteering, to the point where male volunteerism surpasses females in schools with these specific civic experiences. Examining whether the effects of adolescent demographic characteristics are constant, or whether they vary as a result of interactions with the environment (including school and neighborhood) provides findings that are more informative and more meaningful for subgroups of adolescents.

For examining interactions between contexts I focus on the contexts of school and neighborhood. Both contexts have been found to be significantly related to adolescents' civic engagement (Andolina et al., 2003; Atkins & Hart, 2003; Baldi et al., 2001; Campbell, 2007; Flanagan et al., 1998; Harell & Stolle, 2008; Hart et al., 2004; Hart & Fletcher, 2008; Lay, 2007; McIntosh et al., 2007; Niemi & Junn, 1998; Theokas &

Lerner, 2006; Torney-Purta et al., 2007; Vieno et al., 2005), but the relations associated with each context rarely have been examined with respect to the other (with the exceptions of Kahne & Sporte, 2008, and Lay, 2006). Studies that focus on neighborhood effects on youth development disregard the importance of schools, just as studies that focus on school effects disregard the importance of neighborhoods. Given the existence of multiple systems of influence on young people (Bronfenbrenner, 1979), understanding the complex interaction between these systems is essential for understanding why some adolescents experience better outcomes than others. Learning the specific characteristics, practices, and processes of schools and neighborhoods that help or hinder diverse groups of adolescents can inform as to best practices for enhancing civic engagement for young people of a particular demographic background. Additionally, the use of a dataset with a nationally representative sample will enable findings pertaining to schools and neighborhoods to be readily generalized to a range of locations in the United States.

In this study the relationships between individual, family, peer, school, and neighborhood predictors and adolescent civic engagement are analyzed using data from the U.S. sample of the International Association for the Evaluation of Educational Achievement (IEA) Civic Education Study (Torney-Purta, Lehmann, Oswald, & Schulz, 2001). The Civic Education Study (CIVED) is a survey and test of 14-year-olds who were in ninth grade in 1999, focusing on their civic knowledge, attitudes, and behavior. Utilizing a large dataset with a sample that is nationally representative enables findings to be generalized to the national population of ninth graders, and using advanced statistical techniques enables the proper examination of students within schools and students between schools. The following sections provide the conceptualization of civic

engagement used in the current study, including its contribution to positive development, association with characteristics of individuals, and susceptibility to the influence of different contexts.

<div align="center">Adolescent Civic Engagement</div>

For the purpose of the current study, civic engagement is a broad term that encompasses civic knowledge, skills, attitudes, and participation. Civic knowledge often refers to the comprehension of facts pertaining to domestic and international history and government (Rubin, 2007), as well as fundamental democratic principles (Torney-Purta, 2002). Civic skills involve monitoring news and current events as well as interpreting public and political communication (McIntosh et al., 2007; Torney-Purta, 2002). Civic attitudes pertain to beliefs about democratic societies, including the rights and responsibilities of the government and members of society. Finally, civic participation or civic behavior refers to formal and informal involvement in political and civic institutions, including activities such as voting, volunteering, and attending a political rally. Although each is a distinct aspect of civic engagement, they are often interrelated. For instance, higher civic knowledge is associated with more democratic attitudes and more active participation (Galston, 2001). Individually, aspects of civic engagement are seen as indicators of positive development because each is reflective of an attained competency; for instance participation in civic activities reflects an interest in and capability of being a functioning member of society. Additionally, aspects of civic engagement are related to positive outcomes in other areas of development.

Outcomes Related to Civic Engagement

Civic engagement is related to positive outcomes in multiple domains, including: academic achievement in multiple subjects, obtaining a college degree (Dávila & Mora, 2007b), higher intrinsic work values, higher value placed on the importance of community participation (Johnson, Beebe, Mortimer, & Snyder, 1998), more democratic attitudes, including supporting the rights of immigrants (Torney-Purta, Wilkenfeld, & Barber, 2008), voting in elections (Hart, Donnelly, Youniss, & Atkins, 2007), and lower instances of bullying, fighting, and substance use (Vieno, Nation, Perkins, & Santinello, 2007).

Most of the research on the effects of civic engagement has looked at outcomes related to adolescent participation in volunteer work (primarily because it is the most accessible form of participation for youth). Volunteerism in adolescence is related to more socially responsible attitudes and fewer problem behaviors (Zaff & Michelson, 2002). Longitudinal studies show that adolescents who participate in community service during high school have relatively larger gains in academic achievement, are more likely to earn a college degree (Dávila & Mora, 2007b), and have higher rates of voting and volunteering in their adult life (Hart et al., 2007). In a longitudinal study, Reinders and Youniss (2006) found that community service in which youth interacted directly with people in need was related to higher intentions to vote, work on a political campaign, and boycott a product. Service also was indirectly related to increases in students' self-awareness and helping behavior. Lastly, volunteering students have higher intrinsic work values (such as autonomy, responsibility, and skill acquisition) and higher value placed on the importance of career (Johnson et al., 1998).

These studies illustrate that civic engagement is associated with positive outcomes in several domains. The main limitation of this line of research is that over half of the studies employ city- or region-specific samples, which limits the generalizability of the findings. However, the connections found between civic engagement and positive outcomes in other aspects of development have important implications. The implication is that youth who are not civically engaged may also be at a disadvantage in terms of developing these other positive outcomes. In the subsequent section I will describe characteristics of civically engaged and disengaged youth in order to ascertain which youth are receiving such benefits, and which youth are not.

Demographic Characteristics

Characteristics of adolescents are related to civic outcomes that indicate preparedness for functioning citizenship and are positively related to other developmental outcomes. According to National Assessment of Education Progress (NAEP) scores, white and Asian students score higher on tests of civic knowledge than black, Latino, and American Indian students. Although no gender differences are evident in NAEP scores, higher parental education and family income are both associated with higher civic knowledge (Lutkus & Weiss, 2007). McIntosh et al. (2007) confirmed that students from high-income families have higher civic knowledge, and also found that males surpass females in civic knowledge. Considering immigrant status, in comparison to Latino native-born youth, Latino immigrants have higher civic content knowledge but lower civic skills (Torney-Purta, Barber, & Wilkenfeld, 2006).

Similar findings exist for youth participation in civic behavior. Adolescents from disadvantaged circumstances (i.e., living at or below 200 percent of the poverty line)

report lower levels of current volunteerism, as well as lower intentions to participate in future volunteer work and to vote once eligible (Spring et al., 2007). Other work finds that Latino youth are least likely to think that voting is an important activity and that they can solve problems in their community (Lopez, 2003).

More recent findings indicate that racial disparities in the civic engagement of adolescents and young adults have become inverted, and that it is white young people who are not active participants (Lopez et al., 2006). Based on a sample of 15- to 25-year-olds, black young people are most likely to vote on a regular basis, belong to political groups, donate money to political parties, and outwardly display political buttons or signs. Asian young people are most likely to volunteer on a regular basis, work to solve community problems, sign petitions, contact officials, and participate in boycotts. Latinos are most likely to protest while white young people have the highest intentions to be active members of a group and to participate in a charity-walk (Lopez et al., 2006).

These studies and others indicate differential rates of civic knowledge and participation based on demographic characteristics, though the findings based on race are inconsistent. The most recent study found that the engagement gap has reversed and white young people are now less engaged. The divergent findings may be attributed to differences in the current political context in comparison to earlier studies. Additionally, the sample includes young adults (compared to other studies that contain samples consisting solely of adolescents), and it is possible that age-related changes in participation are involved in the racial differences.

Identifying group differences is the first step in addressing inequalities in civic engagement. However, most of the research described here merely indicates the existence

of group differences in civic engagement without looking at characteristics and experiences beyond demographics that could explain the engagement gap. In the current study I examine group differences in civic outcomes, paying particular attention to gender, race, socioeconomic status, and immigrant status. After looking at group differences in adolescent civic engagement I consider additional characteristics and experiences that could explain the existence of an engagement gap.

Another contribution of my study is the age group of interest. Some of the studies reviewed here have focused on older adolescents or young adults, or have grouped them together as if age was not an independent predictor of outcomes. Given that development is cumulative and experiences build on each other, group differences in civic engagement at 14 years of age would be indicative of early inequities in civic engagement. These differences would likely be exacerbated over time. In the current study I examine the civic engagement of 14-year-olds, which may provide more insight as to the initial appearance of an engagement gap.

Context

Individual demographic characteristics are related to civic engagement, though the direction and magnitude of the relationship varies between studies, and youth who are not civically engaged are at a disadvantage for developing positive outcomes in multiple domains. The next reasonable line of inquiry is to examine contexts that are related to civic engagement in order to assess whether specific experiences within, and characteristics of, different contexts are related to the civic engagement gap. The four contexts of interest in the current study are the family, the peer group, the school, and the neighborhood. Research examining how these four contexts are related to adolescent

civic engagement is briefly summarized here, a detailed description of each study is presented in Chapter 2.

Contexts Pertaining to Social Relationships

Family

Parent characteristics and practices may influence adolescents' civic outcomes through the modeling of civic behaviors and discussion of current events, social issues, and political topics. Youth with parents who volunteer are more likely to volunteer themselves (Hart et al., 2004) as well as be active in a group, vote, follow politics, boycott products, and sign a petition (Andolina et al., 2003). The association between parental behavior and youth civic participation is also evident over time (Zaff et al., 2003).

Young people from homes with frequent political discussion have higher levels of civic involvement (Andolina et al., 2003) and civic knowledge. Not only does more frequent youth-parent discourse relate to increases in youth civic knowledge, but the relationship is enhanced if parents have higher civic knowledge (McIntosh et al., 2007). Knowledge seems to be conveyed from parent to child, with higher parental knowledge predicting higher youth knowledge (Hart et al., 2004; McIntosh et al., 2007).

Peers

Social practices within peer groups, and specific social interactions with friends, predict many aspects of adolescent development including civic engagement. Having friends who participate in volunteer or political activities is related to higher intentions to participate in community-related and politically-related activities. Peer encouragement to participate in such activities is an especially strong predictor of adolescents' behavioral

intentions (Da Silva et al., 2004). Having peers that are supportive and communicative is related to civic activism and volunteering (Zaff et al., 2003) and more frequent discussion of politics or public issues with friends predicts higher participation in civic activities (Harell et al., 2008).

Studies on the role of social relationships provide some indication as to how parents and peers are related to civic engagement. Mechanisms include modeling civic attitudes and behaviors, providing support and encouragement, and providing opportunities to discuss political topics. Youth-parent discourse and youth-peer discourse seem to be particularly beneficial, probably because of the adolescent's active participation and construction of knowledge. Unfortunately, these studies fail to examine whether the family and peer contexts interact with other contexts to influence youth engagement. These studies also have weaknesses pertaining to measurement issues, which will be discussed in Chapter 2.

School Context

Schools play an important role in contributing to the civic knowledge and engagement of young people. Studying political topics in the classroom and perceiving a classroom climate that is open for discussion predict higher civic knowledge and voting intentions (Torney-Purta et al., 2007). As expected, taking civics courses also is related to higher civic knowledge (Lay, 2006; Niemi & Junn, 1998).

However, opportunities to learn through formal curriculum and the informal civic environment are not available for all students in all schools. Grave discrepancies exist in the availability of such opportunities for diverse groups of students, with white students and students from high-SES backgrounds receiving more civic learning opportunities in

formal and informal settings (Kahne & Middaugh, 2008). One line of research indicates that the gap in civic behavior between Latino and non-Latino students is reduced significantly when differences in school civic opportunities, such as studying political topics, are taken into account (Torney-Purta et al., 2007). Findings on schools' unequal provision of opportunities for the civic development of all American youth indicate that schools are contributing to the civic engagement gap. However, the more important implication is that schools have the potential to reduce the civic engagement gap between different groups of students.

In addition to the civic learning opportunities and environment in schools, there are other contextual factors that relate to civic engagement, such as school demographic characteristics. School characteristics that predict lower civic knowledge include exceptionally small or exceptionally large school size and higher proportions of students eligible for free lunch (Baldi et al., 2001). Within the normal range of school sizes, small school size has been found to relate to higher youth participation in community service, while large school size predicts lower participation in school-related activities such as sports and clubs (Lay, 2007).

Although research on adolescent civic engagement has examined the influence of distal contexts such as the school district, state, and nation (e.g., Campbell, 2007; Hart et al., 2004; Torney-Purta et al., 2008), there has been limited examination of the next proximal context—the neighborhood in which the school is located. According to Jencks and Mayer (1990), the neighborhood in which the school is located may have a considerable influence on all aspects of schooling. Oxley (2000) contends that schools are complex social systems that are influenced by occurrences and circumstances within

and outside their walls. Just as individual students should be considered within the contexts of schools, schools should be considered within the contexts of their own systems of influence. In the current study I examine the person-in-context and the school within the context of its surrounding neighborhood.

Neighborhood Context

Research indicates that social and economic characteristics of neighborhoods relate to adolescents' civic outcomes. In neighborhoods with college-educated residents, employed males, and adult mentors, adolescents have a stronger orientation toward service (Theokas & Lerner, 2006). Neighborhoods with a disproportionately large population of young people contain adolescents with lower civic knowledge but higher participation in volunteer work (Hart et al., 2004). The proportion of young people in a neighborhood and the poverty rate interact to further influence youth volunteering. In low-poverty neighborhoods, a high proportion of youth predicts higher instances of volunteerism, while in high-poverty neighborhoods a high-youth population predicts lower adolescent volunteering (Hart et al., 2004). Other research confirms that youth in high-poverty urban neighborhoods report lower participation in community service (Atkins & Hart, 2003).

Neighborhood racial diversity also is related to youth volunteering, but the effect differs. In racially diverse neighborhoods characterized by a black or Latino majority, higher diversity predicts higher youth volunteering. Conversely, in predominantly white neighborhoods, youth volunteer less as diversity increases (Hart & Fletcher, 2008). These findings provide evidence that neighborhood racial diversity is related to negative civic

outcomes only under some conditions, and also indicates the importance of considering multiple aspects of the neighborhood context.

Several studies that examine neighborhood effects do not use appropriate statistical techniques to account for the nested nature of the data (the same issue occurs with the research on school effects). The current study utilizes multilevel regression techniques that control for issues associated with single-level statistical techniques.

The observed association between neighborhood characteristics and civic knowledge and participation may be indicative of a contextual influence on schools' ability to recruit qualified educators (Connell & Halpern-Felsher, 1997; Jencks & Mayer, 1990), staff turnover, and the diversion of resources from educational programs to security measures (Elliott et al., 2006). However, the neighborhood context may affect other experiences, including interactions with teachers and opportunities to participate in stimulating out-of-class activities. Schools in disadvantaged communities may worsen the existing social inequities for their students; underqualified teachers, inadequate instructional materials, and insufficient academic and social experiences may contribute to civic alienation (Fine, Burns, Payne, & Torre, 2004). Instead, schools could serve as locations for youth to organize, collaborate with peers and adults, and develop civically (Balsano, 2005). These examples are just a few of the ways in which the school and neighborhood contexts may interact to influence adolescent development.

Interactions Between Contexts

As mentioned previously, and indicated in this brief review, there are multiple systems of influence on the civic engagement of adolescents. However, few studies examine multiple contexts, and even fewer examine the interaction between those

contexts. The most notable limitation of the literature on context effects on youth civic engagement is the failure of nearly all of the studies to examine multiple contexts, and to examine how the contexts interact for a compounded influence on youth. There are two notable exceptions, discussed further below.

Kahne and Sporte (2008) examined how multiple contexts were related to adolescents' commitment to civic participation in a Chicago-based sample of eleventh graders. Students who discussed current events and politics with their parents, whose peers supported their academic achievement, and who reported higher instances of social capital in their neighborhood had higher civic commitments. Feeling a sense of belonging in the school and access to civic learning opportunities were both related to a higher commitment to civic participation. The school context variables attenuated the positive influence of the family and neighborhood context variables. Although this study appropriately considered the role of multiple contexts, the findings are only generalizable to high-minority, low-income settings.

The second study examined the role of multiple contexts, and more specifically the interaction between variables from multiple contexts, in a sample of students from Maryland and Virginia. Lay (2006) considered how political knowledge was influenced by student characteristics, the frequency of political discussion with family and friends, number of civics courses taken, and the population density and poverty level in the neighborhood surrounding the school.

Lay (2006) found two interactions. In the first interaction, low-SES students generally had lower political knowledge, but neighborhood urbanicity moderated the relationship. In comparison to low-SES youth in non-urban areas, low-SES youth in

urban areas had lower civic knowledge. However, adding the predictor of political discussion reduced the cross-level interaction to non-significance. Low-SES students still had lower political knowledge, but the relation was not affected by the neighborhood characteristic.

In the second interaction, Lay (2006) reported that more frequent political discussion with family and friends was related to higher levels of political knowledge. This relationship was not as strong in urban areas, but was particularly strong in high-poverty neighborhoods, indicating that political discussions with others had an enhanced benefit on knowledge in impoverished neighborhoods. Note that this study is the only study to examine the school's neighborhood rather than the neighborhood of the adolescent's home residence.

While this study provides evidence for the importance of including multiple contexts to further understand the relation between demographic variables and civic outcomes, the measures are not very strong and the sample is restricted to a particular geographic area. In the current study, more process-related measures are examined and the sample is not limited to a specific city or region.

In this section I have presented the emerging literature on the influence of multiple contexts on adolescent civic engagement. Only two studies included all four contexts considered to be important for civic outcomes, and only one of those studies deliberately examined interactions between contexts. When examining adolescent development it is important to consider several contexts of influence, including the manner in which those contexts are related to each other. Adolescent development is simultaneously influenced by individual cognition and characteristics, as well as the

support systems of families, peers, schools, and neighborhoods (Feinstein & Peck, 2008).

Including multiple contexts in an investigation of adolescent development, especially the

interaction between those contexts, can provide very rich and informative findings.

Theoretical Perspectives on Context Effects

It is apparent from the research discussed here that there are numerous influences

on the civic engagement of adolescents, including characteristics of the adolescents

themselves, their civic experiences in school, at home, and with peers, and characteristics

of the school and neighborhood contexts. To explain the nature of these contextual

influences, I utilize Bronfenbrenner's (1979) ecological systems theory in my

examination of context effects on youth civic engagement. According to this theoretical

perspective, it is the interactions between multiple systems of influence, in proximal and

distal environments, that affect adolescent outcomes. Not only do these systems (also

termed contexts) interact with each other, but the individual has a bidirectional

relationship with each system, meaning that individuals play a significant role in the

effect their environment has on them. It is the relationships between adolescents and

contexts of civic influence that I am investigating in the current study.[1] One of the assets

of using an ecological approach is that it does not merely involve examining qualities or

characteristics of individuals or systems. Rather, the interaction between individuals and

systems is the most important focus (Kelly, Ryan, Altman, & Stelzner, 2000).

Although ecological systems theory is inclusive of all contexts of influence, by

nature it also contains a lack of specificity about the processes that are responsible for the

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[1] To be precise, I am not examining the bidirectional nature of relations between adolescents and their
environment. I am examining whether the relations between adolescent demographic characteristics and the
outcomes are at all influenced by measures of the adolescent's environment. An interaction exists if the role
of context varies depending upon aspects of the individual adolescent.

contextual influences. Therefore, I employ concepts from related theories in order to identify specific processes by which contexts of influence are related to adolescents' civic outcomes. I draw from Lave and Wenger's (2002) model of situated learning to understand the manner in which schools and the environment within schools may affect individual students. To further understand the processes involved in neighborhood effects, including the social influence of parents and peers, I incorporate concepts proposed by Jencks and Mayer (1990). The incorporation of concepts from these theories contributes to a more comprehensive model on the nature of context effects.

<div align="center">Summary</div>

It is well-established that civic engagement, including its cognitive, psychological, and behavioral components, is an indicator of positive development for adolescents. Additionally, civic engagement is related to the development of other positive outcomes during adolescence and continuing into adulthood. What is less evident is the nature of contextual influences, especially of school and neighborhood, including how characteristics of these contexts may differentially benefit (or harm) particular groups of students. This study is not only an investigation into the influence of multiple contexts, but it also speaks to the broader issue of inequality in preparation for civic engagement. Indeed, if a civic engagement gap exists in the United States, as proposed by other researchers, it is essential to first understand the nature of the gap, and second to develop strategies and policies to narrow the gap. Any gap in civic engagement is a threat to the ideals on which a democracy is based (Levinson, 2007), including representation for all members of a society and equal opportunities for success and achievement.

In the current study I examine contextual influences on four outcomes pertaining to adolescents' civic knowledge, attitudes, and anticipated behaviors. The reasons for selecting a range of civic outcomes are twofold. First, civic engagement is a multifaceted construct including civic knowledge and understanding, democratic values, and intent for active participation. Given that certain aspects of engagement may have more salience for particular groups of people, it is important to examine multiple ways in which young people may be civically engaged. Second, each context may affect aspects of civic engagement differently (e.g., school practices having a stronger relation to knowledge than behavior), therefore it is more useful in deriving policy and practice implications to consider multiple civic outcomes. The outcomes examined include: civic knowledge, support for the rights of ethnic minorities, anticipated voting behavior, and anticipated participation in community and service activities. In order to understand the complex interplay of multiple contexts I include predictors that pertain to the individual adolescent, the family, peers, the school, and the neighborhood in which the school is located.

I am incorporating a range of predictors and civic outcomes in an effort to delineate the specific role that schools and neighborhoods have in preparing young people for different aspects of civic life. The primary goal is to understand how school and neighborhood characteristics interact with each other (and with individual characteristics) in order to make informed recommendations for how school practices and curricula can facilitate the development of positive civic outcomes for diverse groups of students. Contextual influences on youth civic engagement will be addressed as outlined by the research questions that follow.

Research Questions

1. How are individual demographic characteristics and civic-relevant experiences

   (with parents and peers and in school) related to adolescents' civic knowledge,

   attitudes, and behavior?

   a. To what extent are student gender, race, socioeconomic status, and

      immigrant status related to each civic outcome? Is the relation between

      each demographic characteristic and the civic outcome constant or does it

      vary between schools?

   b. To what extent are student confidence in school participation, perception

      of open classroom climate, experiences learning civic topics, experiences

      discussing politics with their parents, experiences discussing politics with

      their peers, and time spent with peers related to each civic outcome? Is the

      relation between each civic-relevant experience and the civic outcome

      constant or does it vary between schools?

2. How are the demographic characteristics and civic environments of schools

   related to adolescents' civic knowledge, attitudes, and behavior?

   a. To what extent are school demographics, such as average student

      socioeconomic status, related to each civic outcome?

   b. To what extent is the civic environment of schools, including average

      level of confidence in school participation, average perception of open

      classroom climate, and average reports of school curriculum, related to

      each civic outcome?

c. To what extent are the demographic characteristics and civic environments of schools associated with the strength of the relationship between individual demographic characteristics and each civic outcome?

d. To what extent are the demographic characteristics and civic environments of schools associated with the strength of the relationship between individuals' civic-relevant experiences and each civic outcome?

3. How are structural characteristics of neighborhoods related to adolescents' civic knowledge, attitudes, and behavior?

a. To what extent are neighborhood characteristics, including affluence, poverty, racial diversity, and immigrant population, related to each civic outcome?

b. To what extent are neighborhood characteristics associated with the strength of the relationship between individual demographic characteristics and each civic outcome?

c. To what extent are neighborhood characteristics associated with the strength of the relationship between individuals' civic-relevant experiences and each civic outcome?

d. To what extent do neighborhood characteristics interact with the demographic characteristics and civic environment of schools for a moderated relation with each civic outcome?

These questions are addressed using a series of hierarchical linear models, which allow for a precise estimate of individual-level and school-level "effects" on adolescent civic engagement. Separate analyses are conducted for civic knowledge, support for

ethnic minorities' rights, anticipated voting, and anticipated community participation. The predictor variables in these analyses include adolescent gender, race, SES, and immigrant status; adolescents' political discourse with parents and peers and time spent with peers; adolescents' civic experiences in school and civic topics learned; school composition related to average SES, and average civic environment and curricula in schools; and neighborhood affluence, poverty, and composition based on race and foreign-born residents. Further discussion of this study's methodology is presented in Chapter 3.

CHAPTER 2

THEORETICAL FRAMEWORK AND REVIEW OF THE LITERATURE

In the current study I examine contextual influences on the civic engagement of 14-year-olds. I am interested in the association between social relationships (in families and peer groups), social environments in which young people spend much of their time (schools and neighborhoods), and adolescent civic engagement. The other subject of interest is whether these influences are uniform for different groups of students. In order to formulate the study it is important first to discuss theories that explain how these contexts can have an influence and second, to review research that examines the effects of each context.

This chapter starts with an introduction of a theoretical framework that will be used to justify and interpret context effects. Next, I define civic engagement and describe specific aspects of this construct. Then I describe how civic engagement is related to other positive outcomes and report demographic characteristics typically associated with engagement. I will then summarize research on the association between families, peers, schools, neighborhoods, and youth civic outcomes, including brief mention of research on other youth outcomes that considers the interaction between contexts. I conclude with a summary and critique of the reviewed literature and a statement of the contribution to be made by this study.

Theoretical Framework

The idea that human development is dynamic and influenced by processes and mechanisms in multiple contexts is consistent with many theoretical positions. In particular, ecological systems theory posits that individuals learn and grow as a result of

multiple interacting systems of influence (Bronfenbrenner, 1979, 2005). Interactions

between persons, processes, and institutions occur in the individual's proximal and distal

environments. A specific aspect of this theoretical perspective is Bronfenbrenner's (1989)

person-process-context model. According to this model, "developmental outcomes and

processes vary as a joint function of the characteristics of the person and of the

environment" (Bronfenbrenner, 1989, p. 200). Otherwise stated, outcomes vary as a

function of characteristics of the person as well as their family, peer group, school, and

neighborhood. In addition to aspects of the developing person and systems of influence,

the proximal processes inherent in these systems affect the person's development.

In addition to the ongoing interaction between the individual and the systems (or

contexts) of influence, the systems also are interdependent. Indeed, development is

affected by the direct influence of each context, as well as the indirect influences of distal

systems operating through more proximal systems. The nested systems of the ecological

model include the individual's microsystem, mesosystem, exosystem, and macrosystem.

The system that is most proximal to the adolescent is the *microsystem*. The

microsystem includes individuals and societal institutions that directly interact with youth

through interpersonal relationships and patterns of activity (Bronfenbrenner, 1989).

Because of their proximity to the individual, components of the microsystem directly

affect development. Different aspects of the microsystem environment are more salient

depending on the age of the individual. For young children, the family and home have the

largest influence, but as children age and explore their surroundings they experience

additional influences, including school, peers, and the surrounding community. The

influence of each context may change over time, especially given added interactions with other contexts.

In the current study, all four contexts are deemed part of the adolescent's microsystem. Bronfenbrenner (1986) originally posited that the neighborhood was a distal environment that only had an effect through proximal people and institutions. Therefore, the neighborhood was placed in the exosystem and deemed to influence the adolescent primarily through the influence on the family. However, extensive research on neighborhood effects on adolescent development indicates that the neighborhood directly influences development in multiple domains (as reviewed in Wilkenfeld, 2007). Just as characteristics of parents and family processes influence development, characteristics of neighborhoods and patterns of activity influence adolescents. Consistent with current research, the neighborhood will be examined as a microsystem component in the adolescent's ecological environment. Whether this assumption is appropriate will be revealed by findings of direct and indirect effects (direct effects indicating a microsystem setting, indirect effects indicating an exosystem setting) and will be revisited at the conclusion of the study.

The interactions between individuals and settings of the microsystem make up the adolescent's *mesosystem* (Bronfenbrenner, 1989). In the mesosystem, relationships between multiple settings have the potential for an additional influence on development. For example, the connection between school and neighborhood contexts can contribute to adolescent development, in addition to each context's individual contribution. Relationships in the mesosystem can foster development through increased support and interaction among relevant individuals and settings, therefore problems can arise when

these connections are not forged. Insufficient connections between microsystems can lead to an impoverished mesosystem, in which the potential positive contributions of microsystem relationships to development are essentially lost (Muuss, 1996). For example, a strong connection between the school and neighborhood benefits students because community members may volunteer at the school or monitor adolescents as they leave school each day. Likewise, schools that are connected to the local neighborhood may coordinate service-learning programs to increase student involvement in the community, or work-study programs that allow students to earn school credit for part-time employment. The linkage between the two contexts benefits students because it increases their access to resources and exposure to adult role models. Conversely, a lack of connection between school and neighborhood might discourage community members from helping out at the school and make it harder for students to work or volunteer in the community. An additional potential problem in the mesosystem occurs when microsystems endorse values or behavior that conflict either with each other or with the larger macrosystem (Muuss, 1996).

The *exosystem* also involves the interaction between individuals and settings, however only one component of the relationship is from the adolescent's microsystem. Since a necessary requirement for being contained in the exosystem is that one of the aspects is not in a person's microsystem, the influence of relationships and processes in the exosystem on development is indirect (Bronfenbrenner, 1989). One frequently mentioned exosystem is the connection between an adolescent's parents and the parents' workplace. Although young people would not directly interact with their parents' place of work, it is likely that parents' participation in or interaction with their job (such as the

amount of time spent at work and the physical and psychological effort expended) will be relevant to their child's development. Also included in the exosystem are local school boards, community groups, and any institution that indirectly affects adolescents. Public policies that affect youth, often through their school and families, can be found in the exosystem. Policy examples include local policies on the proportion of tax revenue allocated to schools and state policies regarding the maximum income level for students to receive free lunch at school.

The most remote system of influence on adolescent development is the *macrosystem*. The macrosystem includes the overarching patterns of beliefs and practices that characterize the broader social context and frame other systems of influence. Although the effect is indirect, these larger societal processes permeate all stages and domains of development because they are by definition a "societal blueprint" (Bronfenbrenner, 1989, p. 228).

Bronfenbrenner's (1979, 1986, 1989, 2005) ecological systems theory has influenced research and theory in human development and has served as the foundation for social policies that benefit children and adolescents (Weisner, 2008). The principle that people develop within the context of multiple influences enhances our understanding of human development. However, the theory is almost too inclusive in that it encompasses each and every system of influence and any possible interaction between those systems. Every single influence and every single interaction cannot possibly be tested at the same time, therefore, the theory can never really be disproven. At most, research can examine a few characteristics or processes from each system of influence to get an estimate of how they collectively contribute to development.

Another limitation of a theory that is inclusive of all influential contexts is that, by nature, the theory contains a lack of specificity. Although theories that focus on the dynamic interactions between multiple systems of influence are more complex, nuanced, and balanced than developmental theories that are unidimensional in their explanations of development (Lerner, Wertlieb, & Jacobs, 2005), it is important to examine specific processes within those systems. It is the processes that more fully explain how multiple systems influence development.

Although proximal processes are a key concept in ecological systems theory, Bronfenbrenner was not always explicit in his description of such processes. Therefore, to enhance understanding of the mechanisms by which persons and institutions in multiple settings influence development, I incorporate concepts proposed by researchers who examine processes within specific contexts. Concepts from Lave and Wenger's (2002) model of situated learning can be used to explain the manner in which schools, especially the environment within schools, affect individual students. I also utilize concepts from Jencks and Mayer (1990), who examined mechanisms for neighborhood effects, including aspects of interactions with family members and peers. In the following section I describe these concepts, including how their incorporation in the current study can inform our understanding of how contexts, and processes inherent in the contexts, influence development.

Proximal Processes

Processes Inherent in Schools

Lave and Wenger (2002) proposed a model of situated learning in which learning is discussed in terms of social participation rather than the more common conception of

academic learning. Specifically, children and adolescents are actively involved in the practices and processes of social communities that have common goals. Through involvement in these social communities, termed *communities of practice*, youth construct individual identities, find meaning, and learn skills as they relate to the specific communities (Kirkup, 2002; Wenger, 1998).

Participation in communities of practice involves learning through social participation, rather than isolated learning in classrooms. In this model, communities refer to relationships and practices within groups of people rather than geographical location. The school is a community of practice that is particularly relevant to civic engagement. Schools, through their curricula, teaching practices, and especially the environment, communicate and exemplify the value of civic knowledge and engagement. Wenger asserted that in schools, "in spite of curriculum, discipline, and exhortation, the learning that is most personally transformative turns out to be the learning that involves membership in these communities of practice" (Wenger, 1998, p. 6). A discussion of the four components of the situated learning model will clarify which specific processes in the school community may facilitate civic development.

There are four components that characterize social practices and processes of learning: community, identity, meaning, and practice. *Community* involves "learning as belonging," through being part of a specific school, family, or peer group (Kirkup, 2002; Wenger, 1998). Through processes involved in belonging to a school community, youth learn that participation in the school itself is worthwhile and that processes are to be valued and maintained. Adolescents may translate this sense of belonging to participation

in civic life and an understanding that belonging to larger groups, such as a nation's citizenry, also is important and worthwhile.

Identity pertains to "learning as becoming;" both becoming an individual and becoming part of the group. One develops his or her own identity in the context of a community of practice through common ideals and experiences (Kirkup, 2002; Wenger, 1998). The acquisition of shared histories and goals facilitates the development of a social and personal identity. If adolescents are to create civic identities through learning they must learn about group members' perspectives on civic topics, relate to the groups' goals, and identify with the civic culture and practices of the group.

Meaning involves "learning as experience;" or developing individual and collective skills and knowledge through discourse and experiences (Kirkup, 2002; Wenger, 1998). Communities of practice convey the meaning of various experiences, which relates to the manner in which schools can make meaning out of civic engagement. Within schools, students, teachers, and administrators construct experiences. Such experiences include practices labeled as "democratic," the communication of attitudes toward social and political issues, and the discussion of the impact that individuals can have on society. Discourse and actual experience are vital to civic development; it is often the informal aspects of school-based citizenship education that contribute to more meaningful civic understanding.

Practice enables students, through "learning as doing," to make the transition from observation to action. This involves actual engagement with community activities and processes (Kirkup, 2002; Wenger, 1998). In terms of civic engagement, practice may be the most important component. Youth need to participate in school processes and

activities that pertain to civic engagement, such as participation in student government and other school-sponsored activities (e.g., newspaper, sports, and clubs). Through these activities, students contribute to the maintenance of the school community and hopefully infer how they can contribute to the maintenance of the larger society.

The model of situated learning complements ecological systems theory because of the focus on learning as group-based processes and experiences. It is the processes inherent in schools and neighborhoods in which I am particularly interested.

Processes Inherent in Neighborhoods

Researchers have proposed that there are processes within neighborhoods that promote positive outcomes for community members, such as cohesion, integration, social control, and shared community values (Sampson, Raudenbush, & Earls, 1997; Sampson & Groves, 1989). Of course, there are also processes proposed to impede positive outcomes, such as social disorganization (Shaw & McKay, 1942), isolation, ineffective social resources, and constraints in job opportunities (Wilson, 1987).

Jencks and Mayer (1990) proposed five possible mechanisms by which neighborhoods influence development, two of which are particularly relevant to the current study. *Collective socialization* pertains to social control in the neighborhood and the home with adults serving as role models for positive and negative behavior. Adults serve as role models by modeling attitudes and behaviors for young people either by intent or implicitly. Positive attitudes and behaviors modeled by adults include behaving in accordance with conventional values and being employed, while negative models include social deviance, unemployment, and crime (Wilson, 1987). In a similar vein, the *contagion* mechanism refers to the transmittable and self-reinforcing nature of peer

norms and behaviors within groups. Just as adults model attitudes and behavior that are prevalent in the neighborhood, peers serve as models for positive and negative attitudes and behavior.

The other mechanisms by which neighborhoods may have an influence pertain to resources in the neighborhood: the accessibility of *institutional resources* may affect development though youth interactions with community structure and organizations, including the availability of opportunities (e.g., high quality schools) versus risks (e.g., abandoned buildings), *competition* over limited resources, and feelings of *relative deprivation* when comparing oneself to other residents of the neighborhood (Jencks & Mayer, 1990).

The collective socialization and contagion processes are most relevant to the current study because of the implication that neighborhood effects on adolescents' civic engagement operate through interpersonal influences. In neighborhoods where residents are politically aware, participate in organized community groups, and view civic participation as a right and a responsibility, youth will be exposed to the kinds of experiences that enhance civic development. This exposure, and the modeling of civic attitudes and behavior, occurs throughout the neighborhood, in the home with family members, and through interactions with peers.

Torney-Purta (1995) described how socialization processes, particularly in relation to political socialization, occur through interactions with parents and peers. Adolescents start with cognitive structures (based on prior experience, biological development, and several other factors), but cognition is changed through exposure to new ideas or perspectives, reading about political topics, and discussion of political and

social issues. Through social relationships, adolescents participate in the collaborative construction of knowledge; meaning that cognitive structures are created and changed when young people interact with others. Of course, some will not change and will continue to serve as the lens through which new information is interpreted. Therefore, political socialization processes are not imposed onto young people, but rather youth are active participants in the construction of their political knowledge, ideals, and values.

The mechanisms proposed by Jencks and Mayer (1990) provide specific processes that may account for the different ways in which neighborhood characteristics relate to civic engagement. The concepts I have taken from this model, and from the model of situated learning, provide more specific explanations for contextual influences on adolescent development.

Comprehensive Model of Context Effects

Utilizing ecological systems theory as the broad foundation for my study, I also draw concepts from related theories to inform as to the specific nature of contextual influences. The model I have developed for the complex interactions between adolescents and multiple systems of influence is depicted in Figure 1 (note that this figure represents a conceptual model and an analytic model is depicted in Chapter 3). As indicated by the model, the demographic characteristics of individuals and their experiences in schools are expected to be directly related to their civic outcomes. Additionally, the contexts of relationships with others, the school, and the neighborhood are hypothesized to have direct effects on youth civic outcomes. However, the school and neighborhood environments are expected to interact with each other, and to interact with characteristics of individual students, for additional effects on youth civic engagement.

Figure 1. Conceptual model for individual and context effects on adolescent civic outcomes

(direct effects are indicated by solid paths, interactive effects are indicated by dashed colored paths)
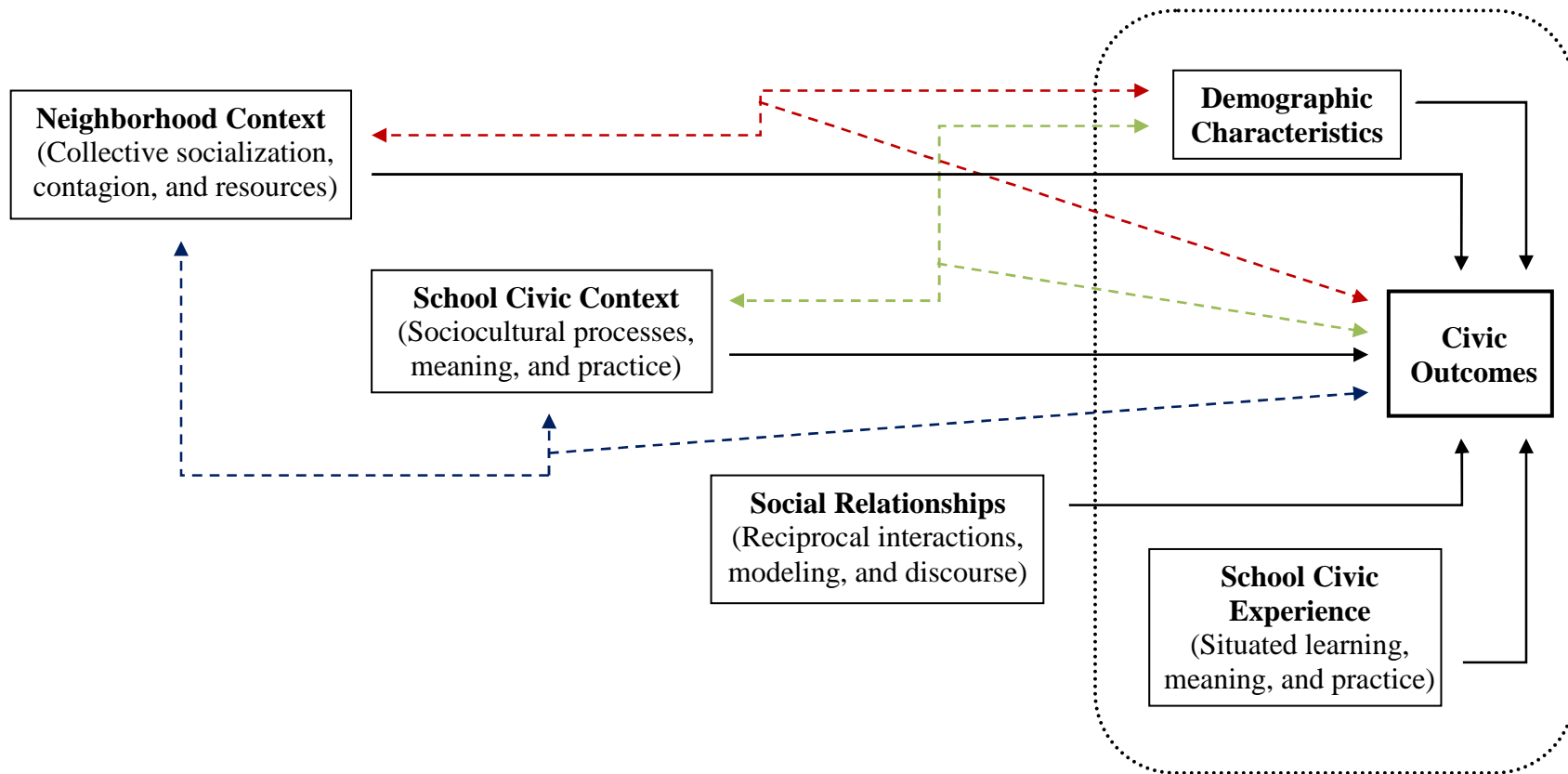
Civic Engagement

Definition of Civic Engagement

Youniss et al. (2002) propose that a broad definition of civic competence allows for an investigation into the continuum of formal and informal engagement and knowledge. Additionally, a broad definition is supported by empirical data in that different aspects are often found to be interrelated. Different forms of engagement are highly correlated when examined concurrently (Galston, 2001; Torney-Purta et al., 2001), and early civic engagement predicts continued engagement later in life (Hart et al., 2007). Civic competence includes "an understanding of how government functions, and the acquisition of behaviors that allow citizens to participate in government and permit individuals to meet, discuss, and collaborate to promote their interests within a framework of democratic principles" (Youniss et al., 2002, p. 124).

In the current study, adolescents' civic engagement signifies their civic competence (terms used interchangeably by other researchers) and ability to be functioning members of society. Civic engagement includes civic knowledge, civic skills, civic attitudes, and civic participation. Civic knowledge involves the comprehension of facts pertaining to domestic and international history and government (Rubin, 2007), as well as fundamental democratic principles (Torney-Purta, 2002). Civic knowledge often is assessed by asking students to complete a series of test items on a country's history, the functioning of the government, and current political figures. Related to civic knowledge, and sometimes even a subcategory of knowledge, is civic skills. In comparison to knowledge of specific content, civic skills represent an ability to apply knowledge. For instance, civic skills can be used to interpret political communication (Torney-Purta,

2002) and public communication (McIntosh et al., 2007). In most cases civic knowledge would enhance the effectiveness of civic skills, and the exercise of civic skills would increase knowledge.

Civic knowledge is related to civic attitudes and civic participation in that higher knowledge is associated with more democratic attitudes and more active participation (Galston, 2001). Civic attitudes pertain to beliefs about democratic societies, including the rights and responsibilities of the government and members of society. Civic participation, or civic behavior, is often what researchers are interested in because it is the most obvious civic outcome for a citizen, especially for adults. Civic behavior refers to formal and informal involvement in political and civic institutions, including activities such as voting, volunteering, and attending a political rally.

I have described how there are distinct aspects of civic engagement, but also how they are interrelated. Often, the components of civic engagement are either correlated or predictive of each other (though this is not always the case, partly depending upon the analysis). Individually, each is seen as an indicator of positive development because it is reflective of the successful acquisition of knowledge and skills, as well as interest in and capability of being a functioning member of society. In addition, aspects of civic engagement are related to positive outcomes in other developmental domains.

Civic Engagement and Other Aspects of Positive Development

Many studies have examined how adolescents' civic engagement is related to other aspects of positive development, including social-justice oriented attitudes and behaviors, psychological functioning, and educational achievement and attainment. This research provides evidence that civic engagement, in addition to being a positive

outcome, is related to the development of other positive outcomes (controlling for

confounding factors such as family income and education). Specific examples are

illustrated throughout the review.

Civic Knowledge

The IEA Civic Education Study, conducted in 1999 in 28 countries, tested and

surveyed 90,000 14-year-olds for measures of civic knowledge, attitudes, and behavior.

In every participating country, student civic knowledge (based on a 38-item assessment)

predicted their expectations of future voting behavior (Torney-Purta et al., 2001). In other

analyses of the international dataset (limited to 27 of the participating countries), higher

civic knowledge was linked to more positive attitudes toward the rights of immigrants

and stronger support for the importance of social-justice related citizenship participation

(Torney-Purta et al., 2008).

Participation in Civic Activities

Most of the research on the association between civic engagement and other

positive outcomes has focused on youth participation in volunteer work. This aspect of

civic participation seems an appropriate focus given that community participation is the

most accessible form of civic engagement for young people, and youth volunteerism has

been steadily increasing (Lopez et al., 2006; National Conference on Citizenship, 2006).

The constant increase in youth volunteering may be attributed to the nature of volunteer

work, which is that it inherently provides models for positive behavior. Young people

also could be frustrated with other aspects of civic participation that do not provide

immediate feedback or reinforcement (such as sending letters to political leaders).

Regardless of the reason, volunteering is a common activity for young people and therefore is the outcome of interest for many studies.

Utilizing a representative community sample in St. Paul, Minnesota, Johnson et al. (1998) examined the precursors and long-term effects of volunteering for 1,000 ninth-grade students. Students with higher grades, educational plans and aspirations, and intrinsic motivation in the ninth grade were more likely to volunteer later in high school. For students who volunteered at any point throughout high school, by senior year they had higher intrinsic work values (such as autonomy, responsibility, and skill acquisition), higher value placed on the importance of, and higher value placed on participation as a citizen in the community. This study's contribution is that it looks at the developmental nature of civic engagement, indicating how volunteering is related to positive outcomes years later. However, the findings must be interpreted in light of the location of the study, and only can be generalized to that particular city.

In another longitudinal study in one geographic location, Reinders and Youniss (2006) examined how the community service experiences of 600 eleventh graders predicted their civic engagement one year later. Note that the sample is limited to students attending two affluent Catholic high schools in the Washington, DC suburbs. Students were mandated to participate in community service, but could select what type of service (e.g., coaching or mentoring, environmental work, or physical labor). Community service in which youth directly interacted with people in need was related to subsequent intentions to vote, participate in volunteer work, work on a political campaign, and boycott a product. Participating in service in which adolescents directly interacted with persons in need also was associated with increases in students' self-

awareness and helping behavior. The finding that the context in which service occurs predicts what students gain from the experience illustrates how aspects of the environment may influence cognition and behavior.

Other longitudinal studies have employed large-scale datasets to examine how civic engagement in high school is related to positive outcomes later in life. The strength of these studies is that, unless the analytic sample differs from the full sample in important characteristics (e.g., gender or race), the findings can be generalized to the U.S. population. Dávila and Mora (2007b) utilized data from the National Educational Longitudinal Study (NELS) to examine whether participation in community service or student government was related to the academic outcomes of over 15,000 students. NELS is a five-wave longitudinal study, occurring from 1988 to 2000. In 1988 the students were in eighth grade (n = 25,000) and by 2000 most had been out of high school for eight years. Indeed, participation in community service and high school student government both predicted academic achievement in three of four subjects (mathematics, science, and history, but not reading). Although mandatory and voluntary community service both predicted academic progress, the relation between voluntary service and progress was slightly larger. In terms of long-term associations with youth civic engagement, participation in mandatory community service, voluntary community service, eighth grade student government, and high school student government all were related to higher odds of graduating from college (all of these findings are controlling for student demographics including SES).

Also using NELS data, Hart et al. (2007) examined the enduring (or long-term) relations between civic knowledge, community service participation, and participation in

extracurricular activities in adolescence with civic participation in early adulthood. Examining how civic engagement and knowledge in twelfth grade (wave three of the study; 1992) predicted civic outcomes eight years later (wave five; 2000), brought the sample to over 12,000 cases with available data. The analyses revealed lasting relations for four outcomes pertaining to voting and volunteering behavior.

Civic knowledge in twelfth grade and participation in any kind of community service (voluntary, required, or a mix of the two) predicted later voting behavior in local and national elections. Voting in national elections also was predicted by high school involvement in any kind of youth activity, including student government, sports, and clubs (Hart et al., 2007).

Twelfth grade participation in any kind of activity, but especially as a leader in an instrumental activity (such as student government or newspaper), participating in a mix of voluntary and required service, and frequency of service all were positive predictors of volunteering in a civic or community service organization as an adult. Additionally, almost all twelfth grade civic predictors were positively related to whether someone volunteered in a youth organization eight years later. Although small in magnitude, civic knowledge was a negative predictor (Hart et al., 2007). It is interesting that civic knowledge was a positive predictor of voting in local and national elections, did not predict volunteering in a community service organization, and was a negative predictor of volunteering in a youth organization. At some point, knowledgeable high-school students become more interested in formal civic participation (voting) than informal aspects of participation (volunteering).

Not only do civically-participative students have higher rates of positive outcomes, but they also exhibit lower levels of negative outcomes. A study on over 7,000 sixth-, eighth-, and tenth-grade students in Italy examined the manner in which civic participation was associated with youth problem behavior (Vieno et al., 2007). Civic participation was defined as participating in an organization; however in this study it was more accurately described as participation in a religious organization. Across age groups, students who were involved with an organization one to four days a week reported significantly lower instances of bullying, getting into fights, and substance use than students who were involved less than one day a week. The fact that these students were primarily participating in a religious organization is one explanation for their low levels of problem behavior. However, the findings also suggest that organizational participation is somehow related to the suppression of negative behaviors. As with many of the studies conducted in the U.S., this particular study is limited to one region in Italy (and the authors note the affluence of the region).

Across these studies, civic knowledge and civic participation predict positive outcomes in several domains (as well as lower levels of negative outcomes). The relation is not always constant, meaning that every aspect of civic engagement is not necessarily associated with every positive outcome, which provides support for the proposition that civic engagement is by nature multidimensional.

Implications

The connection between civic engagement and positive outcomes in other aspects of development indicates that youth who are not civically engaged are at a disadvantage in terms of developing these other positive outcomes. Of course it can be argued that

youth who are already expected to have more positive outcomes (such as youth with

highly-educated parents) may self select into civic activities. However, as these studies

indicate (by holding the effect of demographic characteristics constant), participation in a

range of civic activities predicts positive outcomes across all types of young people.

Though fewer than half of the studies reviewed are nationally representative, the

implication of the findings is that those who do not participate are less likely to acquire

the same benefits as the actively engaged youth. In the subsequent section I will describe

characteristics of civically engaged and disengaged youth in order to ascertain which

youth are receiving such benefits, and which youth are not. These findings serve as the

basis for a later discussion on contexts that may be accountable for these differences.

Demographic Characteristics Associated with Civic Engagement

As previously discussed, different aspects of civic engagement indicate

preparedness for functioning citizenship and are related to other measures of success.

Here I provide evidence that adolescents display different levels of civic outcomes, based

on their demographic characteristics, indicating disparate preparedness for civic life.

Group Differences in Civic Knowledge

One outcome that is particularly important (for reasons already discussed) is civic

knowledge. The U.S. Department of Education recently tested the civic knowledge of

fourth, eighth, and twelfth graders through the 2006 National Assessment of Education

Progress. The NAEP is a measure of the achievement of children and adolescents in

multiple subject domains, and findings based on the assessment scores can be generalized

to the U.S. population.

NAEP civics scores for eighth-grade students indicate that white and Asian students score higher on tests of civic knowledge (average scores of 161 and 154, respectively) than black, Latino, and American Indian students (average scores of 133, 131, and 127, respectively), though it should be noted that scores have increased since 1998 for all racial groups. Higher parental education and family income were both associated with higher civic knowledge, but there were no gender differences (Lutkus & Weiss, 2007).

Although not the main focus of the research, many studies utilizing large-scale datasets find group differences in civic knowledge (these studies and their measures are detailed in a later section). Researchers have found that students from high-income families have higher civic knowledge (McIntosh et al., 2007), while females, Latinos, and black youth have lower civic knowledge (Atkins & Hart, 2003). However, in another study the racial gaps in civic knowledge were not significant when parental civic knowledge was taken into account (Hart et al., 2004). Considering immigrant status, Torney-Purta et al. (2006) reported that, in comparison to Latino native-born youth, Latino immigrants had higher civic content knowledge but lower civic skills.

Group Differences in Civic Behavior

In accordance with the literature on group differences in civic knowledge, gaps are prevalent in youth participation in civic behavior. The Corporation for National and Community Service (CNCS) conducted a large study on the civic attitudes and behavior of approximately 3,200 12- to 18-year-olds nationwide. Results from the 2005 Youth Volunteering and Civic Engagement Survey indicate the existence of a social class-related engagement gap. Civic outcomes differed for youth from disadvantaged

circumstances (youth were considered disadvantaged if they lived at or below 200 percent of the poverty line) and non-disadvantaged youth. Black, Latino, and immigrant youth were overrepresented in the disadvantaged group, as were young people whose parents had a high school education or less. Disadvantaged, or low-income, youth reported lower levels of current volunteerism, as well as lower intentions to participate in future volunteer work and to vote once eligible (Spring et al., 2007). It is unclear why the researchers only reported differences based on whether youth lived below the poverty line when additional demographic characteristics could have been examined. Although there is brief mention of the proportion of students in each group, based on race, immigrant status, and parental education, these characteristics were not investigated specifically for a relation to civic outcomes.

Certainly a portion of the disparities in civic outcomes between low-income and other youth is related to opportunity structures. In their families, low-income youth essentially do not have as many models for civic engagement. According to the CNCS data, while 44 percent of other young people had a parent who volunteers, only 27 percent of low-income youth had a volunteering parent. Pertaining to the school, 31 percent of low-income youth had participated in school-based community service or service-learning and 35 percent participated in school clubs or youth groups. In contrast, among other young people, 40 percent had participated in service and 53 percent participated in clubs or groups (Spring et al., 2007). Of course, low-income parents also have insufficient opportunity structures, which is described by Delli Carpini and Keeter (1996).

Dávila and Mora (2007a) examined group differences in adolescents' civic participation with a focus on the demographic characteristics of gender and race. Utilizing data from the 1988-1992 NELS (with a sample of 15,340 high-school students) the researchers found that female adolescents had higher participation rates in community service and student government than males. Considering race, Asian students had the highest rates of both types of civic participation, followed by white, black, and Latino students. Since this sample is nationally representative the findings have important implications regarding the groups of students who should be targeted for programs aiming to increase student activity involvement. Therefore, it is unclear why the examined characteristics were limited to gender and race. Gender and race often are predictors of adolescent outcomes, but so are parental income and education, as well as immigrant status. Including a comprehensive set of demographic characteristics would enable an examination of which characteristics were most important for which outcomes.

Utilizing data from the 2002 CIRCLE Council for Excellence in Government National Youth Survey and the 1972-2000 Current Population Survey (CPS), Lopez (2003) focused on the civic behavior of Latino youth and adults. The CIRCLE survey involved 1,500 15- to 25-year olds, while the Current Population Survey is a national survey of adults of all ages. In the CIRCLE data, Latino youth were least likely to believe that voting is an important activity and to think they could solve problems in their community. Unfortunately, numbers were not given for different age groups, revealing the researcher's assumption that 15-year-olds and 25-year-olds have identical beliefs about voting because of their Latino ethnicity.

The finding that Latino young people tended to devalue the importance of voting is mirrored by CPS statistics depicting that Latino young people 18 to 30 years of age have shown a steady decline in voter turnout. However, voter turnout is different for subgroups of Latinos. Lopez (2003) reported that, in the 2000 national election, black 18- to 30-year-olds had the highest voter turnout (50.4 percent), followed closely by Cuban Americans (50.1 percent). White young people had the next highest voter turnout (48.7 percent) and then the figures drop off drastically for Latinos of other origins, including Central Americans (39.2 percent), Mexicans (32.7 percent), and Puerto Ricans (31.7 percent).

In a more recent study, Lopez et al. (2006) found that the racial disparity in the civic engagement of adolescents and young adults has reversed that that presently it is white young people who are civically inactive. The researchers used the 2006 National Civic and Political Health Survey (CPHS), which contains a nationally representative sample of 1,700 15- to 25-year-olds. Again, only race was examined and all participants were grouped together regardless of age. In accordance with Lopez's (2003) findings, black young people were the most active participants. They were the most likely to vote on a regular basis (for those 20 years and older), belong to political groups, donate money to political parties, and outwardly display political buttons or signs. Asian 15- to 25-year-olds were most likely to volunteer on a regular basis, work to solve community problems, sign petitions, contact officials, and participate in boycotts. Latinos were most likely to protest and whites reported the highest intentions to be active members of a group and to participate in a charity-walk (Lopez et al., 2006).

The studies reviewed here indicate differential rates of civic knowledge and participation based on demographic characteristics, though the findings based on race are inconsistent. The more recent studies found that the engagement gap has reversed and white young people are now less engaged. However, these samples include young adults (compared to other studies that contain samples consisting solely of adolescents), and it is possible that age-related changes in participation are involved in the racial differences. The latest figures also may be indicative of researchers inquiring about a range of activities, rather than limiting surveys to questions about volunteering and voting. Finally, the change in civic participation by racial group may be attributed to social and political factors, such as increasing visibility of black leaders in the country, or the rise in immigration and therefore immigration reform.

Regardless of the apparent or attenuated group differences in civic engagement, it is reassuring to know that successful interventions can improve civic outcomes for all young people. Indeed, there is a completely separate line of research (mostly conducted by political science academics and educators) on intervening to enhance civic engagement. For instance, McDevitt and Chaffee (2000) conducted an intervention that involved an interactive civics curriculum with approximately 450 fifth- through twelfth-grade students in San Jose, California. The intervention increased students' political communication behaviors, including increased attention to television news and newspapers, and increased levels of parent-student political discourse. The intervention had enhanced benefits for low-SES youth, serving to reduce the gap in political communication behaviors. Literature on civic engagement interventions will be revisited at the conclusion of this study.

Implications

A final note on the disparate civic engagement outcomes for demographic subgroups. In their 1989 Survey of Political Knowledge, Delli Carpini and Keeter (1996) found that in the U.S. adult population, men were more knowledgeable than women, whites more knowledgeable than blacks, high-SES more knowledgeable than mid- and low-SES, and the old more knowledgeable than the young. The group with the highest political knowledge was affluent white males, while poor black women had the lowest knowledge levels. The distributions of scores for these two subgroups did not even overlap. The implication of these findings, and others already discussed, is that political knowledge is lower in the very people who, in many ways, would benefit the most from effective political participation (Delli Carpini & Keeter, 1996). Increased knowledge and understanding enhance people's ability to advocate for policies that would benefit them. Relevant issues and policies include racial- and gender-based discrimination in the workplace, social services such as welfare and food stamps, and housing policies in impoverished communities.

And let us not forget the importance of a knowledgeable and engaged citizenry for the success of the nation. Galston (2001) reviewed some of the main reasons why civic knowledge is fundamentally important to democracy. Knowledge enhances understanding of how policies affect us and how to promote our interests, contributes to ideological consistency, increases trust of others through understanding of context and events, promotes support for democratic principles, and promotes civic participation. Assertions made by Galston (2001) and others reinforce the need to examine whether subgroups of the American population are prepared for active citizenship.

The research on civic engagement and demographic subgroups summarized here has many strengths, including the use of large datasets and national samples, and the examination of a range of important civic outcomes. Most studies find a civic engagement gap based on demographic characteristics, though findings vary depending upon the dataset used, the demographic characteristics of interest, and the age of the sample. Examining these group differences is the first step in addressing inequities in civic participation.

However, for the most part the description of group differences is where the research stops. Whether their purpose was merely to be descriptive, or to provide incentive for further investigation, few of the studies look at characteristics and experiences beyond demographics that could explain the engagement gap. This next step is possibly more important than the first, and in the current study I include both stages of investigation. I begin by examining group differences in multiple civic outcomes, paying particular attention to gender, race, SES, and immigrant status. It is important to consider multiple demographic characteristics in order to understand which characteristics are most important for which outcomes. After looking at group differences in adolescent civic engagement I progress to the exploration of additional characteristics and experiences that could explain the existence of any engagement gap. I examine civic experiences within the contexts of social relationships and the school, followed by school-wide processes and demographic characteristics and neighborhood characteristics.

Another contribution of my study, which I believe is lacking in much of the literature reviewed here, is the age group of interest. Many of the studies have focused on older adolescents or young adults, or have grouped them together as if age was not an

independent predictor of outcomes. Given that development is cumulative and experiences build on each other (as posited by many developmental theorists), group differences in civic engagement at 14 years of age would be indicative of inequalities in civic engagement relatively early in the lifespan. These differences would likely be exacerbated over time. In the current study I examine the civic engagement of 14-year-olds, which may provide more insight as to the initial appearance of an engagement gap.

Contexts of Influence

In the previous section I discussed the association between civic engagement and other aspects of development and described characteristics of adolescents and young adults who are active participants. Now I will report on literature that takes a step back to investigate the people, situations, and institutions that may contribute to youth civic engagement. I start with studies that examine the possible influence of social relationships, specifically relationships with family members and peers. The next context discussed is the school, followed by research on the neighborhood context. I conclude with a brief review of research on adolescent educational outcomes in order to illustrate the methods of studies that specifically investigate the interaction between contexts. The exploration of context interactions is not prevalent in research on civic outcomes. However, in line with ecological systems theory, I maintain that interactions between contexts would have meaningful effects on adolescents' civic outcomes.

Role of Family and Peers

Although not the main focus of the current study, it is important to include the influence of social relationships on youth outcomes because of their salience in the lives of adolescents. During adolescence, friends and peer groups become increasingly

important while parents continue to have an influence on the lives of their children (Collins & Laursen, 2004). These two social contexts, family and peers, play a role in the civic development of youth.

Family

Research indicates that many aspects of family life are related to adolescents' outcomes. Authoritative parenting is consistently associated with more positive psychological and behavioral outcomes (Baumrind, 1991; Jackson, Pratt, Hunsberger, & Pancer, 2005), parental involvement is related to higher academic achievement (Seyfried & Chung, 2002), and higher levels of parental monitoring are associated with fewer problem behaviors (Jacobson & Crockett, 2000). Likewise, parent characteristics and practices are related to adolescents' civic outcomes. Parents can model civic behaviors and also can discuss current events, social issues, and political topics with their children. Research on parent effects on civic engagement often includes parent civic knowledge and behaviors and political discourse as key predictors.[2]

Using data from the 1996 National Household Education Survey (NHES), Hart et al. (2004) examined how parental civic qualities related to the civic outcomes of approximately 5,600 sixth- through twelfth-grade students. Parental civic qualities were related to adolescents' civic outcomes (including civic knowledge, volunteering, and tolerance) in the expected direction. Higher parental knowledge predicted higher youth

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[2] Note that many of the studies reviewed here also include predictors from other contexts. Although recognizing the importance of multiple contexts, the researchers fail to examine interactions between the contexts. Unless otherwise stated, given that the studies consider each context separately, I will report on each context separately (i.e., results pertaining to parent variables will be addressed in the current section, while results pertaining to school variables will be discussed in the section on the school context).

knowledge, higher parental tolerance predicted higher youth tolerance, and higher rates of parental volunteering predicted higher youth volunteering. These findings indicate that civic knowledge, attitudes, and behavior are modeled in the home, reflecting the existence of collective socialization processes.

Other research has examined whether parents are related to adolescents' sense of civic responsibility. In Australia, Da Silva et al. (2004) used data from the Australian Temperament Project to examine parental influences on the community and political civic responsibility of 500 15- to 17-year-olds. Community civic responsibility included items such as supporting charitable organizations and being active in school organizations or organizations for social change. Political civic responsibility included involvement in political activity (e.g., writing letters) and following political news. Youth who reported that their family encouraged them to volunteer and participate politically had higher levels of community and political civic responsibility. Likewise, youth whose parents reported that it was important for their adolescent to be involved in community service and political activity (placed a higher value on participation) were higher on both civic responsibility outcomes. Whether or not other family members participated in volunteer and political activities was not a significant predictor, which is counterintuitive given the opportunity for observational learning, and is also inconsistent with other research. Other aspects of family life, such as maternal warmth and monitoring, were not significant predictors of the civic responsibility outcomes.

Zaff et al. (2003) used a longitudinal survey of youth, the Maryland Adolescent Development in Context Study, to examine how social relationships promoted civic engagement throughout adolescence and into early adulthood. The researchers followed

1,000 adolescents from eighth grade to eleventh grade to one year post-high school. Considering only the first two time points, youth with parents who participated civically had higher rates of civic engagement (including activism and volunteerism) three years later. However, parent engagement in eighth grade was not directly related to youth civic engagement five years later. This study's findings must be interpreted in respect to the sample, which is from one county in the state of Maryland.

In their study on ecological assets, Theokas and Lerner (2006) examined 646 11-year-olds that were a subsample of the 4-H Study of Positive Youth Development. The researchers selected a sample that was diverse, lived in a diverse range of communities, and represented different regions of the country. The study included data from multiple informants, including youth and their parents, and datasets that contain statistics and other official data (for instance, data from the U.S. Census). One of the outcomes considered (and the only outcome pertinent to the current study) was contribution, an eight-item composite of giving-oriented attitudes (e.g., giving back to the world) and participation in service activities. Hereafter this behavioral and attitudinal composite will be referred to as an orientation towards service. The only family variable that predicted youth orientation toward service was the number of nights the family ate dinner together in any given week. The researchers considered this item to be a measure of mutual engagement or collective activity. Although this study has many strengths (including the examination of multiple contexts and use of multiple informants), I question the operationalization of many of their concepts. Saying that the frequency of shared dinners is a measure of collective activity seems like an overstatement. I will revisit the issue of

this study's measures in later sections (when school and neighborhood contexts are discussed).

Recognizing the importance of parent-youth discourse, McIntosh et al. (2007) investigated the civic knowledge, attitudes, skills, and behaviors of parents, as well as the frequency of discourse. Utilizing a sub-sample of the NHES, containing 3,662 adolescents and their parents, researchers were able to examine the effects of parent civic qualities and parent-youth discourse on youth political knowledge and participation in community service. Parental membership in a community or professional organization and adolescent participation in community service were related, while parental civic knowledge and donation to a political cause were linked to youth civic knowledge. Parental discourse with their child was related to higher levels of both civic outcomes. Parental political knowledge actually interacted with the frequency of political discourse for a combined positive influence on adolescents' knowledge. More frequent youth-parent political discussion was related to increases in youth political knowledge, but the relationship was enhanced if parents had higher political knowledge. Essentially, the more knowledgeable a parent is, and the more frequently the parent discusses politics with the adolescent, the better off the adolescent will be in terms of political knowledge. The significant interaction between the two parent variables illustrates how the findings become even more informative with the inclusion of interactions. Unfortunately, the researchers did not look at the interaction between contexts (school variables were included in the model but not discussed), missing an opportunity to assess mesosystem influences. Perhaps the role of youth-parent political discussion changes depending upon characteristics of the school attended or the topics discussed in the classroom.

Of course, discourse that occurs between parents and adolescents is bidirectional, meaning that parents influence youth but youth also influence parents. Indeed, adolescent-parent discussion about political topics is related to increases in parents' political knowledge as well (McDevitt & Chaffee, 2000). McDevitt and Chaffee (2002, p. 282) propose that the home is a "powerful incubator of citizenship" and that adolescents actively contribute to family communication. Young family members can transform patterns of political communication (through increased attention to news and discourse about current events) in such a way that their own civic competencies are developed as well as those of their parents.

Other studies have looked at a range of experiences in the home to see how parents act as role models for civic engagement. Andolina et al. (2003) utilized two datasets, the first containing 1,001 15- to 25-year olds, the second containing 1,166 young people aged 15 to 25 years (neither dataset is nationally representative). Young people from homes with frequent political discussion had higher levels of involvement in volunteering, voting (only those of voting age), following politics, boycotting products, and signing petitions. For example, 44 percent of young people who grew up in homes with frequent political discussion regularly followed politics, compared to 18 percent of young people who never heard politics discussed in their home. Civic behaviors also were modeled in the home. Young people who were raised in a home where someone volunteered (either a parent or sibling) were more likely to volunteer themselves, be active in a group, vote, follow politics, boycott products, and sign petitions.

The study conducted by Andolina et al. (2003) indicates that the entire family system is related to youth civic engagement. However, the findings are based on samples

of 15- to 25-year-olds. For the 15- to 18-year-olds in the sample, when they answer questions about political discourse at home or whether their parents volunteer they are responding based on their current living situation, and recent instances of parent-youth interaction. For the 19- to 25-year-olds, the questions ask about the home in which they grew up, and therefore their responses are necessarily retrospective. In comparison to the adolescents in the sample, young adults are more likely to have subjected themselves to purposeful cognitive assessment of their parents' behavior in an attempt to understand their own behavior. This reflection, by nature, would change their interpretation of how civic engagement was modeled in their parents' home.

In a final study on the role of parents, Pancer, Pratt, Hunsberger, and Alisat (2007) examined how patterns of youth activity involvement were related to patterns of youth-parent interaction for 880 students in Canada. The researchers conducted a cluster analysis to group students based on the types of activities in which they were participating. Students were involved in political activities (e.g., working for a campaign), community activities (e.g., participation in school and community activities), helping activities (e.g., helping people at school or in the community), and passive activities where students responded to requests for involvement but did not initiate the participation (e.g., donating money). The cluster analysis (in which the different types of activities were entered) revealed four clusters of students based on their pattern of participation: uninvolved, responders, helpers, and activists.

The largest group, the Responders (n = 302), were high on passive involvement meaning they responded when asked to participate but did not initiate involvement in civic activities. The second largest group was Uninvolved (n = 276) because they scored

low on all types of activities. Helpers (n = 229) were the third largest group, and they were very high on passive and helping activities. The most active group also contained the fewest members; the Activists (n = 72) were high (the highest) on all four types of civic involvement (Pancer et al., 2007).

Looking at other characteristics of students within these clusters, Helpers and Activists were the highest on self-esteem, optimism, social support, and socially responsible attitudes (a 29-item scale assessing youth agreement with statements about helping others in need or knowing what is happening in the world). Uninvolved youth scored the lowest on all of these measures. Cluster classification also was related to youth interactions with their parents. A measure of parental interaction and influence was constructed from students' responses regarding how often they discussed, how much they enjoyed discussing, and how much influence their parents had on them for six different topics (for a total 18-item scale). The means on parental interaction and influence were significantly different for all four groups of students. Activists reported the highest amount of (and comfort with) parent interaction and discourse, followed by Helpers, Responders, and the Uninvolved. Students in the Uninvolved group also reported experiencing the lowest levels of parental warmth, parental strictness, and positive family functioning (Pancer et al., 2007). This study showed that discourse with parents is related to youth participation in civic and other activities in Canada, a country with a political culture which is similar but not identical to the United States. Although the findings are not generalizable, they do provide insight as to the processes inherent in the family component of the microsystem and how the family context is related to youth behavior outside the home.

The family, a particularly important aspect of the microsystem, is a frequently investigated context for adolescent development across domains because of its assumed (and proven) significant role in development. The studies described here provide some indication as to why or how families, specifically parents, may influence youth civic engagement. Parents model civic attitudes and behaviors, and as a result of deliberate interactions such as discourse, adolescents tend to exhibit similar attitudes and behaviors. Youth-parent discourse about political and social topics may be particularly beneficial because it means that the adolescent is active in his or her own civic development.

Although these studies provide great insight as to the role of the family context in adolescent civic development, they all neglect to examine whether the family interacts with other contexts to influence engagement. Many of studies actually examined multiple contexts (although those results are discussed in subsequent sections), recognizing the importance of multiple settings within the microsystem. However, the researchers overlook possible interactions between the contexts and therefore cannot make any conclusions about possible mesosystem influences. Additionally, the studies must be interpreted with regard to their measures and samples (including who was studied and whether they were representative of the nation). I address some of these issues in the current study by examining interactions between contexts and by utilizing a nationally representative sample. One of the other contexts I examine for a possible connection to youth civic engagement is the adolescent peer group.

Peers

Associations with different kinds of peers may be responsible for the transmission of attitudes, values, and behavior; therefore peers can have both positive and negative

influences on each other. Having friends can be positively related to prosocial behavior

and academic performance (Barber, 2007; Wentzel, McNamara, & Caldwell, 2004), but

peers also are directly related to the development of delinquency and violent behavior

(Dishion, Andrews, & Crosby, 1995). Social practices within peer groups and specific

social interactions with friends influence many aspects of adolescent development.

Campbell (2007) theorized that discussion about social and political issues is an

important activity for all engaged citizens, but might be especially important for young

people as they form their political ideology.

In an examination of two kinds of civic responsibility, Da Silva et al. (2004)

found that peers played an important part in youth orientation toward civic responsibility.

For Australian adolescents (15 to 17 years of age), having friends who participated in

volunteer or political activities was related to higher levels of both community civic

responsibility (e.g., participation in school organizations) and political civic responsibility

(e.g., writing letters). Peer encouragement to participate in such activities was an even

stronger predictor, indicating that peers model civic behavior but also have norms for the

acceptance of civic participation. Other aspects of friendships also predicted the civic

outcomes. Friendship quality predicted higher civic responsibility, while peer

communication and peer alienation predicted lower levels of the civic outcomes.

Unfortunately, these items are not adequately described, which hinders the interpretation

of their influence.

In an additional international study, researchers found that interactions with

friends and characteristics of friends related to adolescents' political participation (Harell

et al., 2008). Researchers utilized data from the Comparative Youth Study, which

includes a sample of approximately 3,300 tenth and eleventh graders residing in Quebec and Ontario, Canada, and a nationally representative sample of 6,300 tenth graders in Belgium. Researchers examined the association between friendship networks and political participation, a composite of fifteen political activities in which youth could have participated in the previous year. The use of this composite outcome has inherent strengths and weaknesses. Combining a range of activities makes for an outcome that is inclusive of many types of political participation and gives each an equal weight. Items that are particularly relevant to high-school students are included, such as forwarding an email with political content, boycotting certain products, and wearing a t-shirt for a political or social cause. However, the disadvantage is that the composite may mask group differences in the kinds of activities in which youth participate. As previously discussed, youth demographics are related to their participation in civic activities, with certain groups tending to participate in certain activities. Using an outcome that combines a large range of civic activities may limit the predictive value of demographic characteristics on the civic outcome. Additionally, and of relevance to the current study, the nature and magnitude of peer influences also might differ depending upon the outcome.

Using the 15-item composite of political participation, Harell et al. (2008) found that more frequent discussion of politics or public issues with friends predicted higher political participation in Belgium and Canada. Having a group of friends and acquaintances characterized by economic diversity (i.e., group members from different SES backgrounds) also was related to higher participation in both countries. In Belgium, being part of a network characterized by racial and religious diversity, as well as political

diversity, predicted higher levels of political participation. These findings indicate that communication with peers as well as characteristics of the peer group explain part of this microsystemic influence on civic engagement.

Pancer et al. (2007) examined how peer interaction was related to youth activity involvement utilizing the person-centered method of cluster analysis (described in the previous section). The measure of peer interaction and influence was constructed from students' responses pertaining to six different topics: how often they discussed the topic, how much they enjoyed discussing the topic, and how much influence their peers had on them pertaining to the topic (for a total 18-item scale). For the clusters of Canadian students, the Activists, Helpers, Responders, and Uninvolved, different patterns of peer interaction were revealed. Activists and Helpers reported the highest amount of peer interaction and influence, while Responders and Uninvolved were equally low.

In a final study of peer influence, Zaff et al. (2003) found that peer support and communication were associated with concurrent and future civic engagement (in their sample of Maryland youth). In eleventh grade, having peers that were supportive and communicative was related to current civic activism and volunteering. Peer support and communication also predicted a more extensive measure of civic engagement in young adulthood (a nine-item measure of civic engagement including items such as discussing social issues with friends, donating money to a charity, and working for a charitable organization).

The findings described here are related to other research on positive youth outcomes, such as Wentzel and McNamara's (1999) finding that aspects of social relationships with peers (peer acceptance in particular) related to adolescents' prosocial

behavior. Unfortunately, much research on peer influence looks at negative outcomes such as behavioral problems. The few studies of peers and civic outcomes indicate that peer modeling of civic behaviors, discussion of political topics, and support and encouragement indicate aspects of contagion processes that may benefit adolescents' civic engagement. Peers, like parents, are an important aspect of the microsystem that has particular salience in the lives of adolescents.

The main weakness of the peer effects literature is the use of composite civic outcomes that may mask group differences in specific types of participation. The use of composites is appropriate, but having one composite that is inclusive of nearly every type of civic behavior is not particularly informative (though statistically it might make for a strong outcome). In the current study I examine four outcomes that cover the range of civic engagement, including student knowledge, an attitudinal measure, and two different types of civic behavior. In addition to examining if different groups of students are prone to different types of engagement, I also examine if the relation between peer measures and youth civic engagement differs depending upon the outcome. The effects of other contexts, including parents, school, and neighborhood, are also examined for differential associations with the four civic outcomes.

The Role of Schools

Schools are a context in which adolescents spend much of their day, interacting with peers and teachers, and hopefully constructing knowledge. There are certain characteristics and conditions within schools that facilitate knowledge construction, democratic attitudes, and intentions to participate in civic behavior. Torney-Purta (2002) proposed three avenues through which schools can enhance civic education and therefore

contribute to civic engagement. Schools can be most effective when they have a formal civic curriculum that involves teaching civic content as well as skills, the classroom culture is one that encourages open and respectful discussion, and the school culture mimics that of the class and provides opportunities for students to actively participate in a civic manner (such as through student government). Many of the studies reviewed here examine these aspects of the formal and informal curricula and environment.

Formal and Informal Aspects of the School Environment

Niemi and Junn (1998) examined multiple aspects of schooling using data from the 1988 NAEP civics assessment. Their purpose was to determine what aspects of school and the civics curriculum predicted the civic knowledge of 4,275 twelfth-grade students. The NAEP findings revealed ways in which schools may contribute to civic development, including through specific educational practices (e.g., engaging activities such as mock elections) and the nature of the curriculum. Civic knowledge was predicted by the amount and recency of civics coursework, the variety of civics topics covered, the incorporation of current events into the curriculum and class discussion, and participation in mock elections (independent of influential demographic and home characteristics). In general, these positive relations were more robust for white students than black and Latino students, and also stronger for males than females.

Other studies confirm that, though the effect is small, taking civics courses predicts higher civic knowledge (Lay, 2006). Using NHES data, McIntosh et al. (2007) found that the number of civics courses taken and participation in youth activities (including student government, in-school, and out-of-school activities) were related to higher levels of political knowledge. Participation in activities was a strong predictor of

community service participation, providing support for the notion that schools contribute to the development of civic skills by creating communities of practice in which students learn through participation in civic-related activities.

Utilizing data from the nationally representative IEA Civic Education Study, Torney Purta et al. (2007) examined 2,811 Latino and non-Latino adolescents to see how they differed on three civic outcomes, and what aspects of the school context were related to such differences. Non-Latino students were found to have higher levels of civic knowledge and intended civic participation, but less positive attitudes toward the rights of immigrants. But there were experiences within the school that predicted the civic outcomes of all students (controlling for student ethnicity). Students who studied political topics in the classroom and perceived a class climate that was open for discussion scored higher on all three civic outcomes. Indeed, adding these variables to the regression model reduced the gap between Latino and non-Latino students to non-significance. This study's findings have important implications pertaining to school practices that can effectively reduce civic engagement gaps. However the gap in this study must be interpreted with caution; the Latino/non-Latino gap is not equivalent to the Latino/white gap and should not be interpreted as such. The non-Latino group includes students who are white, black, Asian, and American Indian, and although white students are the majority, 27 percent of the group consists of non-white students. Therefore, the findings provide information on school effects for Latino students, but not in comparison to white students.

Andolina et al. (2003) also examined a myriad of ways in which schools can socialize adolescents for civic engagement. Young people (aged 15 to 25 years) who

debated issues in class in high school reported higher instances of taking part in non-school organizations, attending community meetings, participating in a walk or run for charity, signing a petition, participating in a boycott, and following political news on a regular basis. Likewise, having participated in a political group during high school predicted higher civic engagement across a range of activities (although involvement in high school organizations in general was not related to higher political activity).

In an international study of the role of schools in civic development, Flanagan et al. (1998) examined the civic outcomes of over 5,500 12- to 18-year-olds in seven countries. The outcome, civic commitment, was based on student responses to two questions regarding the importance placed on contributing to the country and doing something to improve society. The school predictors examined include: democratic climate (essentially a measure of open climate for discussion) and a sense of membership in the school (e.g., the extent to which they identify with the school or feel like a member).

Looking first at country differences in youth civic commitment, Bulgarian youth reported the highest levels of commitment, followed by adolescents in the Czech Republic, Russia, the U.S., Australia, Hungary, and Sweden. Although not mentioned by the researchers, there must be features of the macrosystem that are related to the country differences in adolescents' civic commitments. In the United States, females' sense of membership as part of the school predicted civic commitment. For males, participation in volunteer work and perception that the school has democratic practices predicted civic commitment (Flanagan et al., 1998). The gender differences in the U.S. are interesting and can be interpreted with the concepts pertaining to the model of situated learning

(community, identity, meaning, and practice). Female adolescents' feeling of belonging to the school community and their shared social and personal identity make them want to contribute to society. For males, the meaning behind school experiences and the practice of volunteer work are what influence their civic commitment. These findings provide more evidence that informal aspects of schooling (in particular, social participation) are connected to students' civic outcomes, but also indicate that certain components may be more salient for subgroups of students.

In a study examining concepts similar to Flanagan et al. (1998), Vieno et al. (2005) examined the role of individual students' perception of school climate and the aggregated school climate on students' psychological sense of community and belonging within the school. Using a sample of over 4,000 10- to 18-year-olds in 134 schools (in a particular region in Italy), the researchers found that individual perceptions as well as the overall school climate were important predictors. Students who perceived a democratic school climate (for instance that students are encouraged to express views and are active in making school rules) had a higher sense of community in the school (e.g., feel they belong and other students are accepting). Schools with a higher proportion of students perceiving a democratic school climate also predicted a higher sense of community for individual students. These findings confirm that social aspects of learning are interrelated, as posited by the situated learning model. Students' sense of community in the school, identification with the school and its practices, and negotiated meaning through the expression and understanding of different viewpoints were all connected for these Italian students.

Inequalities in the School Environment

I have described some of the experiences of students and practices within schools that are related to higher levels of civic engagement and civic knowledge among students. However, environments that facilitate civic competence by providing opportunities to learn civic topics and experience hands-on civic participation are not equally available for all students. In a series of analyses, Kahne and Middaugh (2008) concluded that diverse groups of students, in particular minority and low-SES students, had fewer opportunities available for the development of civic competencies. In the first analysis the researchers examined a California sample of 2,366 twelfth-grade students to see how demographic characteristics were related to opportunities for civic development. In comparison to white students, black students were less likely to have taken civics and government courses, to discuss social problems and current events, and to have a class climate that is open for discussion. Latino students also reported fewer experiences of an open class climate, as well as fewer opportunities to participate in community service and service-learning activities. Conversely, youth who had expectations of post-secondary education reported more opportunities and access to civic development across all eight civic learning opportunities examined (instruction in civics and government, discussion of events and problems, community service, extra-curricular activities, student voice, open class climate, simulations of civic processes, and other opportunities to practice civic skills). Of course, the data are cross-sectional so it is possible that students who intend to attend college are more likely to seek out civic opportunities. Regardless, these experiences seem to be more available to them, and more available to white students.

The second analysis was limited to 371 seniors in California high schools who were identified based on the researchers' ability to determine whether the government course students in which students were enrolled was part of a standard preparatory track or an advanced placement (AP) track. As the name implies, the advanced placement track is more difficult, as well as more prestigious. Students in AP government courses reported experiencing higher levels of 11 out of 12 civic learning opportunities, including experience with role models, exposure to diversity, and other opportunities mentioned above (Kahne & Middaugh, 2008).

These findings indicate that minority students and students who are not in advanced academic tracks receive fewer opportunities for socially constructed learning. Unfortunately the sample prohibits the generalization of these important findings, but as an exploratory study the indication of disparate opportunities for learning is very troublesome. In the current study I examine differences in opportunity structures in schools with a nationally representative sample.

School Demographic Characteristics

I have discussed aspects of schools' formal and informal civic curricula, practices, and opportunities that predict students' civic engagement, but demographic characteristics of schools also relate to student outcomes. Looking at overall academic achievement (across multiple domains), Caldas and Bankston (1997) found that students attending schools with high-SES student populations had higher test scores controlling for their own SES. Attending a school with a higher proportion of minority students predicted lower assessment scores. Baldi et al. (2001) reported that schools with higher proportions of students eligible for free lunch contained students with lower civic

knowledge. School size also predicted civic knowledge, with exceptionally small and exceptionally large schools predicting lower civic knowledge (Baldi et al., 2001). In another study a composite measure of school size and student-teacher ratio was related to youth orientation toward service (Theokas & Lerner, 2006). School size and student-teacher ratio were deemed to be related to each other because each measured accessibility, or youth exposure to adults. A higher value on the standardized composite (i.e., larger school size and more teachers per student) predicted higher scores on a measure of students' orientation toward service. These studies (and others reviewed below) indicate that compositional features of schools are involved in this microsystem setting's role in adolescent development.

In an investigation into school-related factors, Lay (2007) examined 3,010 ninth-through twelfth-grade students attending public schools who participated in the NHES (note that the data are from a greatly reduced sample). Although larger schools offered more opportunities for students to participate in student government and service activities, students seemed to take advantage of such opportunities more often in small schools. In comparison to larger schools, adolescents who attended schools with fewer than 300 students were more likely to participate in community service activities. Participation in other school-related activities was suppressed in larger schools, with schools having 1,500-1,800 students showing lower participation in sports and clubs (though no significant effect on volunteering). The negative relation between large school size and activity participation was even stronger for poor students. Perhaps smaller schools facilitate a sense of community, encouraging students to participate in more group activities.

Campbell (2007) also examined how school characteristics related to civic outcomes, with a focus on racial composition. A sub-sample from the CIVED (n = 1,408) was utilized in an investigation into the influence of school racial diversity on the civic environment experienced by adolescents, as well as their intended civic behavior. School racial diversity (measured with the fractionalization equation) related to lower perception of an open classroom climate and lower intentions to vote. Essentially, in schools with a more racially diverse population, adolescents felt less comfortable contributing to discussion and had fewer experiences discussing social and political issues. However, the race of individual students interacted with the racial composition of the school. Specifically, if there were more black students in the school, then black students perceived a more open classroom climate. If there were more white students in the school, white students perceived a more open classroom climate. Black students in majority-black schools, and white students in majority-white schools, also reported higher voting intentions. However, this interaction was reduced to non-significance when student experiences pertaining to classroom climate were added to the model. This study supports the position that adolescents interact with their environment to influence civic outcomes.

Summary

It is apparent from this review of school effects on civic outcomes that formal and informal civic learning opportunities, the perceived climate in classrooms and schools, and demographic factors all relate to adolescents' civic outcomes. It is understood that schools influence formal learning (though curricula and assessments), however these findings indicate that schools also provide an environment in which socially constructed

learning can occur. The school is an aspect of adolescents' microsystems that exerts an influence through compositional features, group processes, and social practices. The few studies that examined the interaction between the adolescent (focusing on the personal characteristics of race and gender) and the microsystem illustrate the importance of considering the individual-microsystem interaction. In the current study I examine similar interactions based on students' gender, race, socioeconomic status, and immigrant status. Recognizing that these are not particularly refined categories of students, I maintain the position that the specific investigation of demographic characteristics, including how those characteristics vary in their effects, will provide more informative findings. Combined with the use of a nationally representative dataset, I am able to make more meaningful generalizations about the interactions between adolescents and the school context, as well as between adolescents and the neighborhood context.

Although the findings on the influence of the school context are important, none of the studies mention a context which, according to Jencks and Mayer (1990), may have a considerable influence on all aspects of schooling—the neighborhood in which the school is located. Neighborhoods that are impoverished or characterized by disorganization (such as high rates of violence and unemployment) are further disadvantaged by their inability to provide safe, high-quality schooling. Schools are one of the neighborhood's primary institutional resources and are of particular importance for adolescents (Leventhal & Brooks-Gunn, 2003).

School funding generally is based on local tax revenue, including taxes from individuals and businesses. In impoverished neighborhoods the residents have lower incomes and lower house values. Additionally, because of social and physical conditions,

commercial enterprises often are not attracted to impoverished neighborhoods (Connell & Halpern-Felsher, 1997), which further reduces revenue in the area. Deficient tax revenue leads to inadequate school funding, which leads to the inadequate provision of materials that facilitate learning and development. Scare funds affect the availability of books, maps, lab equipment, musical instruments, and sports equipment, as well as opportunities for field trips and extracurricular activities. A school's financial resources also determine its human resources (Gershoff & Aber, 2006). Schools in low-income communities have less money to hire teachers, which affects the quality of the educators and also results in high student-teacher ratios. Additionally, negative perceptions of neighborhoods' social and physical conditions may make the school less desirable for qualified educators and staff members (Connell & Halpern-Felsher, 1997). In this kind of setting, less-experienced teachers cannot be effective and ill-prepared students cannot learn.

In accordance with the previous discussion, Oxley (2000) contends that schools are complex social systems that are influenced by occurrences and circumstances within and outside their walls. Just as individual students should be considered within the contexts of schools, schools should be considered within the contexts of their own systems of influence (e.g., neighborhood, district, and state). In the current study I examine the person-in-context and the school within its own context—the surrounding neighborhood.

The Role of Neighborhoods

In recent years there has been an increase in research on the relation between neighborhood characteristics and youth civic outcomes, probably because of the general surge in neighborhood effects research and special concern for youth growing up in

poverty. Researchers have found neighborhoods to be directly and indirectly related to psychological, behavioral, educational, and now, civic outcomes.

Neighborhood Social and Economic Characteristics

In the final context examined by Theokas and Lerner (2006), with data from the 4-H Study of Positive Youth Development, the neighborhood was found to relate to 11-year-olds' orientation toward service. A composite of college-educated residents, employed males (both Census measures), and youth experience with an adult mentor (as reported by adolescents) predicted a higher orientation toward service among youth. In line with the collective socialization model, adult role models impart this prosocial attitude. Recall (from previous sections) that this study also included aspects of the family and school contexts. Although the study provides evidence that different aspects of the microsystem can influence youth civic orientation, the study misses the opportunity to examine mesosystem influences by looking at the combined effect of multiple contexts.

In another study that considered microsystem but not mesosystem influences, Hart et al. (2004) used NHES data to examine whether neighborhood poverty and the age-breakdown of a neighborhood were related to the civic knowledge, volunteering, and tolerance of 5,616 youth in sixth through twelfth grade. The researchers found that neighborhoods with a disproportionately large population of young people (aged 16- to 25-years-old) contained adolescents with lower civic knowledge but higher participation in volunteer work, supporting the idea that contagion processes occur within neighborhoods. In this case, higher proportions of young people may be associated with norms that encourage volunteering behavior. However, there was an interaction between

the proportion of young people and the poverty rate in the effect on youth volunteering. In low-poverty neighborhoods, a high youth population predicted higher instances of volunteerism. The opposite was true for high-poverty neighborhoods, where a high youth population predicted lower adolescent volunteering. The researchers also found that youth in high-poverty neighborhoods displayed lower levels of tolerance, supporting the proposition that impoverished neighborhoods may involve the socialization of less tolerance and support of others' rights and opinions. The examination of the interaction between neighborhood measures contributes to an enhanced understanding of the nature of neighborhood effects on youth. Unfortunately, there are no cross-context interactions considered (e.g., parent-neighborhood interactions).

In a related study, Atkins and Hart (2003) confirmed that neighborhoods are relevant to the civic engagement of young people. Also using data from the 1999 NHES, the researchers found additional interactions between neighborhood characteristics and the subsequent effect on youth civic outcomes. For the outcome of volunteerism, youth in high-poverty neighborhoods actually volunteered more (Atkins and Hart, 2003, used a dichotomous predictor of high-poverty in contrast to the previous study which used a continuous predictor). However, youth in high-poverty urban neighborhoods had lower levels of community participation than youth residing in high-poverty neighborhoods located outside an urban area. Perhaps the urban environment provided different opportunities for collective socialization (i.e., the behaviors modeled by adults) and contagion (i.e., the norms and behaviors modeled by peers) processes. Regardless of urbanicity, high-poverty neighborhoods predicted lower civic knowledge and less political tolerance. In this study and others (e.g., Hart & Atkins, 2002), researchers have

concluded that impoverished urban environments do not support the development of civic competencies for adolescents. These conclusions are consistent with research on adults which indicates that urban settings foster social, economic, and political isolation (Cohen & Dawson, 1993; Wilson, 1987).

Neighborhood Racial Composition

There is some debate as to the nature of the effects of neighborhood structural characteristics, especially neighborhood racial diversity. For instance, the literature indicates that neighborhood racial diversity is negatively related to adults' civic engagement (Costa & Kahn, 2003) and social trust (Putnam, 2007). Costa and Kahn (2003) utilized data from the American National Election Survey to find that higher levels of racial diversity in a metropolitan area predicted lower levels of organization membership. Utilizing another large-scale dataset, the Social Capital Community Benchmark Survey, Putnam (2007) found that racial diversity was related to many negative civic outcomes, including lower levels of social trust, voter registration, and intentions to donate and volunteer. Perhaps neighborhood racial diversity has a negative influence on adult civic attitudes and behavior because of initial issues with trust and cooperation and the tendency of untrusting citizens to "hunker down" (Putnam, 2007, p. 149). However, Putnam also found that in neighborhoods characterized by more diversity, residents reported higher interest in political and national affairs, more participation in protests and groups that take action for social or political reform, and higher knowledge of their representation in Congress. Therefore, despite an overall trend for neighborhood racial diversity and civic engagement to be inversely related, there were ways in which diversity and adults' civic outcomes were positively associated.

Other researchers have found results that challenge the perception that neighborhood diversity is inherently a negative feature. Utilizing data from the 1996 and 1999 NHES, Hart and Fletcher (2008) examined whether other characteristics of the neighborhood context interacted with neighborhood diversity to influence 12- to 16-year-olds' volunteerism. Indeed, the effect of neighborhood diversity was influenced by whether the neighborhood had a black or Latino majority in comparison to a white majority. In black/Latino majority neighborhoods (defined as 50 percent or more of the population identified as black or Latino), higher levels of racial diversity predicted higher instances of youth volunteering. Conversely, in predominantly white neighborhoods, youth volunteered less as diversity increased. These findings provide evidence that neighborhood racial diversity contributes to negative civic outcomes only under some conditions, and also indicate the importance of considering multiple aspects of the neighborhood context.

A study conducted in Canada found similar results with data from the 2003 Canadian General Social Survey (with a sample of 24,951 Canadian adolescents and adults, aged 15 years and older). Upon initial investigation, the proportion of minorities in a neighborhood (as well as the proportion of low-income families) predicted lower levels of a generalized trust measure. However, further investigation indicated this finding only applied for members of the racial majority group. For minority residents, the effect of neighborhood racial diversity was not statistically significant (Harell & Stolle, 2008). As with other studies, the findings described here illustrate how specific interactions can lead to more informative findings. Additionally, this is one of the few studies that looked at the interaction between individuals (based on their race) and their

microsystem (neighborhood racial diversity) for a combined influence on a civic outcome.

Summary

Most of the research on neighborhood effects on civic engagement indicates that processes related to collective socialization and contagion explain how neighborhoods influence youth. However, it must be noted that these are merely inferences and the variables do not explicitly measure neighborhood mechanisms. These studies also illustrate that neighborhoods, as a component of the microsystem, are directly related to adolescent development.

Consistent with research on family, peer, and school effects on civic engagement, neighborhood effects research neglects possible interactions with other contexts. As stated previously, the current study specifically examines such interactions, while employing a multilevel regression technique that controls for errors associated with single-level models. There are other benefits of using such a technique, which are discussed further in Chapter 3.

<center>*Interactions Between Contexts*</center>

As indicated in this review, there are multiple systems of influence on the civic engagement of adolescents. However, few studies examine multiple contexts, and even fewer examine the interaction between those contexts. There are two notable exceptions, discussed further below.

Multiple Contextual Influences on Civic Engagement

Kahne and Sporte (2008) employed a sample of 4,057 eleventh graders in Chicago in their investigation of context effects on youth civic commitments. The

outcome, commitment to civic participation, was measured by combining behavioral

intentions and feelings of responsibility to participate civically (this measure is discussed

further below). Students who discussed current events and politics with their parents,

whose peers supported their academic achievement (e.g., help each other with homework

and think it is important to do well in school), and who reported higher instances of social

capital in their neighborhood had higher civic commitments. Supporting the notion of a

community of practice, feeling a sense of belonging in the school was related to a higher

commitment to civic participation. A seven-item composite of civic learning

opportunities and participation in service-learning were the strongest predictors of the

civic outcome. Additionally, although not mentioned by the researchers, adding school

context variables to the model attenuated the positive influence of the family and

neighborhood context variables (though all variables were still statistically significant).

This study illustrates the utility of including variables from multiple contexts; otherwise

the effects of the included context(s) may be overestimated.

Although the findings are important, this study has a couple limitations worthy of

note. First, the findings are only generalizable to high-minority, low-income settings (as

indicated by the sample's demographic characteristics, which are not described here).

Second, there are concerns about the construction of some of the measures. The outcome,

civic commitment, is a five-item scale measuring students' agreement with the following

statements: in the next three years I am likely to work on a community project in which a

government agency is involved, in the next three years I am likely to be involved in

improving the community, being involved in community issues is my responsibility,

being concerned about local and state issues is everybody's responsibility, and I have

good ideas for programs and projects to help solve community problems. Although the researchers report this scale had a reliability of .73, its combination of behavioral and attitudinal measures is disconcerting. Prior research has found that civic engagement items are often highly-related, which explains the scale's reliability, but that does not necessarily mean that they measure the same construct. Additionally, the school context predictor of classroom civic learning opportunities contains four measures of student learning and class requirements (e.g., I learned about things in society that need to be changed) and three measures of teacher practices (e.g., teachers encourage students to make up their own minds). Again, the scale was reliable but I have doubts about the theoretical basis for combining these measures. Nevertheless, the researchers found that multiple contexts predicted the civic commitment outcome, including civic learning opportunities in school.

The second study that examined the interaction between variables from multiple contexts included the contexts of family and friends (these contexts were combined), school, and neighborhood. Lay (2006) utilized data from the Metro Civic Values Study, a study of approximately 3,000 high-school students in Maryland and Virginia. The outcome, political knowledge, was measured as a seven-item test of political structures, political history, and prominent political figures. Lay (2006) considered the role of student demographic characteristics; frequency of political discussion with family and friends (combined number of days a week); number of civics courses taken; and the population density (number of people per square mile) and poverty level (proportion of residents earning less than $15,000) in the neighborhood surrounding the school.

Initially, students with lower parental income had lower political knowledge, but one of the neighborhood characteristics moderated the relationship. In comparison to low-SES youth in non-urban areas (characterized by lower population density), low-SES youth in urban areas had lower civic knowledge. In general, low-SES students had lower political knowledge, but the urban context exacerbated the relationship. However, adding the predictor of political discussion reduced the cross-level interaction to non-significance. Low-SES students still had lower political knowledge, but the relation was not affected by the neighborhood characteristic (Lay, 2006).

In the final model, Lay (2006) reported that more frequent political discussion with family and friends was related to higher levels of political knowledge. This relationship was not as strong in urban areas, but was particularly strong in high-poverty neighborhoods. Political discussions with others had an enhanced beneficial influence on knowledge in impoverished neighborhoods. The influence of this interaction is the first piece of evidence (in this review) of mesosystem influences on civic outcomes.

While this study provides evidence for the importance of including multiple contexts to further understand the relation between demographic variables and developmental outcomes, the measures from each context are not particularly informative. With the exception of discourse with family and friends, the study includes no measures of processes and therefore few conclusions can be made regarding the mechanisms by which the contexts are related to development. Additionally, the sample is restricted to a particular geographic area and therefore cannot be generalized to the national population of adolescents.

I have reviewed the emerging literature on the relations between multiple contexts and adolescent civic engagement. Only two studies included all four contexts considered to be important for civic outcomes, and only one of those studies deliberately examined interactions between contexts. When examining the development and outcomes of youth it is important to consider multiple contexts of influence, including the manner in which the contexts are related to each other. Adolescent development is simultaneously influenced by individual cognition and characteristics, as well as the support systems of families, peers, schools, and neighborhoods (Feinstein & Peck, 2008). In order to give an idea of the richness of findings that can come from including multiple contexts in an investigation of adolescent development, I briefly review two studies that do not examine civic outcomes, but do specifically examine the ways in which contexts interact to influence youth outcomes.

Multiple Contextual Influences on Educational Outcomes

One of the most salient developmental tasks in adolescence is to succeed academically and therefore to find environments that facilitate achievement. Using a nationally representative sample of over 17,000 adolescents who participated in the National Longitudinal Study of Adolescent Health (Add Health), Pong and Hao (2007) examined how school and neighborhood conditions were related to the achievement gap between immigrant and native-born students. Using an outcome of self-reported grade point average (GPA), the researchers found that neighborhood characteristics were associated with the school performance of all students, such that high-neighborhood SES was associated with higher student GPAs, and a higher amount of foreign-born neighbors was associated with lower student GPAs. However, when school characteristics, such as

school climate and class size, were added to the model the relation between foreign-born neighbors and native students' GPA reduced to non-significance. Addition of these factors did not impact the relationship between foreign-born neighbors and lower academic performance for immigrant children.

In a study in inner-city Chicago (involving 630 11- to 16-year-olds) adolescent prosocial competence (a composite of educational and positive functioning measures) was directly and indirectly predicted by aspects of multiple contexts (Rankin & Quane, 2002). Having friends who are positively oriented toward academic success predicted higher prosocial competency. The outcome also was predicted by maternal intolerance for deviant behavior, maternal value placed on conventional goals and behavior, family rules, parental monitoring, and parental involvement. Neighborhood collective efficacy was not directly related to prosocial competence, but it did moderate the relationship between parental monitoring and the youth outcome. Overall, parental monitoring was associated with higher levels of prosocial competence. However, this relation was stronger for youth in neighborhoods characterized by low collective efficacy. This finding indicates that the role of parental monitoring in contributing to youth prosocial competence is even more effective in neighborhoods with low collective efficacy, indicating that in these communities parental monitoring serves as a protective factor.

Summary

In this section I reviewed research that included multiple contexts when examining adolescents' civic and educational outcomes. These findings indicate that it is important to include a range of variables from different contexts to avoid both an omitted variable bias and an omitted context bias. Family members, peers, schools, and

neighborhoods have all been shown to be directly and indirectly related to adolescent development. The direction and magnitude of the associations vary depending upon the outcome examined, as well as the inclusion of other contexts. The current study includes measures from all four contexts, and examines a range of outcomes to see how different contexts relate to different measures of youth civic engagement.

Although there have been advancements in neighborhood studies to make them more broadly generalizable, there is still an overrepresentation of certain groups of young people (particularly minority youth). The use of national datasets is one attempt to alleviate issues with sampling, but many studies still involve city- or region-specific samples. Therefore, findings from those studies must be interpreted within the context of the specific geographic location. The current study contains a nationally representative sample of 14-year-olds in the U.S.; therefore findings can be generalized to the national population of 14-year-olds.

<div align="center">State of the Literature and Contribution of the Current Study</div>

The studies reviewed here contribute to an understanding of what constitutes civic engagement, how civic engagement is related to other positive outcomes, characteristics of adolescents who are actively engaged, and how multiple contexts in the adolescent's microsystem are associated with differences in civic engagement. In the current study I draw from this literature in my conceptualization of context effects on adolescents' civic engagement. In this section I use my theoretical framework to interpret the collective findings, describe the strengths and weaknesses inherent in the current state of the literature, and identify the specific contributions of my study in consideration of the current literature.

In line with my theoretical framework, many different contexts are related to adolescents' civic outcomes. Parents and peers model civic behavior and encourage adolescents' construction of knowledge through discussion. Schools serve as communities of practice in which civic curricula and group processes enhance student learning. The school community enables students to belong to a group with common experiences, and the civic experiences and discourse allow students to construct meaning (including acquiring knowledge and skills) and eventually display their own civic practices. Lastly, neighborhood characteristics relate to adolescents' civic outcomes through processes related to the collective socialization of civic behavior and contagion of peer norms about civic engagement.

Strengths of the Current Literature

One strength of the research reviewed here involves the use of longitudinal studies to better explain the development of civic engagement. Such studies can examine the characteristics or conditions that relate to concurrent civic engagement, and also can be used to predict future levels of engagement. The use of national datasets is another important advancement because findings can be generalized to the national population of adolescents. However, when the analytic sample is greatly reduced from the original sample, the sample may lose its representativeness.

Overall, there are some very important findings pertaining to the demographic characteristics of engaged and disengaged youth. Although rarely examined in the same study, the findings on contextual factors that relate to civic engagement can provide insight as to why there are engagement gaps for youth of different gender, race, immigrant, and SES background.

Weaknesses of the Current Literature

There has been much advancement in studies on context effects on civic engagement, in particular the use of large-scale national datasets to enable findings to be generalized to the larger population. However, the majority of studies do not utilize multilevel statistical techniques to account for the nested nature of the data contained in these datasets. I did not even mention this particular weakness throughout the review because it was so prevalent. The prevalence is concerning because single-level statistical models used on multilevel data are incredibly problematic and can produce misleading results. This issue is discussed further in Chapter 3.

Although many studies employ large-scale datasets, city- and state-specific samples also are common. Findings from these studies, with their overrepresentation of urban and minority youth, must be interpreted within the context of the specific cities and demographic groups examined. For researchers who do not want to employ national datasets, they could target multiple cities or towns, or (if the research must be conducted in one location) at least sample the larger metropolitan area rather than the urban core.

Considering measurement issues, there were a few instances of questionable operationalization of constructs and formation of composite measures. In some cases the operationalization of measures did not make sense for the construct being assessed, which might have occurred when researchers employed items or scales that were not designed with an investigation of civic engagement in mind. Therefore, researchers had to stretch to make a conceptual connection. There were also occasions in which very large composites were constructed (either as predictors or as outcomes) that may have overlooked the nuanced nature of the constructs within the comprehensive item. In other

instances, composites included behavioral and attitudinal items, often to serve as a measure of orientation or commitment. Although most of the measures critiqued here had adequate psychometric properties, I question whether they were conceptually sound.

As I mentioned throughout the review, the main weakness of the literature reviewed here is the failure of nearly every study to consider interactions between contexts even though most of the large-scale datasets allow for the consideration of multiple contexts of influence. It is imperative that research include aspects from multiple contexts or the findings might suffer from an omitted variable bias. Such a bias occurs when a context is deemed to have an important influence, but the conclusion is based on the exclusion of variables from other contexts. While studies infrequently focus on multiple contexts, it is even more uncommon to examine interactions between contexts. Research on other aspects of adolescent development indicates that adolescents are influenced by these interactions. Therefore it is a weakness to exclude these significant and informative predictors of adolescents' outcomes.

Contribution of the Current Study

In the current study I utilize data from the Civic Education Study and the U.S. Census to examine the associations between the family, peer, school, and neighborhood contexts and a range of adolescent civic outcomes. Findings from the study have the potential to be generalized more readily to a range of contexts in the United States. Additionally, the use of hierarchical linear modeling properly accounts for the nested nature of the data and will give more accurate estimates of context effects. Several studies have utilized nationally representative samples, but few have used multilevel modeling to analyze the data.

Using data from multiple datasets allows for the examination of the four microsystem settings discussed throughout this chapter. In my study I include predictors pertaining to the adolescent, as well as families, peers, schools (from the CIVED), and neighborhoods (from the U.S. Census). Several studies have examined a mix of these contexts, usually focusing on one or two contexts, but few consider all four systems of influence. In addition to including all of the contexts I will specifically examine cross-context interactions (e.g., school-neighborhood effects) and cross-level interactions (e.g., student-neighborhood effects).

To enable the examination of cross-level interactions I include the demographic characteristics of gender, race, SES, and immigrant status. The studies reviewed here often include demographic characteristics but generally use them as control variables. In order to further understand the nature of the interaction between the individual and the microsystem settings I allow demographic characteristics to vary in their effects (a statistical technique that is described in Chapter 3).

In addition to including a comprehensive set of individual demographic characteristics, I consider a range of civic outcomes. This approach enables an examination of how adolescent demographic characteristics and each of the four contexts relate to different outcomes. Other studies have considered multiple outcomes, but do not also consider multiple contexts. Including multiple outcomes enables the consideration of civic knowledge, attitudes, and behavior without combining them into a composite where the nuances of the types of engagement would be lost.

In summary, research on adolescent civic engagement indicates that the contexts of family, peer, school, and neighborhood all play a part in the civic development of

young people. I am interested in continuing this line of research by examining the influence of multiple contexts for independent and combined effects. The findings have the potential to be relevant to subgroups of adolescents and to anyone interested in manipulating contexts to enhance adolescents' civic outcomes.

CHAPTER 3

METHODOLOGY

The current study examines context effects on adolescent civic engagement

utilizing two existing datasets. The first dataset is the International Association for the

Evaluation of Educational Achievement (IEA) Civic Education Study of 1999, and the

second source of existing data is the 2000 U.S. Census. When merged, the two datasets

provide demographic and process measures pertaining to individual adolescents, families,

peers, schools, and neighborhoods.

In this chapter I provide an overview of the Civic Education Study and the 2000

Census including relevant information pertaining to design, sampling, and procedures.

Next, I describe the measures from each dataset used in the current study, including how

the measures are used to operationalize conceptual constructs. The chapter concludes

with a description of the statistical methods used to analyze the CIVED and Census data.

IEA Civic Education Study

Background

The International Association for the Evaluation of Educational Achievement is a

consortium of governmental agencies and research institutions founded for the purpose of

conducting comparative studies on education. IEA conducted its first study on civic

education in 1971 (Torney, Oppenheim, & Farnen, 1975), and its second study in 1999

(Torney-Purta et al., 2001). The 1999 Civic Education Study is a cross-national study of

approximately 90,000 adolescents in 28 countries, including 2,811 14-year-olds in the

United States. The U.S. sample of the CIVED is the focus of the current study.

Research Design

The 1999 CIVED is a two-phased cross-sectional study of 14-year-olds (described by Baldi et al., 2001, and Torney-Purta et al., 2001). This particular age group was selected because in some participating countries compulsory schooling ended after 14 years of age (or rather, after the grade in which 14-year-olds would be found). Therefore, each country would sample the modal grade for 14-year-olds; in the U.S. the modal grade was ninth grade.

The first phase (1994-1998) involved an in-depth investigation into the nature of civic education in different countries, including national case studies and interviews with national experts and leaders in education. Based on qualitative data collected during this phase it was determined that there were universal principles that were deemed to be essential for 14-year-olds to obtain and understand across the participating nations. These principles fell into three content domains: the meaning of democracy and democratic institutions, national identity and international relations, and experience with issues of social cohesion and diversity. The CIVED instruments were designed to cover content within each of these domains.

The two instruments used in the study, an assessment and a survey, were developed during Phase 2 (1997-2000). The assessment measures students' knowledge of fundamental democratic principles and skills in applying civic knowledge to interpreting political materials (such as a political cartoon). It is worth noting that this was not a test of country-specific history or government, as is often the case with tests of civic knowledge including NAEP, but was a test of democratic concepts, principles, and skills. Researchers ensured that test items measured knowledge within each of the three key

content domains. After items were vetted through pre-piloting and piloting processes, the final assessment contains a total of 38 items, 25 assessing civic content knowledge and 13 items assessing civic skills. This process conforms to prescriptions for developing psychological instruments and measures (McCartney, Burchinal, & Bub, 2006).

The second instrument is a survey of students' attitudes toward civic issues (70 items), conceptions of democracy and citizenship (52 items), and expected civic participation (24 items), with items reflecting all three content domains. These items were piloted the year before the study was conducted. The questionnaire also includes items pertaining to demographic characteristics, participation in activities, interactions with peers, and school experiences. The administration of the assessment and questionnaire to a representative sample of 14-year-olds occurred in all 28 countries in 1999-2000. The administration procedure is discussed further in a later section.

It is quite remarkable that social scientists and national education experts could reach consensus on assessment and survey items that would be interpreted in the same manner by youth in 28 countries. Although consensus is always necessary in cross-national studies, reaching consensus on the wording of math or science problems would be less complicated. The rigorous consensus-building process that the CIVED entailed ensured the legitimacy of using the instruments in all participating countries. Researchers have expressed concern over using assessments in different cultures (e.g., Greenfield, 1997) or with different racial and socioeconomic groups (e.g., Price, Dake, & Kucharewski, 2002). However, the manner in which the IEA instruments were developed meant that the voices of all national groups were heard. The process enhanced content validity and verifications of translations and adaptations to items ensured that the items

would mean the same thing to 14-year-olds in all participating countries. The U.S. team of experts (an educational research specialist in social studies and statistical specialists from the U.S. National Center for Education Statistics [NCES]) vetted all items from a U.S. perspective. Therefore, I will assume consistency in interpretation across groups of students in the United States.

Sampling Design

The study involved a three-stage, stratified, clustered sample (described by Baldi et al., 2001, and Schulz & Sibberns, 2004). Stratified and clustered sampling procedures lose some of the precision associated with true random sampling. However, both procedures are probability-based and therefore are subject to less sampling error than theoretical, purposive, or convenience sampling (Mertens, 2005).

In the first stage, researchers identified geographic primary sampling units (PSUs). PSUs were groups of adjacent counties (though sometimes a single large county could serve as its own PSU). The 1,027 PSUs were classified into different strata based on their size, region, and type of community (metropolitan or non-metropolitan). From the entire group, 52 PSUs were selected with probability proportional to their representation in the population. Stratification in the first stage ensured that different regions of the U.S. were represented in the study, as well as communities of various size and type.

In the second stage of sampling, within each of the 52 PSUs, public and private schools were selected separately. In both groups, schools were selected using a probability proportional to their size. The proportional stratified sampling in stage two ensured that there would be enough private schools in the sample to be analyzed, and that

a diversity of public and private schools would be selected. The participation rate for schools was 65 percent before replacement and 83 percent after replacement.[3]

The third stage involved the random selection of an intact civics-related classroom within each school. It had to be a ninth-grade classroom, and preferably a non-tracked civic-related course (e.g., history, civics, or government). Within the class, all students were invited to participate with only a few exceptions due to severe disability or limited English proficiency. The participation rate for students was 93 percent.

The decision to specifically sample civics classes, rather than sampling any class in the ninth grade regardless of the course subject, might be deemed a limitation. However, this procedure is equivalent to other large-scale studies in which subject-specific courses are selected because of the studies' subjects of interest. For instance, mathematics courses are specifically sampled in the Trends in International Mathematics and Science Study (TIMSS; Kastberg, Roey, & Williams, 2005).

Additionally, students seem to be equally likely to take civics courses. Data from the 2000 NAEP High School Transcript Study indicate that, on average, students take four years of social studies courses in high school (Perkins, Kleiner, Roey, & Brown, 2004), or at least they did in 1999 before the current focus on math, science, and reading achievement. Specifically, high school graduates in 2000 earned an average of 3.9 social studies credits (the total credits earned across all school subjects was 26.2). This figure indicates that, in the year 2000, the average high school graduate took four years of social studies while in high school. Of course, these figures do not include the number of credits

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[3] The participation rates met IEA standards. Replacement, or substitute, schools were assigned by key sorting variables. For public schools, the replacement had to be located in the same PSU, of a similar size, and of the same minority enrollment category. For private schools, the replacement had to be in the same PSU, of a similar size, and the same religious denomination.

earned by students who did not complete high school, and it is possible that such students did not take social studies courses to the same extent. But it seems that, on average, in 1999 students would have taken some kind of civics course every year, and therefore sampling a ninth-grade civics or social studies course is a reasonable approach to getting a nationally representative sample of students.

Weighting Procedure

Given that the study does not involve a simple random sample, in which all students have an equal chance of selection, it is appropriate to apply sampling weights to account for different probabilities of selection. In the CIVED dataset, sampling weights account for differential selection at each stage (PSU, school, and classroom) and are provided for each student. Applying the sample weight for the U.S. sample (variable name = HOUSEWGT) ensures that the students are representative of ninth-grade students and therefore findings are generalizable to the national population.

This complex survey design produced a nationally representative sample of 2,811 ninth-grade students in 124 schools nationwide (assuming appropriate weights are applied). In the current study the analytic sample is slightly smaller than the original CIVED sample. In the original sample there were five instances where two schools shared the same zip-code. Given that I am aggregating student variables to the school, and including school and neighborhood variables at the same level, it would not be appropriate to keep both schools in these instances. Therefore, I randomly selected and dropped one school in each zip-code in which two schools were contained in one neighborhood. Therefore, my analytic sample contains 2,729 (weighted) students in 119 schools (the average number of students per school is 23 with a range of 6 to 61). To

ensure that the sample maintains its internal validity I utilize a weight that is normalized

for the reduced sample. The normalized weight is based on the original CIVED weight

for the U.S. sample (HOUSEWGT).

Instrument Administration

As mandated by IEA, each school had a school coordinator (appointed by the

school principal) who made arrangements for the test and survey administration. Usually

the coordinator was a teacher in the school, but if that was not possible outside test

administrators were made available. School coordinators were responsible for

maintaining contact with the study researchers, identifying civics-related classes from

which the sample was drawn, planning the instrument administration dates, obtaining

permission from parents, administering the assessment and survey to students (or

assigning another school representative to administer the instruments), administering the

survey to teachers and principals, and returning all completed materials to the research

coordinators at Westat (the research organization that supervised field operations for the

study).

In the United States, the data were collected in October, 1999. Students were

given two hours during class to complete the assessment and questionnaire. School

administrators and teachers were also given surveys to provide supplemental information.

The administrator survey (completed by school principals) asked questions

pertaining to characteristics, policies, and the social and civic environment of the school.

Teachers were asked to give specific information about topics taught in class and the

value they placed on civic education (as well as demographic information). It should be

noted that data from the teacher questionnaire are not nationally representative of civics

teachers in the U.S., but rather are a sample of teachers teaching a sample of ninth-grade students that is representative (Sibberns, 2004).

With the exception of one demographic measure (school region), data from the administrator and teacher surveys are not used in the current study. In addition to the extensive amount of missing data, there is minimal variability in responses to items that would be of interest (for example, which civics topics were taught). Although it would be beneficial for the purpose of convergent validity, the measures simply do not have sufficiently strong psychometric properties to be included.

Measures

CIVED researchers utilized advanced or "modern" statistical techniques, including confirmatory factor analysis (CFA) and item response theory (IRT) models, to construct scales that would facilitate cross-national comparisons of student experiences and outcomes. CFA confirms the internal cohesiveness and structure of the instruments' items and provides evidence that the measures have construct validity. IRT scales effectively account for missing data and provide common scales on which students from different countries can be compared, or for which groups of students (by race, gender, or other characteristic) within countries can be compared.

As for the specific IRT models employed, the civic knowledge scale was developed with the one-parameter Rasch model because the assessment items could be scored as correct or incorrect. The model accounts for the difficulty of items and specifies the probability of correct responses. The attitudinal scales were developed with a different type of IRT model; the generalized partial credit model was used because the responses were ordered categories (e.g., strongly agree to strongly disagree) rather than

dichotomous. Construction of the scales is detailed in Husfeldt, Barber, and Torney-Purta (2005) and Schulz and Sibberns (2004). Next I will describe the measures (including single items, composites, and IRT scales) used in the current study. All of the measures are from the U.S. CIVED dataset, though many were originally developed for the international dataset.

<div align="center">*Outcome Variables for the Current Study*</div>

Because of the multifaceted nature of civic engagement, and the potential for differential context effects depending upon the kind of engagement (for instance, school activity participation having a stronger influence on volunteering than knowledge), I examine four civic engagement outcomes in the current study. The outcomes cover the breadth of civic engagement, including knowledge, attitudes (support for the rights of minorities), and behavior (voting and participating in community activities). See Table 1 for descriptive statistics of each outcome.

Civic Knowledge

Civic knowledge is conceptualized as knowledge of fundamental democratic principles. Operationalized, civic knowledge (original variable name = KNOWMLE) is an IRT scale comprised of 25 test items measuring civic content knowledge (dispersed throughout items BS101 to BS238). All of the original test questions are multiple-choice with four options, but the items were recoded to indicate whether the student got the answer correct or incorrect (the IRT scale was constructed from these recoded items). In the original study the knowledge scale was set to have an international mean (M) of 100 and standard deviation (SD) of 20 (Torney-Purta et al., 2001). For the analytic sample in

Table 1. *Descriptive statistics of CIVED and Census variables (weighted)*

Variable	M	SD	Minimum	Maximum
Outcomes				
Civic knowledge[a]	.00	1.00	-3.89	2.32
Support minority rights[a]	.00	1.00	-3.02	1.39
Voting[a]	.00	1.00	-2.46	1.26
Community participation[a]	.00	1.00	-2.64	2.27
Level-1 variables				
Student demographics				
Female[c]	.52	.50	.00	1.00
White[c]	.63	.48	.00	1.00
Latino[c]	.14	.34	.00	1.00
Black[c]	.12	.33	.00	1.00
Asian[c]	.05	.22	.00	1.00
Multiracial[c]	.04	.20	.00	1.00
American Indian[c]	.01	.09	.00	1.00
Immigrant[c]	.11	.31	.00	1.00
SES[b]	.00	1.00	-3.09	1.46
Social relationships				
Discuss politics with parents	2.48	.90	1.00	4.00
Discuss politics with peers	1.90	.80	1.00	4.00
Time spent with peers at night	2.91	.92	1.00	4.00
School civic experiences				
Confidence in participation[a]	.00	1.00	-3.07	1.85
Open climate for discussion[a]	.00	1.00	-3.55	2.24
Civic curriculum[b]	.00	1.00	-4.01	2.15
Level-2 variables				
School demographics				
School SES	-.10	.49	-1.28	1.17
Northeast region[d]	.21	.41	.00	1.00
Southern region[d]	.24	.43	.00	1.00
Midwest region[d]	.25	.44	.00	1.00
West region[d]	.29	.46	.00	1.00
School civic environment				
School confidence in participation	-.04	.32	-.87	.83
School open climate for discussion	-.04	.33	-.59	.97
School civic curriculum	-.01	.29	-.82	.75
Neighborhood characteristics				
Affluence[b]	.00	1.00	-2.09	3.11
Poverty[b]	.00	1.00	-1.45	4.43
Racial diversity[b]	.00	1.00	-1.49	2.58
Foreign-born residents[d]	.11	.12	.00	.54

[a] Variable is an IRT scale that was standardized for the analytic sample.
[b] Variable is standardized for the analytic sample.
[c] Dichotomous variable where the mean indicates the proportion represented in the sample of 2,729 students.
[d] Dichotomous variable where the mean indicates the proportion represented in the sample of 119 schools.

the current study the scale has been re-standardized to have a mean of 0 and standard deviation of 1. Reliability for the scale (Cronbach's alpha) is equal to .90.

Support for Ethnic Minorities' Rights

Expressing support for the rights of minorities is an attitude that reflects the internalization of democratic principles (i.e., belief in the rights of all members of a society) and an understanding of issues related to diversity. This construct is measured with a four-item IRT scale (MINORMLE) assessing the extent to which adolescents support different kinds of rights. Students responded to the following statements (the response options for the items are 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree):

1. All ethnic groups should have equal chances to get a good education in this country (original item = BS4G2)

2. All ethnic groups should have equal chances to get good jobs in this country (BS4G5)

3. Schools should teach students to respect members of all ethnic groups (BS4G8)

4. Members of all ethnic groups should be encouraged to run in elections for political office (BS4G12)

In the original study this scale had an international M of 10 and SD of 2 (Torney-Purta et al., 2001). In the current study it is standardized to have a M of 0 and SD of 1.[4] The reliability for the four-item scale is .80.

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[4] Note that the same conversion is made for all subsequent IRT scales, meaning that the original variables from the international dataset (M = 10, SD = 2) are standardized for the U.S. analytic sample (M = 0, SD = 1). The reliabilities given also are for the U.S. analytic sample.

Anticipated Voting Behavior

Civic behavior involves participation in formal and informal activities that promote democracy and the maintenance of the polity. Based on the assumption that different kinds of participation will be appealing to different groups of adolescents, I examine two aspects of civic participation. The first behavioral outcome of interest is youth expectations for formal civic participation, specifically as a voter. Although one might question the validity of 14-year-olds' reports of voting behavior, Campbell (2007) found that among high-school students who reported that they would vote, 84 percent reported doing so 10 years later.

Anticipated voting is measured with a two-item IRT scale (VOTEMLE). Students reported whether they anticipated doing the following once they are adults (1 = I will certainly not do this, 2 = I will probably not do this, 3 = I will probably do this, 4 = I will certainly do this):

1. Vote in national elections (BS5M1)

2. Get information about candidates before voting in an election (BS5M2)

The scale has a M of 0, SD of 1, and reliability equal to .79.

Anticipated Community Participation

The second behavioral outcome is a measure of adolescents' anticipated community participation, which is a more informal aspect of civic participation. In this three-item IRT scale (COMMMLE) adolescents reported whether they anticipated participating in the following activities over the next few years (1 = I will certainly not do this, 2 = I will probably not do this, 3 = I will probably do this, 4 = I will certainly do this):

1. Volunteer time to help people in the community (BS5M6)

2. Collect money for a social cause (BS5M7)

3. Collect signatures for a petition (BS5M8)

The scale has a M of 0, SD of 1, and reliability equal to .75.

Predictor Variables for the Current Study

Given my interest in multiple contexts of influence, and the interaction between those contexts and the individual, it is necessary to include a comprehensive set of variables. I include variables that pertain to the adolescent, social relationships with parents and peers, the school, and the neighborhood. The variables pertaining to the family, peer, and school contexts can be interpreted as measures of processes by which contexts relate to adolescents' civic outcomes, while the variables pertaining to the neighborhood context are merely representative of demographic and economic conditions. Each variable, and any conversion made from the original CIVED variable, is described below. Unless otherwise stated, the predictors are included in the analysis at level 1 (levels of analysis are discussed in greater detail in the section on statistical analyses). Descriptive statistics for the predictors are illustrated in Table 1 (descriptive statistics for the single items used to create composite measures are available in Appendix A).

The first set of predictors are demographic characteristics of students, including gender, race, immigrant status, and socioeconomic status. It is important to note that adolescents' demographic characteristics are not considered merely as control variables, but rather are specifically examined for interactions with context variables.

Student Demographic Characteristics

     Gender. Gender is a dichotomous indicator of whether a student is male or female. I recoded the original variable (BSGGEND, where 1 = female and 2 = male) in order for 1 to indicate that a student is female and 0 to indicate that a student is male. The sample is 52 percent female.

     Race. Race and ethnicity are multidimensional constructs that involve socially constructed meanings that vary within and between groups of people. The complicated processes that are captured within group labels are beyond the scope of this study (see Phinney, 1996, for an in-depth discussion), but I do recognize their psychological importance. Here, the concept of race (and any physical differences that may or may not be associated with it) refers to the group of people with which adolescents identify, either because of their skin color, their personal or family history, or the group's characteristics or identity.

     Students originally responded to one question on race and a separate question on Latino ethnicity. The race item (BSENT3A) asked students to respond which race best described them and allowed them to check multiple options (A = American Indian, B = Asian, C = black or African American, D = Native Hawaiian or Pacific Islander, E = white). The Latino ethnicity item (BSENT03) was separate, enabling students to respond that they were Hispanic or Latino (value of 1) or not Hispanic or Latino (value of 2).

     To create a comprehensive race variable I combined students' responses from the two questions, giving priority to their identification as Latino. If a student answered that they identified as Latino and any other race, they were classified as Latino. If a student answered that they identified as non-Latino they were coded as the race for which they

identified. This composite variable is how race has been operationalized. The sample consists of 1,704 white students, 373 Latino students, 330 black students, 142 Asian students (combining the response categories of Asian and Native Hawaiian or Pacific Islander), 114 Multiracial students, and 20 American Indian students (45 students did not report their race or ethnicity). For the analyses I created dichotomous variables for each racial group, and white is used as the reference group.

Immigrant status. Immigrant status is a dichotomous indicator of whether or not the student was born in the U.S. The original item (BSGBRN1) asked students if they were born in the country (1 = no, 2 = yes). I recoded the item to be a dummy variable that indicates students' immigrant status (1 = immigrant, 0 = non-immigrant). Eleven percent of students in the analytic sample are immigrants.

Socioeconomic status. Theoretically, socioeconomic status involves youth exposure and access to intellectual and material resources. To measure this construct I utilize three variables from the CIVED dataset: maternal education (BSGEDUM), paternal education (BSGEDUF), and books in the home (BSGBOOK). I utilize these measures of SES because of the assumption that adolescents have better knowledge of their parents' education than income, and because books in the home is widely used in educational research as a measure of SES (Campbell, 2007).

For parental education, students were asked to respond to the questions "How far in school did your mother/father go?" (1 = did not finish elementary school, 2 = finished elementary school, 3 = finished some high school, 4 = finished high school, 5 = some vocational or technical education after high school, 6 = some community college, college, or university courses, 7 = completed a bachelor's degree at a college or university). I

averaged students' responses for maternal and paternal education (and converted the average to a six-point scale) for one mean score that serves as an indicator of intellectual resources.

The amount of books students have in their home is the item that represents material resources (1 = 0 books, 2 = 1-10 books, 3 = 11-50 books, 4 = 51-100 books, 5 = 101-200 books, 6 = more than 200 books). I averaged the books in the home item with the parental education average for an SES composite that measures students' access to resources. In cases where students were missing one or two of the components, their values were based on any of the three variables that were available. The composite is standardized for the analytic sample (M = 0, SD = 1) and has a reliability of .66.

For all of the individual demographic variables, I aggregated them to the school level to see if context effects existed beyond the effects of individual characteristics. For instance, the aggregate of the gender variable is the proportion of females in the school (given that the students are representative of the school). The aggregate of individual SES is the average school SES. It is particularly important to include aggregated variables in the multilevel model if the corresponding individual variables vary randomly at level 1 (Raudenbush & Bryk, 2002). All characteristics of individuals are examined as level-1 predictors and their aggregates are considered as level-2 predictors (reflecting school demographics).

Social Relationship Measures

The CIVED dataset contains few items that pertain to adolescents' social interactions or other aspects of social relationships. Therefore, the broader concept of

social interactions is narrowed to the more specific concepts of discourse with parents and peers and time spent with peers in the evening.

Discuss political topics with parents. Discourse with parents, particularly pertaining to political topics, is assessed with items asking students how often, with parents or other adult family members, they (1 = never, 2 = rarely, 3 = sometimes, 4 = often):

1. Have discussions of what is happening in national politics (BS5L2)

2. Have discussions of what is happening in international politics (BS5L5)

I created a composite measure by summing and averaging student responses to these two items. The final predictor, a measure of overall political discourse with parents, has a M of 2.48, SD of .90, and reliability equal to .68.

Discuss political topics with peers. The same variables are available for measuring discourse with peers. Two items inquire as to how often, with people of their own age, students (1 = never, 2 = rarely, 3 = sometimes, 4 = often):

1. Have discussions of what is happening in national politics (BS5L1)

2. Have discussions of what is happening in international politics (BS5L4)

To construct an overall measure of political discourse with peers I created a new variable that is an average of the two individual items. The composite measure has a M of 1.90, SD of .80, and reliability equal to .65.

Time spent with peers in the evening. I also include a measure of adolescents' time spent with peers in the evening outside the home. Students were asked "How often do you spend time during the evening after dinner outside your home with your friends?" (BSGOUTS; 1 = almost every day [4 or more days a week], 2 = several days [1 to 3 days

a week], 3 = a few times each month, and 4 = never or almost never). In contrast to a separate item that inquired as to the amount of time spent with friends directly after school, this item measures time spent with peers in the evening, which is less likely to be related to school or supervised by adults since it is outside the home. The assumption is that time spent with friends in the evening is not necessarily constructive, and therefore would not be positively related to civic engagement. I reverse-coded the measure in order for a higher value to indicate more time spent with peers in the evening. The single-item predictor has a mean of 2.91 and standard deviation of .92.

School Measures

Confidence in effectiveness of school participation. The next group of predictors pertains to the construct of civic experiences in school. Civic experiences refer to real-world experiences of democratic processes, opportunities to express and understand different sides of social issues, and exposure to the importance of democratic practices and ideals. The first component of this conceptual definition, real-world experiences of democratic processes, is operationalized as adolescents' perceived confidence in the effectiveness of school participation. The four items in this IRT scale (CONFSMLE) assess the extent to which adolescents agree with the statements (1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree):

1. Electing student representatives to suggest changes in how the school is run makes schools better (BS4J1)

2. Lots of positive changes happen in this school when students work together (BS4J2)

3. Organizing groups of students to state their opinions could help solve problems in this school (BS4J3)

4. Students acting together can have more influence on what happens in this school than students acting alone (BS4J5)

The scale has a M of 0, SD of 1, and reliability equal to .79. At level 2, I examine the *average level of confidence in school participation*, which is the mean aggregate of individual students' confidence in school participation within each school. The variable is not re-standardized at level 2, enabling the examination of school contextual effects.[5]

Openness of classroom climate for discussion. Whether students have had opportunities to express and understand different sides of social issues is measured with a scale of classroom climate. Perception of a classroom climate that is open for discussion (CCLIMMLE) is a six-item IRT scale assessing how often the following conditions exist in history, civics, and/or social studies classrooms (1 = never, 2 = rarely, 3 = sometimes, 4 = often):

1. Students feel free to disagree openly with teachers about political and social issues during class (BS4N1)

2. Students are encouraged to make up their own minds about issues (BS4N2)

3. Teachers respect our opinions and encourage us to express them during class (BS4N3)

4. Students feel free to express opinions in class even when their opinions are different from most of the other students (BS4N5)

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[5] "Contextual effect" is a statistical term that is explained in the section on statistical analyses.

5. Teachers encourage us to discuss political or social issues about which people have different opinions (BS4N7)

6. Teachers present several sides of an issue when explaining it in class (BS4N8)

The scale has a M of 0, SD of 1, and reliability equal to .82. The mean aggregate of individual students' reports of classroom climate within each school, *average perception of open classroom climate*, is considered at level 2. The variable is not re-standardized at level 2.

Civic curriculum. Student exposure to learning about the importance of democratic practices and ideals is measured by student reports of experienced curriculum. The civic curriculum is measured as it is experienced by students, in contrast to teacher reports of what is taught in class. In the original questionnaire seven individual items assessed the extent to which adolescents agree that, in school, they have learned (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree):

1. To understand people who have different ideas (BS4K1)

2. To cooperate in groups with other students (BS4K2)

3. To contribute to solving problems in the community (BS4K3)

4. To be a patriotic and loyal citizen of my country (BS4K4)

5. To be concerned about what happens in other countries (BS4K6)

6. The importance of voting in national and local elections (BS4K7)

After a correlation analysis revealed that these six items were moderately related, and also that correlations with the outcome variables followed similar patterns (results of the correlation analysis are available in Appendix B, Table B1), I conducted a factor analysis to determine whether the items measured any underlying constructs. Factor

analysis of the six variables identified one underlying measure of civic curriculum, with factor loadings ranging from .64 to .72 and an eigenvalue of 2.86 (47.67 percent of variance accounted for by this factor). The reliability of the items in the measure is .81 and the constructed factor has a mean of 0 and standard deviation of 1. This scale also is aggregated to the school level for a measure of the *average report of school civic curriculum.*

Geographic region. The final measure pertaining to the school is the region in which the school is located. School administrators reported whether their schools were located in the Northeast, Southeast, Central, or Western region of the United States (NAEPREG). In the sample of 119 schools, 21 percent are located in the Northeast, 24 percent in the Southeast, 25 percent in the Central, and 29 percent in the West. I created dichotomous variables for each region and renamed the variables Northeast, South, Midwest, and West (for accordance with common nomenclature). West is used as the reference group in the multilevel regression analyses because it is the largest group and I have no theoretical reason for choosing a particular region with which the others should be compared. Note that the region measures were included at the school level (with the aggregated school variables and the neighborhood variables) and were classified as neighborhood measures because of their distal relation.

I am using many of the scales from previous CIVED research because they are psychometrically strong, indicating widespread content validity and reliability. To ensure that all salient contexts are considered I also examine single items and composites pertaining to interactions with parents and peers. In the next section I describe measures of the neighborhood context.

U. S. Census

Through the U.S. National Center for Education Statistics I have acquired a restricted data license that allows access to the zip-codes for the schools that participated in the Civic Education Study. Most research on neighborhood effects employs residence zip-codes (from adolescents' homes), which is sensible given that such studies often examine interactions between family and the neighborhood. However, the current study focuses on school-neighborhood interactions. It is certainly possible that there is overlap in home and school neighborhoods (either in their geographical location or demographic qualities). Gershoff and Aber (2006) reported that most children and adolescents attend neighborhood public schools. I do not have information on the correlation between students' home neighborhoods and the neighborhoods of their schools (because home zip-codes are not available in the CIVED dataset), but there is likely to be a high correlation between the sociodemographic characteristics of a school's neighborhood and the sociodemographic characteristics in the school's attendance zone (Jargowsky & Komi, 2008), meaning the neighborhoods in which students reside.

It is relevant to examine characteristics of schools' neighborhoods because schools and neighborhoods are proposed to be inextricably linked. In an extension of Wilson's (1987) theory on the concentration effects of poverty, Stewart, Stewart, and Simons (2007) propose that for young people who live in disadvantaged neighborhoods, schools may be their only exposure to a positive mainstream environment (though this specific relationship was not investigated in their study on neighborhood effects on adolescents' college aspirations). Unfortunately, "it is possible that schools in neighborhoods characterized by concentrated disadvantage, social disorganization, and

racial isolation reflect the social ills found within their neighborhood environment" (Stewart et al., 2007, p. 900). Additionally, just as neighborhoods influence the schools located within their boundaries, schools influence their surrounding neighborhood by attracting families and providing employment opportunities (Gershoff & Aber, 2006). Leventhal and Brooks-Gunn (2003) specifically identify schools as an institutional neighborhood resource that is important to adolescent development. Therefore, it is important to examine the ways in which schools interact with the neighborhoods in which they are located, and how this interaction affects the outcomes of students attending the school.

Conceptual and Operational Definitions of Neighborhoods

When defining neighborhoods one can describe structural characteristics or processes. Neighborhood structural characteristics pertain to easily quantifiable characteristics that are often obtained through census data, such as demographic characteristics of community members, poverty rates, and unemployment. Conversely, neighborhood experiential characteristics, or processes, refer to social connections between people and institutions, positive and negative interpersonal relations, and the overall solidarity in a community. For the current study I borrow from Small and Supple's (2001) conceptual definition of a neighborhood: the physical place and characteristics of the population within that place.

Just as there are multiple ways to conceptualize neighborhoods, there are multiple ways to operationalize neighborhoods. Objective neighborhood measures, taken from U.S. Census data, are distal but standard in that they are measured consistently across neighborhoods. Frequently used objective characteristics include the proportion of

residents living below the poverty line, female-headed homes, and males who are unemployed; median income or education levels; distributions of demographic characteristics of community members (such as race, gender, and immigrant status); and crime rates. Census data from zip-codes and tracts vary as to their level of aggregation in that census tracts offer more precise geographic information (Kowaleski-Jones, 2000). Many researchers prefer tracts because they are more proximal to the individual and have been established based on the advice of local communities (Duncan & Aber, 1997; Haynie, Silver, & Teasdale, 2006). However, according to Sampson (1998, cited by Ainsworth, 2002), the stratification in neighborhoods is so strong and pervasive that the associated outcomes are consistently evident regardless of the unit of analysis used to define neighborhoods.

In comparison to objective measures, subjective neighborhood measures typically involve the experience of the neighborhood environment, through youth, parent, community member, or researcher perceptions of neighborhood boundaries, features, and processes (Pratt, Turner, & Piquero, 2004). Data can be collected through photographs and windshield surveys in which researchers conduct a systematic observation of a neighborhood and record aspects of physical conditions and resources that are more specific than what is available through census data (Nicotera, 2007). Although these measures are closer to the daily lives of adolescents (and more indicative of processes within neighborhoods), these proximal neighborhood measures are not available in the CIVED dataset.

In the current study I use neighborhood compositional characteristics associated with Census zip-codes as measures of the population within a particular place.

Neighborhood compositional characteristics are not used as proxies for neighborhood

processes, rather they are indications of the demographic, social, and economic

conditions in schools' surrounding neighborhoods. The assumption is that aggregated

neighborhood demographic characteristics, from Census measures, are an index of

conditions that influence people within the neighborhood (Shinn & Toohey, 2003).

U.S. Census Design and Instrument Administration

The first U.S. Census was administered in 1790 in the 13 original states (the

information described in this section is detailed in U.S. Census Bureau, 2002).

Historically and currently, the primary purpose of the Census is to provide an exact count

of the U.S. population to be used in allotting the appropriate number of representatives to

the U.S. House of Representatives. States with higher populations are allotted more

representatives, while the opposite occurs in states with lower populations. In addition to

collecting population indicators (e.g., total population, age groups, and racial groups), the

Census now includes items pertaining to social, economic, and housing characteristics

that can be used for research and policy purposes.

Data are collected decennially, with the most recent data collection occurring in

2000. There are two questionnaires distributed: a short form and a long form. The short

form contains seven questions for each member of the household, including his or her

name, sex, age, race, Latino origin, relationship status, and housing status. The short form

is sent to every single household in the United States, which enabled a population count

of 281,421,906 people in the year 2000.

There is also a long form that is sent (in addition to the short form) to 17 percent

of households. This sub-sample is considered to be representative of the entire U.S.

population. The long form contains additional questions about nation of origin, school enrollment and educational attainment, duration of residence, labor force status and industry, income, and a series of housing characteristics.

The Census forms were delivered between March 13 and 15, 2000. Follow-up phone calls (and/or letters) were made to residents who failed to complete their Census form. The final response rate for the 2000 U.S. Census was 67 percent.

Census Measures for the Current Study

The 2000 U.S. Census Supplemental Files 1 (U.S. Census Bureau, 2000a) and 3 (U.S. Census Bureau, 2000b) contain information on the demographic composition of every zip-code in the United States. In the current study, these data are connected to the CIVED schools as measures of the schools' neighborhood context. As previously stated, neighborhood is defined as a physical place (indicated by the assigned zip-code) and the collective characteristics of the population within the physical space. I extracted the following measures of the collective characteristics of the neighborhood population:

1. Proportion of white residents

2. Proportion of Latino residents

3. Proportion of black residents

4. Proportion of Asian residents

5. Proportion of multiracial residents

6. Proportion of American Indian residents

7. Proportion of foreign-born residents

8. Proportion of residents 25 and older with a high school or college education

9. Proportion of residents 16 and older in managerial or professional occupations

10. Proportion of residents 16 and older unemployed

11. Proportion of households with annual incomes $75,000 and greater

12. Proportion of residents living below the poverty line

13. Proportion of households receiving public assistance

14. Proportion of female-headed households

A correlation analysis revealed very strong relations between these variables (results available in Appendix B, Table B2); the average strength of the relationship between two neighborhood variables was .62, regardless of direction. Therefore, I used these measures to form composites that represented different neighborhood constructs. Descriptive statistics for the composite measures are available in Table 1.

For a measure of neighborhood racial diversity, I combined items 1 through 6 utilizing the racial fractionalization equation (as used by Campbell, 2007, and Costa & Kahn, 2003). Racial fractionalization is computed by combining the proportion of residents from each racial group (fractionalization = 1 - $[\Sigma s^2]$, where s represents each racial groups' proportion of the population). This measure is considered a generalized heterogeneity measure (Moody, 2001) and can be interpreted as the probability that two randomly selected residents in a neighborhood are members of different racial groups. A higher score on the measure indicates more diversity in a neighborhood. I standardized the racial diversity measure to have a mean of 0 and standard deviation of 1.

I entered the remainder of the variables in a series of factor analyses utilizing principal components analysis and varimax rotation, results of the initial factor analysis are depicted in Table 2. Consistent with prior research, two factors emerged: a measure of neighborhood affluence and a measure of neighborhood poverty.

Table 2. *Factor loadings of neighborhood measures (rotated solution)*

Measure	Neighborhood affluence	Neighborhood poverty	Neighborhood immigrant population
High school or college education	.74		
Professional occupation	.91		
High income	.89		
Unemployed		.89	
Below poverty line		.70	
Public assistance		.77	
Female-headed household		.80	
Foreign-born residents			.97
Eigenvalue	2.79	2.87	1.20
Variance (%)	34.81	35.85	14.97
Cronbach α	.89	.80	

Note. The extraction method is principal components and the rotation method is varimax.

I conducted a second analysis separately for each factor including only the items that had loaded onto that factor in the initial factor analysis. The analysis of the neighborhood affluence items revealed factor loadings in the range of .86 to .95 and an eigenvalue of 2.45 (82.90 percent of variance in the items explained). For the neighborhood poverty analysis the factor loadings ranged from .83 to .92 and the eigenvalue was 3.06 (explaining 76.53 percent of variance in the items). The factor scores from the separate analyses are used in the multilevel regressions (in contrast to using the scores from the initial factor analysis which technically incorporates the loadings of items not included in the construct). Both factors have a mean of 0 and standard deviation of 1.

It is noted that the proportion of foreign-born residents did not load onto the affluence or the poverty factor and therefore will be considered as a single item (M = .11, SD = .12). All variables from the U.S. Census are examined as level-2 predictors of adolescents' civic outcomes.

Analytic Techniques

In the current study I employed a series of analytic techniques in order to develop adequate measures and investigate my research questions. Preliminary procedures involved examining psychometric properties of individual and composite measures, correlation analyses, factor analyses, and the examination and treatment of missing data (some of these analyses were discussed in the previous section). I describe the results of these preliminary analyses in this chapter because they all pertain to the construction of measures and the preparation of the dataset for the primary analyses (results of the primary analyses are reported in Chapter 4). I also describe the statistical method used in the study, a multilevel regression procedure, and give a summary of the procedure and decision rules for entering variables into the statistical models.

Preliminary Analyses

Univariate and Bivariate Analyses

In order to gain an understanding of the characteristics of the measures from the 1999 Civic Education Study and the 2000 Census it was necessary to conduct preliminary univariate and bivariate analyses. The univariate analyses involved examining descriptive statistics of predictors and outcomes (including the mean, standard deviation, and range), most of which are illustrated in Table 1 and Table A1. Table 1 contains descriptive statistics for the final predictor and outcome variables, while Table A1 (available in Appendix A) contains statistics for the original items used to construct the final variables.

The IRT scales and other standardized measures from the CIVED data generally have normal distributions. Two of the outcomes (support for minority rights and anticipated voting) are slightly skewed, but not enough to significantly affect the results.

Skewness is also evident in some of the Census measures. However, these measures are indicators of the U.S. population, so any irregularities are merely reflections of non-normal distributions in the population. A more significant issue with some of the items (in particular, the proportion of foreign-born residents) is their truncated range because this will influence the interpretation of coefficients in the multilevel regression analyses. To address some of the issues with the original neighborhood variables I constructed composites through factor analysis and computation with the fractionalization equation (discussed in the previous section).

Prior to conducting the factor analysis I performed a correlation analysis of all the original CIVED and Census variables to help assess which items would serve better as composites because of the strength and nature of their association.[6] The initial correlation analyses for level-1 and level-2 variables indicated instances in which data reduction techniques were appropriate because the variables were highly-associated and together would make stronger predictors (results of the initial analyses are available in Appendix B, Tables B1 and B2). After developing composite measures and factors I conducted a correlation analysis that involved the final level-1 and level-2 variable (see Tables 3 and 4, respectively). As expected, measures within each context are moderately to highly related, but because of conceptual distinctions it is not appropriate to combine these measures any further.

Factor Analyses

Given the high correlations between the original civic curriculum variables and among the neighborhood variables it was appropriate to utilize factor analysis to create

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[6] The guidelines used for interpreting correlation coefficients and creating composite variables are available in Appendix B.

Table 3. *Correlations among level-1 predictor and outcome variables*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Female	−	.01	.00	.00	-.01	.01	-.02	-.02	.02	.04*	-.03	-.10**	.13**	.12**	.13**
2. White		−	-.51**	-.48**	-.30**	-.27**	-.11**	-.25**	.30**	.07**	-.01	.04*	.06**	.08**	.01
3. Latino			−	-.15**	-.09**	-.08**	-.04	.18**	-.24**	-.03	.01	.00	-.05**	-.06**	-.03
4. Black				−	-.09**	-.08**	-.03	.02	-.11**	-.10**	-.02	.02	-.03	-.04*	-.01
5. Asian					−	-.05*	-.02	.19**	-.06**	.03	.02	-.11**	.05*	.00	.06**
6. Multiracial						−	-.01	-.02	.00	.01	.00	.01	-.07**	-.02	-.03
7. Am. Indian							−	-.01	-.03	.00	.01	.00	.00	-.01	.00
8. Immigrant								−	-.17**	.03	.07**	-.09*	-.01	-.03	.02
9. SES									−	.20**	.08**	-.03	.11**	.14**	.06**
10. Discuss with parents										−	.56**	-.11**	.20**	.24**	.27**
11. Discuss with peers											−	-.06**	.12**	.19**	.21**
12. Evening with peers												−	-.06**	-.01	-.06**
13. Confidence in participation													−	.32**	.52**
14. Open climate														−	.40**
15. Civic curriculum															−
Outcomes															
Civic knowledge	.01	.28**	-.17**	-.21**	-.01	.00	-.05*	-.12**	.39**	.21**	.07**	-.14**	.13**	.18**	.08**
Support minority rights	.24**	.02	-.01	-.05*	.06**	.00	-.02	-.04*	.14**	.16**	.06**	-.11**	.40**	.27**	.33**
Vote	.13**	.13**	-.10**	-.08**	-.01	-.01	.01	-.09**	.27**	.37**	.21**	-.09**	.34**	.31**	.37**
Community participation	.25**	-.05*	-.01	.03	.04*	.03	.02	.03	.05*	.30**	.23**	-.05**	.29**	.24**	.34**

* p < .05, ** p < .01

Table 4. *Correlations among level-2 predictor variables*

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. School confidence in part.	–	.49**	.58**	.32**	.06	.04	-.10	.00	.17	-.09	-.04	-.02
2. School open climate		–	.45**	.35**	.28**	-.06	-.06	-.13	.27**	-.22*	-.03	.07
3. School civic curriculum			–	.10	.05	.10	-.03	-.11	-.01	.01	-.08	.01
4. School SES				–	.17	-.12	.11	-.14	.55**	-.51**	-.26**	-.21*
5. Northeast region					–	-.29**	-.30**	-.33**	.33**	-.15	.04	.18*
6. South region						–	-.33**	-.37**	-.15	.06	.07	-.19*
7. Midwest region							–	-.38**	-.02	-.06	-.33**	-.35**
8. West region								–	-.14	.14	.22*	.35**
9. Neighborhood affluence									–	-.70**	-.09	.02
10. Neighborhood poverty										–	.28**	.16
11. Neighborhood diversity											–	.45**
12. Neighborhood foreign-born												–

* p < .05, ** p < .01

composite level-1 and level-2 measures. The additional benefit of this procedure is that factors enhance the construct validity of measures. For all analyses I performed a principal components analysis with a varimax rotation.

For the civic curriculum factor analysis (discussed previously in the section on CIVED measures), all six items cohered as one underlying construct. After the first analysis I attempted to force a two-factor solution because some of the items seemed more relational in nature (e.g., communicate with others) while others were more applied (e.g., learning to vote). The eigenvalues were not high enough to warrant a two-factor solution, therefore I used the one factor solution for a single measure of civic curriculum.

I also conducted factor analyses for the neighborhood variables, the details of which were described in the section on Census measures. The neighborhood characteristics cohered in a manner that is consistent with prior research, revealing a measure of neighborhood affluence (a 3-item factor) and a measure of neighborhood poverty (a 4-item factor).

Missing Data Analysis

The final step in the preliminary analyses was to conduct a missing data analysis for all level-1 predictor and outcome measures (note that there are no missing data for level-2 variables because the school measures are aggregates and the neighborhood measures are from the U.S. Census). Because of the use of IRT scaling, which accounts for missing data when estimating students' scale scores, the extent of missing data in the CIVED dataset is minimal. However, it was still important to determine what percentage of students were missing scores on specific measures, and whether the students missing data differed in their demographic characteristics from students with complete data.

On average, the demographic measures were missing data for 2 percent of cases, parent and peer measures were missing data for 5 percent of cases, and measures of school civic experiences were missing 5 percent of data. None of the predictors' missing data exceeded 10 percent, a number that is recommended as a cut-off for necessary imputation or deletion (Hair, Black, Babin, Anderson, & Tatham, 2006). Students who failed to answer items pertaining to social relationships and civic experiences in school were slightly more likely to be male, a race other than white, low-SES, and (to a less extent) born outside the U.S. The cell sizes for the groups of students missing data were generally quite small.

There were somewhat divergent amounts of data missing in the four outcomes, ranging from 1 to 10.6 percent of data missing. For civic knowledge, only 1 percent of data were missing, and students missing data were more likely to be Asian, Latino, and multiracial. Students who failed to answer items pertaining to anticipated voting (9 percent of data missing) were likely to be non-white and low-SES. On the outcomes of support for minority rights (4 percent of data missing) and anticipated community participation (10.6 percent of data missing), students missing data were more likely to be male, non-white, and low-SES. As with the predictor variables, although there were differences in the amount of missing data based on demographic groups, the differences were minor (and cell sizes small) and should not pose a serious threat to the external validity of the findings. Therefore, I determined that the extent of missing data was not high enough to warrant any modifications.

This conclusion was supported by Hair et al. (2006) who argued that when the amount of missing data is below 10 percent the adjustment of scores is not required

because the extent of missing data is not likely to affect the results. This criterion was met by all predictor and outcome measures except anticipated community participation, which is discussed further below. Additionally, because the amount of missing data is small and the sample is large, utilizing different imputation and deletion techniques will make little difference, in that the techniques will provide similar results (Croninger & Douglas, 2005; Hair et al., 2006). Therefore, I determined that the proportion of missing data was not high enough to warrant either the complex imputation of data or the listwise deletion of cases. In the current study I utilize pairwise deletion of cases because this approach allows me to preserve the sample and maximizes the data utilized. The drawback of using pairwise deletion is that the number of students used in each analysis will vary slightly (Hair et al., 2006).

The common solution when there are data missing on an outcome variable is to delete all students who are missing data on the variable (Hair et al., 2006), but this strategy is not particularly useful here because I have four outcomes. For instance, if I delete all of the students who are missing data on the community participation outcome (i.e., employ listwise deletion) then I will inevitably delete students who have values for the knowledge outcome. My analysis for civic knowledge would then have an unnecessarily reduced sample. By employing pairwise deletion, the students missing data on an outcome will automatically be excluded from that variable's analysis but will be retained for the analyses of other outcomes. Therefore, the sample size will vary slightly for each outcome: civic knowledge has a sample of 2,704 students, support of minority rights has a sample of 2,625 students, the anticipated voting sample is 2,482 students, and

the anticipated community participation sample is 2,439 students. In conclusion, I am employing pairwise deletion for missing data on all predictor and outcome measures.

It was necessary to complete this series of preliminary analyses before proceeding to investigate the relationship between the predictor variables and the civic outcomes through multilevel regression analyses. It also was necessary to examine the presence and extent of demographic-based gaps in the four civic outcomes. I provide the results of the civic engagement gap analysis in Chapter 4, including a description of differences in civic outcomes based on students' demographic characteristics.

Multilevel Regression Analysis

In order to examine the influence of multiple contexts on civic outcomes, while also accounting for the nested nature of the data, I employed a multilevel regression procedure. Multilevel regression techniques have only recently become utilized in psychological research on neighborhood effects (e.g., Beyers, Bates, Pettit, & Dodge, 2003; Wight, Botticello, & Aneshensel, 2006), but have been used extensively in educational research on large-scale datasets (e.g., Lee & Bryk, 1989, Raudenbush & Bryk, 1986).

Indeed, the nested nature of students in schools necessitates using a multilevel approach, such as hierarchical linear modeling (HLM; Raudenbush, Bryk, Cheong, & Congdon, 2004), to provide more accurate estimations of relationships between predictors and the outcome. When multilevel data are analyzed with single-level statistical procedures problems occur that pertain to aggregation bias, misestimated standard errors, and heterogeneity of regression, all of which can contribute to misleading results (Lee & Bryk, 1989). An aggregation bias occurs when characteristics of schools

or neighborhoods are assumed to have the same influence on student outcomes as characteristics of individuals. For example, the influence of school SES on an individual's academic achievement may not be equivalent to the effect of that individual student's SES. Single-level models take what should be level-2 variables and assume their meaning is the same at level 1 (also allowing level-2 measures to be analyzed with inflated degrees of freedom).

Another issue with single-level models is that they inaccurately assume independence and therefore do not take into account the groupness of the data. Students that attend the same school inherently share more similar experiences than students who attend different schools. HLM accounts for this lack of independence within schools and therefore gives more accurately estimated standard errors. Additionally, HLM provides an intraclass correlation coefficient (ICC) which specifies the amount of total variance in the outcome that is attributed to differences that occur between schools.

Finally, and perhaps most relevant to the current study, is the likelihood that the regression slopes between certain predictors and outcomes vary for different schools. For instance, student SES and student achievement are often related, but the strength of that relationship may not be the same across all schools. Multilevel models can examine this heterogeneity of regression slopes, while single-level models cannot.

In addition to addressing the issues associated with single-level modeling, multilevel modeling enables all level-1 predictors to be outcomes at level 2. I present three mathematical equations for the modeling done at each level that illustrate the modeling of level-1 outcomes and predictors.

The level-1 model is expressed as:

$$Y_{ij} = \beta_{0j} + \sum_{q=1}^{Q} \beta_{qj} X_{qij} + r_{ij} \qquad [1]$$

where Y_{ij} is the civic outcome of interest (civic knowledge, for example) of student i in school j, β_{0j} is the intercept (mean civic knowledge of students in school j), β_{qj} are level-1 coefficients associated with the X_{qij} student variables (such as race), and r_{ij} is the random effect of student i in a school j.

There are two equations for the level-2 model, one that depicts the modeling of the level-1 intercept and another that depicts the modeling of level-1 predictors:

$$\beta_{0j} = \gamma_{00} + \sum_{s=1}^{S_q} \gamma_{0s} W_{sj} + u_{0j,} \qquad [2]$$

$$\beta_{qj} = \gamma_{q0} + \sum_{s=1}^{S_q} \gamma_{qs} W_{sj} + u_{qj,} \qquad [3]$$

These equations signify that the level-2 model incorporates the level-1 intercept (β_{0j}) and each coefficient (β_{qj}) as additional outcome measures. The level-2 equations include γ coefficients for school and neighborhood variables (W_{sj}) as well as the random effect of schools (u_{0j} for the intercept and u_{qj} for the predictors).

Level-2 predictors include measures of the demographic and civic environment of schools, as well as neighborhood characteristics. The reasons for including school and neighborhood measures at the same level are twofold. First, the neighborhood is directly surrounding the school and therefore the school environment and the neighborhood environment are interrelated (as discussed previously). Many of the adolescents attending the school will live within a short distance of the school (possibly within the same zip-

code), and will therefore have high levels of interaction with the neighborhood and its residents.

The second reason is statistical and pertains to the fact that in this sample there is only one school per neighborhood (rather than multiple schools in each neighborhood). It would not be possible to consider neighborhood characteristics at a third level because there would be no variance in school variables within neighborhoods. Therefore, students are assumed to be nested simultaneously within schools and neighborhoods. Student experiences and characteristics were considered at level 1 while school and neighborhood characteristic were analyzed at level 2. Utilizing this approach permits the estimate of direct and indirect school and neighborhood effects on adolescent civic outcomes. The analytic model, illustrating the anticipated relations between level-1 and level-2 measures, is depicted in Figure 2 (statistical methods employed to examine these effects are discussed further below).

Analytic Strategy

I conclude this section with an explicit description of the steps involved in the statistical analysis including the procedure, decision rules, and manner in which HLM is used to answer each research question. Given that I am interested in the simultaneous influence of multiple contexts, the models actually allow for all of the research questions to be considered simultaneously (for each of the four outcomes). Refer to Chapter 1 for specific research questions (RQ) and see Table 5 for a summary of the procedure and decision rules.

The first step when conducting a multilevel analysis is to create a fully unconditional model in which the dependent variable is entered with no predictors in the

Figure 2. Analytic model for level-1 and level-2 effects on adolescent civic outcomes

(direct effects are indicated by solid lines, indirect effects are indicated by dashed lines)
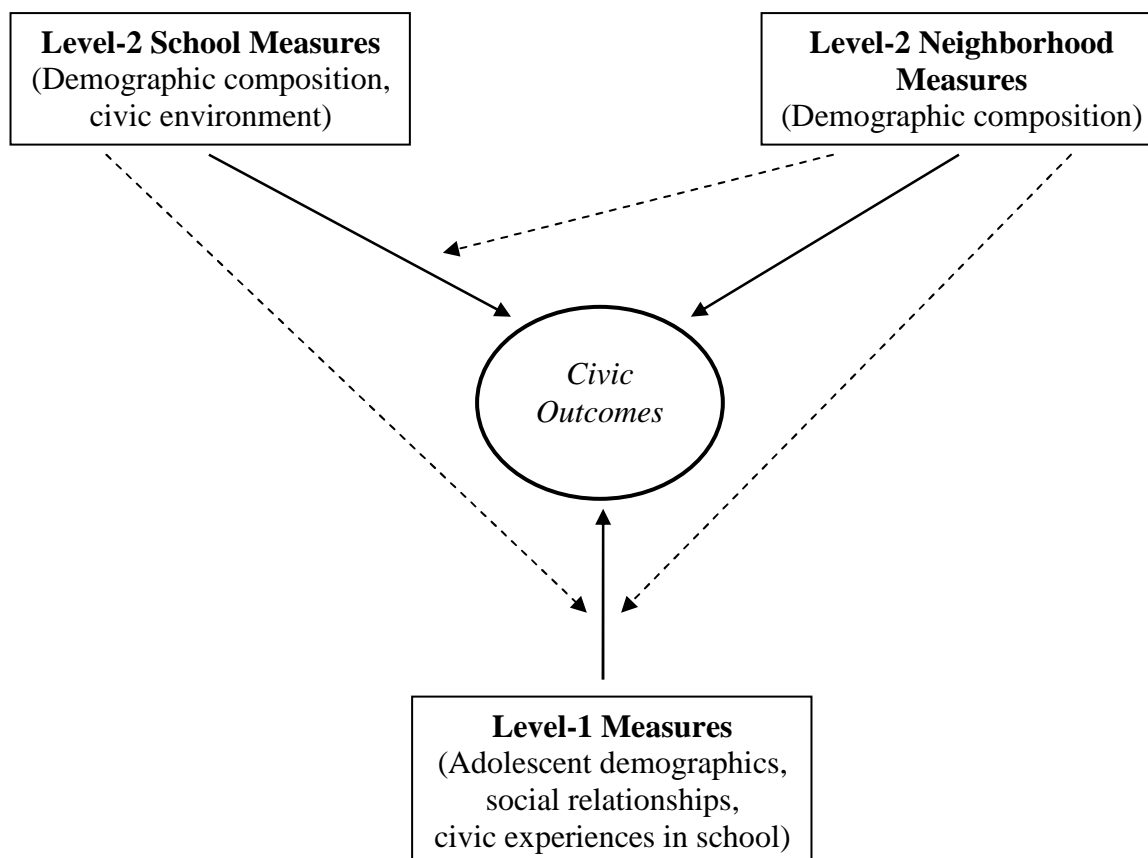
model. The unconditional model partitions the variance in the outcome variable between

level 1 (within schools) and level 2 (between schools). The level-1 variance component

(σ^2) and the level-2 variance component (τ) can then be used to compute the intraclass

correlation coefficient (ICC = $\tau / [\tau + \sigma^2]$). The ICC specifies the amount of total

variance in the outcome that is attributed to differences between groups. Throughout the

analysis I compared each model's τ and σ^2 with the corresponding variance components

from the unconditional model and computed the reduction in variance. Computing the

proportion reduction in variance, or determining how much of the initial variance in the

Table 5. *Summary of procedure and decision rules for variables entered and included in*

the multilevel models

Step	Procedure
1.	Create an unconditional model in order to determine the proportion of variance in the outcome that is attributed to within- and between-group differences.
2.	Test each level-1 predictor for significant random effects. Retain random effect is variable meets all criteria: a. Chi-square test for the variance component is statistically significant at $p < .10$. b. Tau correlations with the intercept and other random predictors do not exceed .70. c. Reliability exceeds .05.
3.	Introduce variables related to student demographic characteristics. a. All demographic variables are retained regardless of statistical significance.
4.	Introduce variables related to social relationships. a. All relationship variables are retained regardless of statistical significance.
5.	Introduce variables related to civic experiences in school. a. All school experience variables are retained regardless of statistical significance.
6.	Remove all level-1 predictors from the model (returning to an unconditional model). Introduce school environment variables. a. All school civic environment variables and school SES are retained regardless of statistical significance. b. School racial composition variables are removed if not statistically significant.
7.	Remove school environment variables. Introduce neighborhood environment variables. a. The neighborhood environment variables from the U.S. Census are retained regardless of statistical significance. b. Geographic region variables are removed if not statistically significant.
8.	Create a full model including variables retained from steps 3 through 7.
9.	Introduce cross-level interactions and level-2 interactions.

outcome is explained by the model's predictors, can be interpreted in a similar manner to

an R^2 statistic utilized in traditional multiple regression (Raudenbush & Bryk, 2002).

The next step (for each civic outcome) was to examine whether the influence of

student characteristics, measures of social relationships, or civic experiences in school

varied between schools. In order to assess whether the relation between the predictors and

the outcome were constant or whether they varied between schools I first allowed the

"effect" of each predictor to vary randomly (with the exception of Asian, multiracial, and

American Indian because the degrees of freedom were too greatly reduced for each of

these predictors). Allowing predictors to vary is the means by which HLM investigates the heterogeneity of regression slopes.

There are a few criteria that a predictor must meet in order to be permitted to vary randomly throughout the analysis. The first criterion is that a predictor must have a statistically significant random effect, which is determined with a χ^2 test of the variance component.[7] The interpretation of this statistical significance is that the effect of the predictor on the outcome (or more accurately, the relationship between the predictor and the outcome) varies between schools. The second criterion is that the correlations between the variance components for the predictor, the intercept, and any other randomly-varying variables do not exceed .70. High correlations indicate an insufficient amount of independent variation in that variable. The third criterion is that the predictor's reliability, which is an indicator of whether the coefficient is a good estimate of the population parameter, exceeds .05 (Raudenbush & Bryk, 2002). When a predictor has a low reliability it is an indication that a substantial proportion of the observed variability in the regression coefficient is merely sampling variance (Lee & Bryk, 1989). In terms of decision making, I allowed a maximum of two predictors to vary randomly for each outcome to avoid overspecification of the models. Note that the intercept (or the mean of the civic outcome of students in school j) was always set to vary randomly between schools. A random intercept enables the examination of group differences in the mean level of the outcome.

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[7] Note that a p-value of .10 is the criterion for determining statistical significance of fixed and random effects, rather than the .05 p-value commonly used with single-level regression analyses. In the fields of education and psychology, studies employing multilevel statistical procedures often utilize .10 as the p-value for determining significance (e.g., Anderman, 2002; Chung & Steinberg, 2006; Kahne & Sporte, 2008).

The predictors that did not meet this set of criteria were designated to have fixed effects, meaning that the predictors' effects were constant across all schools. As the analysis proceeded and additional predictors were added, randomly varying variables that did not continue to meet the aforementioned criteria were changed to have a fixed effect.

Variables with fixed effects were centered on their grand mean and variables with random effects were centered on their group mean. Grand-mean centering involves subtracting the overall mean of the variable from the observed values in order for the mean of the variable to be equal to zero. Grand-mean centering makes the intercept more meaningful (e.g., the score for a student who is average on all of the predictors) and makes it possible to examine level-2 effects on all students. In comparison, centering a variable on its group mean involves subtracting the school mean from each value. Variables that are set to have random effects are group-mean centered because the purpose is to look at group differences in the relation between that variable and the outcome.

The procedure described for determining whether level-1 predictors have random effects directly tests Research Question (RQ) 1. RQ1 inquires as to the nature of the relationship between student-level variables and the civic outcome, including whether the relationship is constant and the strength of the relation. Whether the relation is constant is determined by the tests of random effects. The extent of the relationship between each student-level predictor and the outcome is determined by the size and statistical significance of the variable's regression coefficient (γ). Since each outcome is standardized to have a mean of zero and standard deviation of one, the predictors' coefficients can be interpreted as effect sizes.

Level-1 predictors were entered in hierarchical blocks, with student demographics entered first, followed by social relationship measures, followed by civic-related experiences in school. Each time I examined the relative importance of the set of variables as indicated by how much of the original within-school variance was explained in the outcome variable. I also examined the amount of variance explained by the entire within-school model (including demographic characteristics, social relationships, and civic experiences in school).

RQ2 and RQ3 both pertain to the influence of variables at the school/ neighborhood level. To determine the extent of the relationship between school variables and the civic outcome, and neighborhood variables and the civic outcome, I examined the regression (γ) coefficients (and their statistical significance) for each predictor. Again, predictors' coefficients can be interpreted as effect sizes. The level-2 predictors were entered in blocks in order to assess each context's ability to account for between-school variance in the outcome, however each context was examined separately (rather than in a cumulative manner as with the level-1 variables). This approach allowed me to examine the initial direct relations between each context and the civic outcome.

The final step in the multilevel regression for each civic outcome was to examine interactions between variables from multiple contexts. The interactions between school and neighborhood environment measures (when both components of the interaction are at level 2) are considered to be purely statistical interactions. Examining interactions between student-level variables and school/neighborhood-level variables (referred to as cross-level interactions because the components are at level 1 and level 2) involves the investigation of how level-2 variables are related to level-1 random effects. In addition to

being a statistical interaction, cross-level interactions also provide an indication of

personal interactions because individual students' characteristics and experiences are a

component of the interaction.

The analytic strategy described in the previous paragraphs was equivalent for all

four civic outcomes. For the sake of consistency I decided to retain nearly all of the level-

1 and level-2 predictors regardless of their statistical significance.[8] This approach enables

comparisons between outcomes and contributes to the coherence of the study. The

random level-1 predictors and interactions between predictors will not be constant across

the four outcomes.

Finally, there are a few statistical rules to abide by when conducting a multilevel

analysis with fixed and random effects (these standards are credited to Raudenbush and

Bryk, 2002). First, if a level-1 variable is set to have a random effect (and therefore

group-mean centered) then the aggregate of that variable must be modeled on the

intercept at level 2. The logic behind this rule is that if the level-1 variable is group-mean

centered, then the average effect of that variable is not officially accounted for in the

model. Including the aggregated variable at level 2 accounts for the average effect.

Second, any level-2 variable that is used to model the slope of a level-1 variable (in a

cross-level interaction) must also be included in the intercept model even if the effect is

not significant. This rule is akin to single-level regressions in which all individual

components of an interaction variable must also be included in the analysis. Third, given

the rule that one level-2 predictor is allowed per 10 level-2 units, I did not exceed the

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[8] The exception to this approach is that I did not retain the geographic region of the school if it was not statistically significant. Additionally, I did not retain the school demographics pertaining to race (for example, the proportion of black students in a school) because they were not statistically significant predictors in any of the analyses.

maximum amount of 12 level-2 predictors allowed in each analysis (for my sample of nearly 120 schools).

Effect Sizes

Recall that effect sizes for individual predictors can be determined by the size of the coefficient because the outcome measures are z-scored. In the current study the focus will be on effect sizes for groups of predictors. Specifically, I examine the proportion reduction in variance associated with the addition of each group of predictors to the model. This strategy is analogous to examining the change in R^2 with traditional multiple regression. In a discussion of effect size statistics, McCartney et al. (2006) stated that the change in R^2 statistics indicates the predictive power of a single measure or a group of measures. In the current analysis I will investigate the predictive power of sets of measures pertaining to the individual adolescent, social relationships, school experiences, the school environment, and the neighborhood environment.

Since the current study employs HLM, predictive power is indicated by the proportion of variance in the outcome accounted for by the addition of the group of predictors. Based on the literature reviewed in Chapter 2, adolescents' demographic characteristics are expected to explain an average (across the civic outcomes) of 3 percent of variance in the civic outcomes, with social relationships explaining 13 percent of the variance. School experiences and the neighborhood environment are both projected to explain approximately 11 percent of the variance in the civic outcomes.[9] The effect sizes for the contexts (in terms of predictive power) are expected to be small in magnitude.

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[9] Note that these estimates are based on studies that employed hierarchical regression and for which the R^2 could be determined for predictors from different contexts. There is no anticipated effect size for the school environment because there were no studies that included school measures at level 2 and presented the predictive power of the measures.

Summary

The current study involves secondary analysis of two linked datasets for the purpose of determining the role of multiple contexts of influence (family, peers, school, and neighborhood) on adolescents' civic outcomes. Measures of processes within the contexts of influence (e.g., discourse with parents) are the focus of the analyses. One of the largest limitations in research on youth civic engagement is that most studies focus on one particular context rather than the simultaneous influence of multiple contexts, or even the interaction between those contexts. Through the use of the 1999 IEA Civic Education Study and the 2000 U.S. Census I am able to examine predictors from these four contexts, as well as predictors pertaining to the individual adolescent. The use of multilevel regression techniques allows for the simultaneous examination of predictors from different contexts and at multiple levels of analysis. Finally, the nationally-representative sample enables findings to be generalized to the population of 14-year-olds in the United States, unlike a convenience sample or sample from a limited geographical area.

CHAPTER 4

RESULTS

In the previous chapter I described the statistical procedure used in the current

study, hierarchical linear modeling, and the steps taken in each analysis. In the current

chapter I describe the results from the analyses of context effects on adolescents' civic

outcomes. I start by first providing evidence for the existence of a civic engagement gap

by gender, race, immigrant status, and socioeconomic status. I then present the HLM

results for each civic outcome of interest: civic knowledge, support for the rights of

ethnic minorities, anticipated voting behavior, and anticipated community participation.

The chapter concludes with a brief summary of the findings because an extensive

summary and discussion is presented in Chapter 5.

Civic Engagement Gap

There is evidence, based on the current literature, that civic engagement itself is

an indicator of positive development and that it is associated with other positive

outcomes. Therefore, a civic engagement gap based on adolescents' demographic

characteristics would imply that certain subgroups of young people were not deriving the

benefits associated with this positive aspect of development.

Before examining aspects of different contexts that relate to civic engagement it

was necessary to determine if students differed in civic outcomes based on their

demographic characteristics. For each civic outcome, I compared students based on

gender, race, immigrant status, and socioeconomic status. To determine whether a

significant civic engagement gap existed I tested group differences with t-tests (for

dichotomous variables) and Analysis of Variance (ANOVA; for categorical variables).

The results of these tests of statistical significance, as well as mean scores on the civic outcomes by demographic group, are depicted in Table 6. For dichotomous variables (gender and immigrant), within each civic outcome significant differences between group means are indicated by asterisks. For categorical variables (race and SES), multiple group means needed to be compared (note that SES was recoded to be a categorical variable only for the purpose of examining the engagement gap). Within each civic outcome, if the group means are significantly different from each other then they will have the same letter next to the mean (and standard deviation). No letters next to the mean indicates that the group's mean level of the outcome is not significantly different from any other group's mean.

There was not a significant gender difference in students' civic knowledge, but females had significantly higher scores on the other three civic outcomes. Since all of the outcomes are z-scored, the differences can be discussed in terms of standard deviation units. Females' support of minority rights and anticipated community participation were half a standard deviation higher than males, while anticipated voting was a quarter of a standard deviation higher. Some of these mean differences are quite large in their magnitude.

Group differences also were evident based on immigrant status. In comparison to immigrant students, non-immigrant students had significantly higher civic knowledge (.40 SD higher), expressed support of minority rights (.13 SD), and anticipated voting behavior (.28 SD). Immigrant and non-immigrant students were equally likely to report expectations of community participation.

Table 6. *Mean scores on civic outcomes based on adolescents' demographic characteristics*

Demographic characteristic (n)	Civic knowledge	Support minority rights	Anticipated voting	Anticipated community participation
Gender[a]				
Female (1,388)	.02 (.92)	.24 (.94)***	.13 (.92)***	.24 (.91)***
Male (1,300)	-.01 (1.07)	-.24 (1.00)	-.13 (1.06)	-.26 (1.02)
Immigrant status[a]				
Immigrant (286)	-.35 (.95)	-.11 (1.01)	-.24 (1.12)	.09 (1.10)
Native-born (2,400)	.05 (1.00)***	.02 (1.00)*	.04 (.98)***	.00 (.98)
Race[b]				
White (1,704)	.22 (1.03)abc	.02 (1.04)	.10 (1.02)ab	-.04 (1.00)
Latino (373)	-.42 (.79)ade	-.03 (.93)a	-.27 (1.04)a	-.03 (1.04)
Black (330)	-.57 (.67)bfg	-.14 (.93)b	-.24 (.83)b	.09 (.91)
Asian (142)	-.03 (1.04)df	.25 (.94)ab	-.03 (.94)	.17 (1.07)
Multiracial (114)	.02 (1.06)eg	.01 (.99)	-.05 (1.00)	.14 (1.14)
American Indian (20)	-.55 (.99)c	-.20 (.74)	.16 (1.00)	.30 (.67)
Socioeconomic status[b]				
Low SES (455)	-.53 (.74)a	-.24 (.95)a	-.43 (1.01)a	-.11 (.99)a
Average SES (1,728)	-.02 (.95)a	.01 (.99)a	.00 (.96)a	.02 (.98)
High SES (506)	.58 (1.10)a	.19 (1.03)a	.37 (.96)a	.06 (1.07)a

Note. Under demographic characteristic, the number of students in each demographic group is noted in parentheses. Under each civic outcome, standard deviations are noted in parentheses.
[a] * and *** indicate significant differences at .05 and .001, respectively.
[b] Within the race and SES groups, categories with the same letter following the standard deviation statistic are statistically different from each other at p < .05.

Racial group differences were apparent in the civic outcomes and these differences were most pronounced for civic knowledge. ANOVA results indicated racial group differences in civic knowledge (F (5, 2662) = 55.84, p < .001) and post-hoc comparisons revealed which specific groups differed. White, Asian, and multiracial students had knowledge levels that were significantly higher than Latino and black students (all moderate to large in their magnitude). White students also had significantly higher scores than American Indian students. The largest gap in mean scores of civic knowledge was the white-black gap at nearly .80 SD.

Racial differences also existed in students' support for the rights of ethnic minorities ($F(5, 2568) = 3.21$, $p < .01$). Post-hoc comparisons indicated that significant differences occurred between Asian, Latino, and black adolescents' mean scores with Asians reporting significantly higher levels of support than Latino and black students.[10] At approximately .40 SD, the Asian-black gap was the largest.

Racial differences in adolescents' anticipated voting behavior also were evident ($F(5, 2418) = 11.20$, $p < .001$). White students were significantly higher on anticipated voting than Latino and black students, and the largest gap occurred between white and Latino students (.37 SD). Although an ANOVA indicated overall racial group differences in anticipated community participation ($F(5, 2384) = 2.29$, $p < .05$), post-hoc comparisons did not reveal statistically significant differences between specific groups of students.

The last demographic characteristic on which to compare group differences is student socioeconomic status. It is already evident from the correlation analysis (results depicted in Chapter 3, Table 3) that student SES is related to all four civic outcomes. Since SES is a continuous variable, it was necessary to construct SES groups in order to examine the actual gap between students of varying SES (note that the continuous variable is still used in the HLM analyses). I recoded SES into a categorical variable using one standard deviation as a divider because this distinction is consistent with my approach for discussing SES differences in the HLM analyses. Students who were originally one standard deviation or more below the mean were recoded as low SES, while students who were originally one standard deviation or more above the mean were

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[10] Note the difference between Asian and American Indian students also was quite large, but the difference was not statistically significance likely because of the small sample of American Indian students.

recoded as high SES. The average-SES group consists of students who were within one standard deviation of the mean.

As indicated by the figures in Table 6, very large socioeconomic class-based differences existed in the civic outcomes. ANOVAs indicated overall group differences in civic knowledge (F (2, 2686) = 168.29, p < .001), support of minority rights (F (2, 2579) = 22.51, p < .001), anticipated voting (F (2, 2432) = 73.77, p < .001), and anticipated community participation (F (2, 2399) = 3.46, p < .05). High-SES students had higher mean scores than low-SES students on all four outcomes, and higher scores than average-SES students on three of the four outcomes (community participation is the exception). Some of these differences were very large. For instance, the gap between low- and high-SES students was greater than one standard deviation for civic knowledge and was .80 SD for anticipated voting.

In summary, there were apparent group differences in the civic outcomes of interest, indicating gaps in civic knowledge, attitudes, and behavior based on student demographics. The largest differences occurred in students' civic knowledge, while anticipated community participation had the smallest group differences. Students who are female, white, Asian, native-born, and high-SES consistently had higher scores on civic outcomes. Most of these findings are consistent with prior research on civic engagement.

Having determined that a civic engagement gap existed between students based on demographic characteristics, the next step was to examine how different contexts of influence were related to the gaps.

HLM Results

Civic Knowledge

For each outcome I started the analysis by partitioning the outcome's total

variance into its within-school (σ^2) and between-school (τ) components. In the

unconditional model for civic knowledge, within-school variance was .73 and between-

school variance was .29. Using these figures to calculate the ICC (.29 / [.29 + .73]), I

determined that 28 percent of the total variance in civic knowledge occurred between

schools. In each step of the analysis I examined change in these variance components to

determine whether the family, peer, school, and neighborhood contexts explained any of

the original variance in the outcome. The results of the HLM analysis of students' civic

knowledge are depicted in Table 7.

Before examining the association of different contexts with civic knowledge I

tested the student-level predictors for random effects. For each student-level predictor

(individually), I assessed whether the relation between the predictor and civic knowledge

was constant or whether the relation varied between schools. In the initial exploration of

random effects on civic knowledge three variables were found to vary randomly: female,

SES, and peer discourse. However, while constructing the within-school model each

variable's random effect either dropped to non-significance (as was the case with female)

or was too highly correlated with the intercept's random effect. Therefore, the HLM

model of adolescent civic knowledge does not contain any randomly varying predictors.

Within-school Model

Many characteristics of students predicted civic knowledge, which was expected

given the group differences found in the bivariate comparisons. Latino, black, and

Table 7. *Multilevel model of students' civic knowledge (n = 2,704)*

	Model 1: Student characteristics	Model 2: Social relationships	Model 3: School experiences	Model 4: School environment	Model 5: Neighborhood environment	Model 6: Full model	Model 7: Full model + interactions
FIXED EFFECTS							
Intercept	-.04	-.02	.00	-.10**	-.06	-.04	-.04
School confidence				.06		-.07	-.04
School climate				.35**		.25*	.22*
School curriculum				.01		.00	-.06
School SES				.87***		.45***	.43***
Affluence					.17*	.02	.05
Poverty					-.15**	-.04	.01
Racial diversity					-.06	.03	.01
Foreign-born residents					-.59	-.66*	-.53*
POVxSchConf							.15*
DIVxSchClim							-.21*
Female	-.01	-.07+	-.09*			-.09*	-.09*
Latino	-.20**	-.20**	-.20**			-.08	-.09
Black	-.44***	-.40***	-.44***			-.34***	-.34***
Asian	.01	-.04	-.03			.02	.02
Multiracial	-.02	.01	.06			.10	.09
American Indian	-.51**	-.60*	-.62**			-.59*	-.59*
Immigrant	-.12*	-.12*	-.14**			-.11*	-.12*
SES	.24***	.21***	.20***			.17***	.17***
Discuss with parents		.15***	.14***			.14***	.14***
Discuss with peers		-.01	-.02			-.02	-.02
Evening with peers		-.12***	-.12***			-.12***	-.12***
Confidence in participation			.04+			.04	.04
Open climate			.09***			.08***	.08***
Civic curriculum			-.03			-.02	-.02

Note. The table contains HLM coefficients (under fixed effects) and variance components (under random effects). All variables have been centered on their grand mean.
+ p < .10, * p < .05, ** p < .01, *** p < .001

Table 7. continued

	Model 1: Student characteristics	Model 2: Social relationships	Model 3: School experiences	Model 4: School environment	Model 5: Neighborhood environment	Model 6: Full model	Model 7: Full model + interactions
RANDOM EFFECTS							
Between-school (Intercept)	0.14 ***	.13***	.12***	.05***	.17***	.06***	.05***
Within-school	0.69	.67	.67	.73	.74	.66	.66

Note. The table contains HLM coefficients (under fixed effects) and variance components (under random effects). All variables have been centered on their grand mean.

[+] $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

American Indian students all had significantly lower levels of civic knowledge. In comparison to white adolescents (the reference group), Latino students scored .20 SD lower, black students scored .44 SD lower, and American Indian students scored .51 SD lower (these figures are from Table 7, Model 1). The coefficients for the race variables are not as large as the mean group differences examined with ANOVAs in the previous section (because the HLM analysis accounts for differences in immigrant and socioeconomic status) but they are still quite sizeable. Immigrant status was a negative predictor of civic knowledge, while student SES was positively related to knowledge levels. For a one standard deviation increase in SES, student knowledge increased by one-quarter of a standard deviation.

The within-school variance component for this model (depicted at the bottom of Table 7, Model 1) was .69. The reduction from the unconditional model (where $\sigma^2 = .73$) indicates that adolescents' demographic characteristics accounted for five percent of the within-school variance in civic knowledge. Note that the between-school variance component also decreased (from .29 in the unconditional model to .14 in Model 1) even though no school-level variables were added. This reduction is actually attributed to the grand-mean centering of the level-1 variables. When the variables are grand-mean centered the intercept becomes mean civic knowledge adjusted for differences in group membership (rather than the intercept being equal to civic knowledge for students with a value of zero on all predictors). The centering of the variables affects the parameter estimate but is not a true reduction of variance between schools.

The next step in constructing the within-school model involved adding predictors pertaining to social relationships (illustrated in Table 7, Model 2). Political discourse with

parents was positively related to students' civic knowledge. Political discourse with peers was not a significant predictor, but students who spent more time with their peers in the evening had lower knowledge levels. It is worth noting that gender became significantly related to the outcome when this set of variables was added to the model. Controlling for these aspects of social relationships, females have lower civic knowledge than males. In terms of the proportion of variance explained, the social relationship measures accounted for an additional 4 percent of the within-school variance in civic knowledge.

Students' civic experiences in school also were related to civic knowledge, which can be seen in Table 7, Model 3. Having confidence in the effectiveness of school participation and perceiving an open climate for discussion both predicted higher civic knowledge, although the coefficients were quite small. Student exposure to civic curriculum was not related to student knowledge, indicating that learning about ideal democratic practices does not translate to knowledge of democratic concepts and structure.

The group of variables pertaining to students' civic experiences in school did not explain any additional within-school variance in civic knowledge. Again, the gender gap grew (with boys having higher knowledge levels) with the addition of the school variables. This finding indicates that adolescent boys have higher knowledge levels than girls when they have similar levels of discourse with parents and peers, equivalent time spent with peers, and equal civic experiences in schools. These relationships and civic-related experiences seem to create a gender gap in knowledge, indicating that males and females differentially benefit from such experiences.

The within-school model (including predictors pertaining to demographic characteristics, social relationships, and civic experiences in school) explained 8 percent of the variance in civic knowledge that occurs within schools.

Between-school Model

I examined the school and neighborhood environments separately to see how each related to variance between schools in students' civic knowledge. The coefficients of predictors at level 2 can be interpreted in the same manner as the level-1 predictors. Each coefficient is an indicator of the relationship between that variable and students' civic knowledge, assuming the effects of other variables are held constant.

The average climate for discussion in school was positively related to students' civic knowledge, while school confidence in participation and civic curriculum were not significant predictors (Table 7, Model 4). School SES also was positively related to student civic knowledge. The school civic environment (measured with aggregates of individual students' civic experiences) and mean SES accounted for 83 percent of the between-school variance in civic knowledge.

Considered separately, characteristics of the surrounding neighborhood also were associated with adolescents' civic knowledge (Table 7, Model 5). Neighborhood affluence predicted higher civic knowledge among students, while neighborhood poverty predicted lower knowledge levels. The neighborhood context accounted for 41 percent of the variance in civic knowledge that occurs between schools. Note that the proportion of variance that is accounted for by the neighborhood measures is not in addition to the school environment, as was the case with the within-school model. The finding that the school environment explained 83 percent of the between-school variance and the

neighborhood environment explained 41 percent of the variance (which totals over 100 percent) indicates that the two contexts have shared variance in the outcome.

Full Model

The final stage of the analysis involved combining the within- and between-school models (Table 7, Model 6) and adding interaction variables (Table 7, Model 7). This approach enables me to determine what predictors maintain their relation to the outcome when all four contexts are considered, and to examine how different contexts interact to influence the civic outcome. I will focus on findings that pertain to noteworthy changes in predictors' coefficients (in comparison to earlier models), or have not yet been discussed (e.g., interactions).

Starting with the influence of student demographic characteristics, in the final model, once the influence of multiple civic experiences and contexts had been considered, Latino students no longer had significantly lower civic knowledge. Additional analysis indicated that it was the addition of the school environment variables that coincided with the Latino coefficient reducing to non-significance. Essentially, if individual students' civic experiences and the schools' civic and socioeconomic environment are equal then there is no Latino-white civic knowledge gap. School-wide beliefs and practices may enable Latino students to have more meaningful group experiences and stronger feelings of belonging to the school community. The black-white gap also was reduced once these aspects of the school environment were considered, though the difference was still sizeable and remained statistically significant.

Pertaining to the school environment, school average climate for discussion and school SES maintained their positive associations with adolescents' civic knowledge.

Since the level-1 corresponding measures (i.e., individual students' experience of an open climate and student SES) are grand-mean centered, the level-2 aggregate measures are considered to have statistically significant contextual effects. Here I refer to the term "contextual effect" in the statistical sense, while throughout this paper I have discussed "contexts" in relation to groups of people and environments in which adolescents interact. Contextual effects involve factors at the school level that create an additional effect on the outcome beyond the individual student effects.

For civic knowledge, contextual effects are found for school climate and school SES. The personal experience of a class climate that is open for discussion is related to civic knowledge, and attending a school with an overall open climate has an additional positive effect over and above one's personal experience. Additionally, attending a school with a high-SES population is associated with higher student knowledge over and above the individual student's SES. The mean SES of the school seems to make quite a difference in terms of students' civic knowledge, probably indicating differences in school facilities and academic materials as well as parental involvement and opportunities to provide meaningful activities outside the classroom.

For the neighborhood variables in the final model, in which the effects of all other variables are taken into account, neighborhood affluence and poverty were no longer related to student knowledge. However, the proportion of foreign-born residents became a negative predictor. The relation is not as large as it appears ($\gamma = -.53$) because the variable has a restricted range, but higher proportions of foreign-born residents in the surrounding neighborhood were still associated with lower levels of civic knowledge among students.

Interactions Between Predictors

Although there were no significant cross-level interactions (because no level-1 variables varied randomly while meeting the established criteria), I discovered two interactions between school and neighborhood context variables. Neighborhood poverty interacted with school average confidence to differentially influence student knowledge, and neighborhood diversity interacted with school average climate for an additional effect.[11]

Once all predictors were included in the statistical model, neither neighborhood poverty nor school average confidence were directly related to student civic knowledge. However the two predictors interacted to produce a significant indirect effect, which is illustrated with point estimates of students' civic knowledge in Figure 3.[12] Overall, school mean confidence in participation was not related to student civic knowledge, but the relationship differs according to the level of neighborhood poverty. In schools with high mean confidence in participation, the difference in civic knowledge by neighborhood favors youth in high-poverty neighborhoods (while the opposite occurs in schools with low mean confidence). Although the differences in student knowledge are not large, the interaction does indicate that this aspect of the school civic context is particularly beneficial for students attending schools in high-poverty neighborhoods. However, this

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[11] Throughout the analysis neighborhood poverty and neighborhood affluence often interacted with school context variables, but only if considered separately. For example, the neighborhood poverty by school confidence interaction would reduce to non-significance if neighborhood affluence by school confidence was also added as an interaction (and vice versa). I decided to focus on neighborhood poverty interactions rather than neighborhood affluence interactions because findings related to impoverished neighborhoods seemed more meaningful and policy-relevant than findings related to affluent neighborhoods.

[12] Note that in Figure 3, and all subsequent figures, "low" is defined as one standard deviation or more below the mean, "average" is within plus or minus one standard deviation of the mean, and "high" is one standard deviation or more above the mean.

Figure 3. Interaction between neighborhood poverty and school confidence in participation on students' civic knowledge
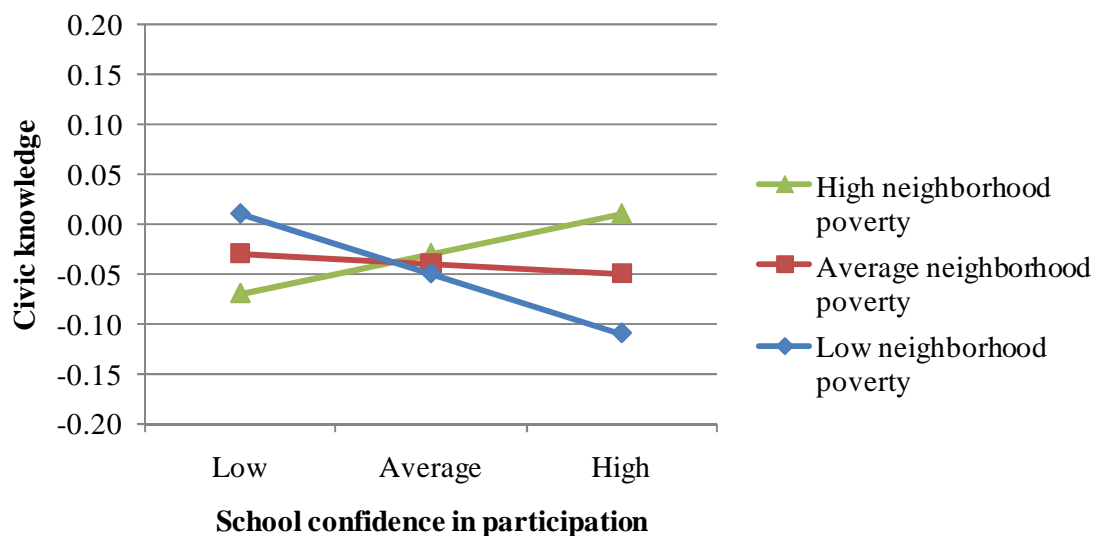
interaction should be interpreted with caution, especially as it pertains to schools in low-poverty neighborhoods. In low-poverty neighborhoods, most of the schools have average levels of mean confidence; there was 1 low-confidence school and 1 high-confidence school located in low-poverty neighborhoods.[13]

The other cross-context interaction occurred between neighborhood diversity and the average climate for discussion in school. Recall that neighborhood diversity was not significantly related to students' civic knowledge, while school climate was positively associated with students' knowledge. The interaction, which is illustrated in Figure 4, indicates that neighborhood diversity moderated the effect of school climate. In neighborhoods with low levels of racial diversity, student knowledge and school climate were positively related; students in high-climate schools had knowledge levels approximately one-third of a standard deviation higher than in low-climate schools.

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[13] Cell sizes are only mentioned for interactions in which they are problematic.

Figure 4. Interaction between neighborhood diversity and school climate on students' civic knowledge
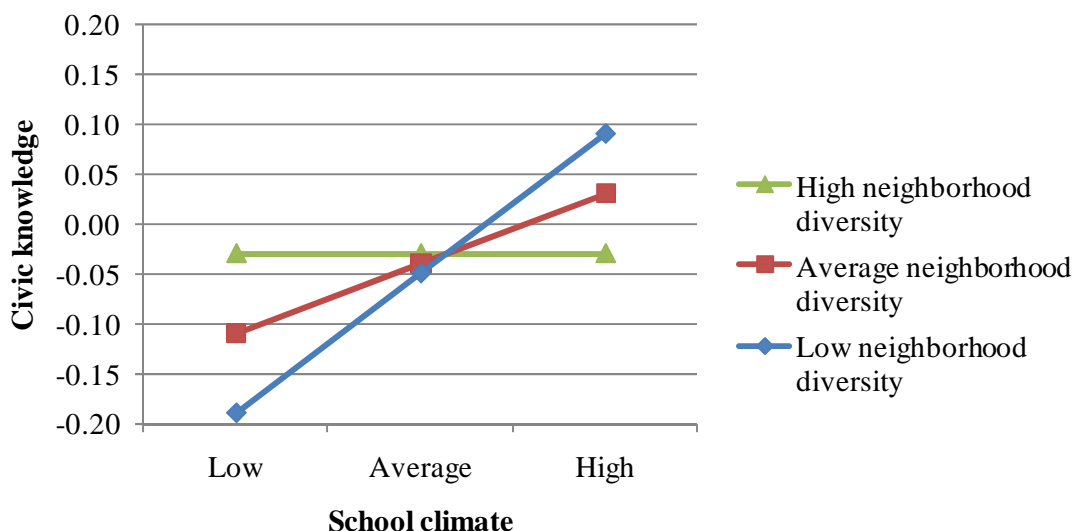
However, the role of school climate in enhancing student knowledge was less effective in high-diversity neighborhoods.

Further analyses revealed that the mean open climate for discussion was relatively low in neighborhoods characterized by low and high racial diversity, in comparison to neighborhoods with average diversity levels. The difference is that in neighborhoods with low racial diversity, having a school climate in which students are encouraged to interact and discuss issues openly is important for the development of knowledge. In racially diverse neighborhoods, these experiences have neither benefit nor detriment for student knowledge.

In the final HLM model of adolescent civic knowledge (Table 7, Model 7), the level-1 and level-2 predictors explain 10 percent of the variance within schools and 83 percent of the variance between schools in adolescents' civic knowledge.

Summary

Characteristics of adolescents and measures of the family, peer, school, and neighborhood context predicted students' civic knowledge. The nature of the relation between student demographics and the outcomes sometimes changed when variables pertaining to other contexts were included. For instance, once the positive influences of parental discourse and civic-experiences in school (and the negative influence of evening time spent with peers) were accounted for, boys had higher knowledge levels than girls. Similarly, once the influence of the school environment was accounted for, Latino students had knowledge levels comparable to white students. Methodologically, these findings illustrate the importance of including predictors from multiple contexts when examining youth outcomes. Practically, they indicate that features of these systems of influence are partly responsible for civic engagement gaps.

Discourse with parents was related to higher knowledge levels, discourse with peers was not related, and time spent with peers in the evening predicted lower knowledge. Students' civic-related experiences in school were weak predictors of student knowledge; confidence in participation and civic curriculum were not even significant predictors. Note that civic knowledge is the only civic outcome for which a measure of civic experiences in school did not vary randomly. This indicates that the relevance (or rather, irrelevance) of individual students' civic experiences in school to students' civic knowledge is uniform across all schools.

There were interesting interactions between contexts in their relation to civic knowledge. For example, in high-poverty neighborhoods the average confidence in participation among students was a positive predictor of student knowledge while in low-

poverty neighborhoods this school characteristic was a negative predictor (although neither predictor had a significant direct effect). The significance of the combined predictors' indirect effect demonstrates the importance of looking at interactions between contexts for their mutual influence on students' outcomes and indicates that schools in disadvantaged communities can have a larger impact on students by enhancing the schools' civic environments.

Support for the Rights of Ethnic Minorities

The second outcome of interest is the civic attitude of support expressed for the rights of ethnic minorities. According to the unconditional model for this outcome, 93 percent of the variance in support of minority rights occurs within schools and 7 percent of the variance occurs between schools (ICC = .07). In an attempt to explain within- and between-school differences I considered predictors pertaining to the adolescent, family, peers, school, and neighborhood.

Prior to constructing the within-school model I examined each level-1 predictor for significant random effects. Individually, whether a student was an immigrant, political discourse with parents, and confidence in the effectiveness of school participation all had significant random effects. During the first stages of analysis the variance components for immigrant and parental discourse quickly dropped to non-significance. However, student confidence in participation retained its statistically significant variance component while also meeting the other criteria for random effects. Therefore, the HLM model for support of minority rights contained one variable that was set to vary between schools and centered on its group mean (while all other predictors were centered on their grand means). Results of this analysis are depicted in Table 8.

Table 8. *Multilevel model of students' support of minority rights (n = 2,625)*

	Model 1: Student characteristics	Model 2: Social relationships	Model 3: School experiences	Model 4: School environment	Model 5: Neighborhood environment	Model 6: Full model	Model 7: Full model + interactions
FIXED EFFECTS							
Intercept	-.01	.00	-.01	-.04+	-.03	-.03	-.03
School confidence				.35**		.32**	.30**
School climate				.30**		.12	.14
School curriculum				.13		-.02	-.01
School SES				.16**		.08	.09
South					-.13*	-.15**	-.16**
Affluence					-.02	-.04	-.02
Poverty					-.15+	-.09*	-.07
Racial diversity					.02	.03	.02
Foreign-born residents					-.02	-.37	-.34
POVxSchSES							.04
DIVxSchSES							.02
Female	.46***	.46***	.37***			.36***	.36***
Latino	.12	.14+	.14*			.26***	.26***
Black	-.04	-.01	-.02			.10	.10
Asian	.33**	.32**	.25**			.25*	.25**
Multiracial	.09	.11	.17			.21+	.21+
American Indian	-.13	-.05	-.09			-.07	-.08
Immigrant	-.10	-.13+	-.12*			-.08	-.08
SES	.13***	.11***	.09***			.07***	.07***
Discuss with parents		.12***	.04			.04	.04
Discuss with peers		.00	-.03			-.02	-.02
Evening with peers		-.06**	-.06**			-.05*	-.06*

Note. The table contains HLM coefficients (under fixed effects) and variance components (under random effects). Unless otherwise stated, variables have been centered on the grand mean.

[a] Variable is centered on the group mean.

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

Table 8. (continued)

	Model 1: Student characteristics	Model 2: Social relationships	Model 3: School experiences	Model 4: School environment	Model 5: Neighborhood environment	Model 6: Full model	Model 7: Full model + interactions
Confidence in participation[a]			.24***			.25***	.27***
School SES							-.21***
Poverty							-.11**
Racial diversity							-.01
POVxSchSES							-.13**
DIVxSchSES							.19**
Open climate			.10***			.09**	.08**
Civic curriculum			.12***			.12***	.11***
RANDOM EFFECTS							
Between-school (Intercept)	.04***	.03***	.03***	.02**	.06***	.01**	.02**
Confidence in participation			.02***			.02***	.01**
Within-school	.87	.85	.71	.93	.93	.70	.70

Note. The table contains HLM coefficients (under fixed effects) and variance components (under random effects). Unless otherwise stated, variables have been centered on the grand mean.

[a] Variable is centered on the group mean.

$^+$ p < .10, * p < .05, ** p < .01, *** p < .001

Within-school Model

Considering only student demographic characteristics as predictors of the outcome, female gender predicted higher support for the rights of minorities (.46 SD higher than males), and Asian students reported higher support than white students (one-third of a standard deviation higher). Student SES also was positive related to support of minority rights; a one standard deviation increase in SES predicted a .13 SD increase in support. In comparison to the unconditional model, the demographic characteristics explained 6 percent of the within-school variance in the outcome.

Similar to the results for civic knowledge, discussion with parents was associated with higher support for the rights of minorities while evening time spent with peers related to lower support levels. When these variables were introduced to the model, the coefficients for Latino and immigrant became statistically significant. This change indicates that holding constant the amount of discourse with parents and peers, and time spent with peers in the evening, Latinos reported higher support than white students and immigrants reported lower support than native-born students. In addition to altering the magnitude of relations between other variables and the outcome, the social relationship variables accounted for an additional 2 percent of within-school variance in students' support of minority rights.

Students' civic experiences in school were all positively related to the outcome and greatly reduced the within-school variance component. On average, student confidence in the effectiveness of school participation related to higher support such that a one standard deviation increase in confidence related to one-quarter of a standard deviation increase in support of minority rights. However, this relation was not constant

across all schools as evidenced by the significant random effect in the bottom of Table 8, Model 3 ($\tau = .02$, $\chi^2 = 178.94$, $p < .001$). I will discuss this random effect further, including moderating influences of level-2 variables, in the full model section.

The other measures of civic experiences in school (open climate and civic curriculum) had fixed effects in which both were associated with higher support for the rights of ethnic minorities (Table 8, Model 3). The school experience variables accounted for an additional 15 percent of the variance in the outcome that occurs within schools. In total, the within-school model (including student demographics, social relationships, and school experiences) explained 24 percent of the within-school variance in students' support of minority rights.

Between-school Model

The school environment, measured with aggregated student variables, was related to adolescents' civic attitudes. School average confidence in participation, average open climate for discussion, and mean SES all were associated with higher support for the rights of ethnic minorities. The school context variables explained 71 percent of the original variance between schools in this civic attitude.

One of the region predictors was statistically significant in this analysis; students attending schools in the South reported lower support of minority rights. Impoverished neighborhoods had a similar relationship such that student support of minority rights decreased as the level of neighborhood poverty increased. The neighborhood variables explained less variance than the school context, but in comparison to the unconditional model the neighborhood context accounted for 14 percent of between-school variance in the outcome.

Full Model

In the combined model of student support of minority rights many of the level-1 predictors maintained their relation with the outcome. Females and Asian students still reported higher support, although the relationships were not as strong. In contrast to Model 1 in which only student demographics were considered, in the final model Latino and multiracial were associated with higher support (while immigrant status returned to being a non-significant predictor). Student SES maintained its positive association even though it was reduced, as did students' civic-related experiences in school.

In the full model school and neighborhood environment predictors were modeled on the intercept (Table 8, Model 6) and on the student confidence slope (Table 8, Model 7). School average climate for discussion and mean SES were no longer significant predictors, but school average confidence in participation maintained its positive association. However, since this level-2 school variable is an aggregate of a level-1 variable that is group-mean centered it was necessary to determine whether school average confidence had a significant contextual effect (recall that when the level-1 variable is grand-mean centered, statistical significance of the level-2 variable automatically indicates a significant contextual effect). Therefore, I ran an additional test of significance (specifically, a hypothesis test that produces a χ^2 statistic) for school confidence. Results from this test indicate whether effects at the school level are actually significantly higher than the effects of the student-level variable. Otherwise stated, I conducted an additional hypothesis test to determine if the level-2 effect of school confidence in participation was significantly higher than the level-1 effect of individual students' confidence in participation. The test revealed that this was not a statistically

significant contextual effect (i.e., the contextual effect was not significantly different than zero) meaning that there was not an additional influence beyond individual students' confidence in participation.

Among the neighborhood variables, the negative association between neighborhood poverty and the outcome was attenuated in the full model (Model 6) and reduced to non-significance once interactions were introduced (Model 7). Living in the South maintained a negative association with the support of minority rights.

Interactions Between Predictors

In contrast to the civic knowledge outcome, there were no significant school by neighborhood influences on students' support of minority rights. However, there were many cross-level interactions in which level-2 school and neighborhood variables moderated the relationship between a level-1 predictor and the outcome. Specifically, school SES, neighborhood poverty, and neighborhood diversity (including interactions between these measures) influenced the student confidence in participation slope. I present each of these interactions separately and utilize graphs for illustration.

Across all schools, student confidence in the effectiveness of participation was related to higher support for the rights of ethnic minorities. However, this relationship varied between schools and was consequently influenced by school and neighborhood characteristics. School SES was negatively related to the student confidence slope, meaning that as school SES increased the slope (or strength of relation between student confidence and the outcome) decreased. This relationship, and the effect on the outcome, is illustrated in Figure 5.

Figure 5. Interaction between school SES and student confidence in participation on students' support of minority rights
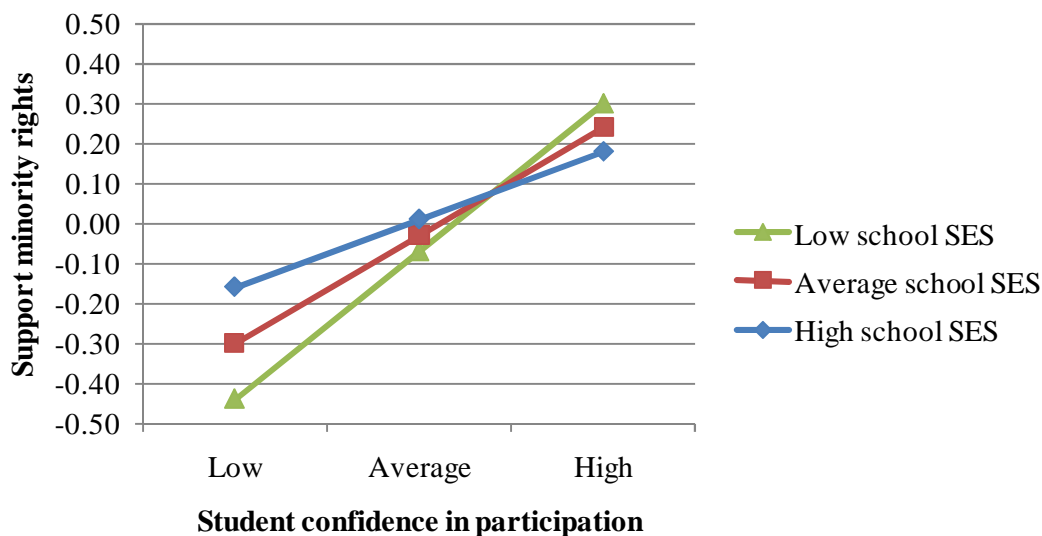
It is evident that student confidence was related to more supportive attitudes among all students, however this relation was particularly strong in low-SES schools. In low-SES schools, students with high confidence in the effectiveness of school participation reported minority support that is three-quarters of a standard deviation higher than students with low confidence. This interaction indicates that student confidence in school participation confers more of a benefit on students' civic attitudes in low-SES schools. It is the second occurrence of student confidence having an increased benefit for youth deemed at a disadvantage (the first occurrence is depicted in Figure 3), indicating that a feeling of empowerment can be an important protective factor for students who are deemed at risk because of the school and neighborhood contexts.

A similar interaction occurred between student confidence in participation and neighborhood poverty. As neighborhood poverty increased, the relation between student confidence and support of minority rights decreased (illustrated in Figure 6). Recall that

Figure 6. Interaction between neighborhood poverty and student confidence in participation on students' support of minority rights
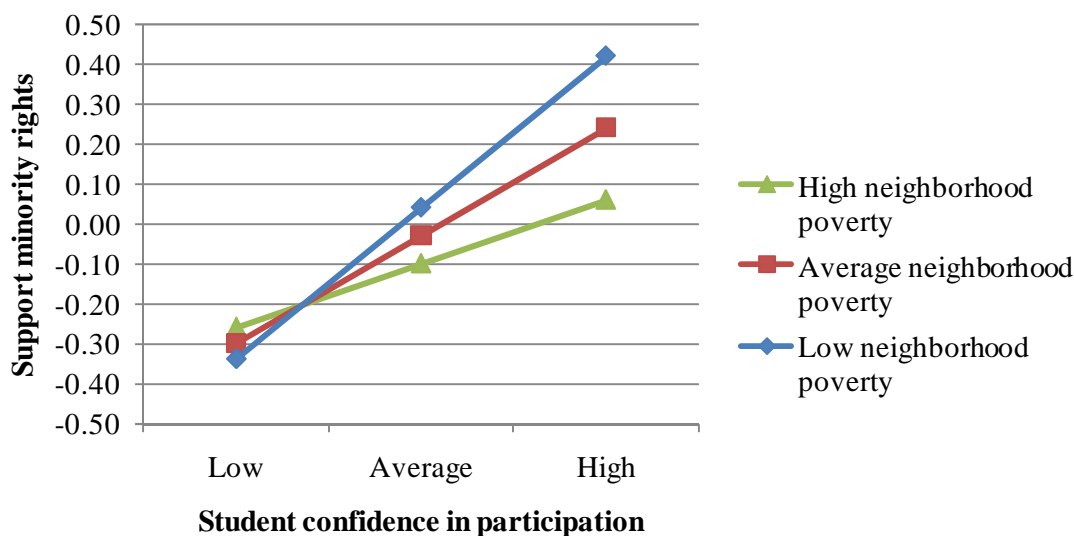
neighborhood poverty initially was related to less supportive attitudes, but the association was reduced to non-significance with the introduction of variables on the student confidence slope (refer to Table 8 to compare the full model and the full model with interactions). The interaction indicates that the beneficial effect of higher student confidence is less pronounced in high-poverty neighborhoods. This finding appears to contradict the preceding interaction, but perhaps the next interaction can provide clarification.

In addition to their main effects on the student confidence slope, school SES and neighborhood poverty interacted to further affect the slope (this interaction is depicted in Figure 7). In low-SES schools, the student confidence slope (i.e., the strength of the relation between student confidence and the support of minority rights) was quite high, regardless of neighborhood poverty level. In high-SES schools, the difference in the confidence slope by neighborhood poverty is more pronounced.

Figure 7. Interaction between neighborhood poverty and school SES on student confidence-support minority rights slope
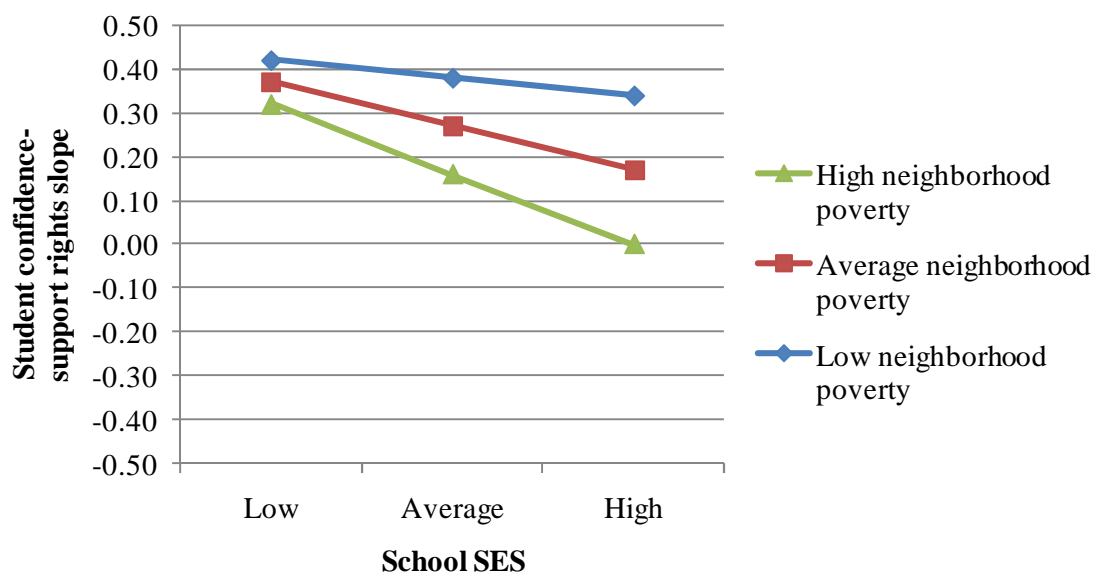
The relation between student confidence and civic attitudes was strongest for students attending low-SES schools that are also in low-poverty neighborhoods, while there was no relation for students attending high-SES schools in high-poverty neighborhoods (these may be private, charter, or magnet schools). This explanation must be interpreted with caution given the small number of schools that meet either of these criteria. Further analyses revealed that there was only 1 low-SES school located in a low-poverty neighborhood (in comparison to 9 low-SES schools located in high-poverty neighborhoods) and 1 high-SES school located in a high-poverty neighborhood (while there were 6 high-SES schools in low-poverty neighborhoods).

There is one final interaction on the slope of student confidence and student support of minority rights. Although neighborhood racial diversity did not have a significant main effect on the slope, it interacted with school SES to differentially influence the relationship between student confidence and minority rights support

(illustrated in Figure 8). Students in low-SES schools had the strongest relationship between student confidence and minority rights support, but neighborhood diversity decreased the strength of the relation. The opposite occurred in high-SES schools, where the strength of the student confidence slope was positively influenced by neighborhood diversity. High neighborhood racial diversity serves as an equalizer in determining the relationship between school SES and the student confidence slope, meaning that the school population socioeconomic status is not as relevant in high-diversity neighborhoods.

Figure 8. Interaction between neighborhood diversity and school SES on student confidence-support minority rights slope

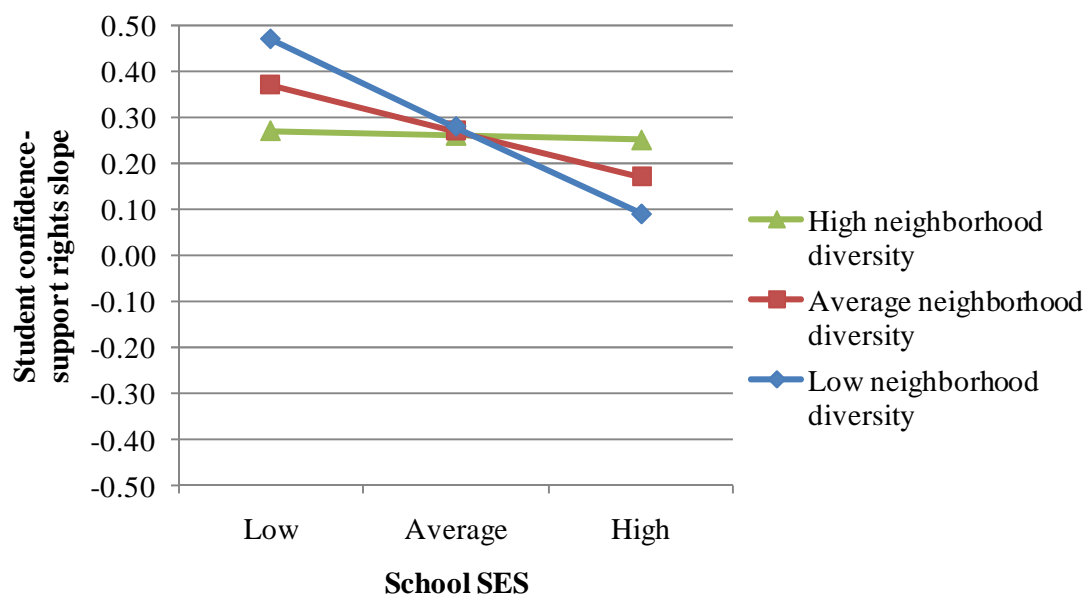This interaction also needs to be interpreted with caution because of cell sizes. Among the low-SES schools, only 1 was located in a low-diversity neighborhood, while 7 of the schools were in high-diversity neighborhoods. Among the high-SES schools, 5

were located in low-diversity neighborhoods and 1 was located in a high-diversity neighborhood.

This group of interactions explained 50 percent of the variance in the relationship between student confidence in participation and support for the rights of minorities. The entire model, including the level-1 and level-2 predictors modeled on the intercept and the level-2 predictors modeled on the student confidence slope, accounted for 33 percent of the within-school variance in students' support of minority rights and 71 percent of the between-school variance.

Summary

In comparison to the analysis of the role of context in adolescents' civic knowledge, the analysis on support of the rights of minorities explained more of the variance that occurs within schools but less of the between-school variance. Females and racial minority students reported more supportive attitudes, especially when differences in civic experiences and contexts were held constant. All civic-related experiences in school were positively related to the civic attitude. However, for one particular experience (confidence in the effectiveness of participation), characteristics of the school and neighborhood moderated the standard positive relation. This series of cross-level and cross-context interactions was quite complicated, which is evidence for the complex interactions that influence adolescent development. I discuss these findings in greater detail in Chapter 5.

Anticipated Voting

The remaining two outcomes pertain to adolescents' expectations of participation in civic behavior. For the first behavioral outcome, adolescents' anticipated voting, the

unconditional model established that 91 percent of variance in the outcome occurs within

schools and 9 percent of the variance in students' anticipated voting occurs between

schools (ICC = .09). Considering the level-1 predictors individually, gender, SES, peer

discourse, and open climate for discussion all varied randomly between schools in their

relation with students' anticipated voting. Although gender and SES initially had the

highest variance components, their random effects reduced to non-significance when

other level-1 predictors were introduced. Peer discourse and open climate maintained

their statistical significance (and met the other criteria for random effects) so I set them to

have random effects. These two variables were group-mean centered and all other

variables were grand-mean centered. Results of the analysis of context effects on student

voting are depicted in Table 9.

Within-school Model

In the first model of students' anticipated voting (see Table 9, Model 1), females

reported higher anticipated voting while Latino and black students reported lower

expectations of participation in this civic behavior. Student SES was positively associated

with anticipated voting in that a 1 SD increase in SES related to a .24 SD increase in

voting. The demographic characteristics accounted for 7 percent of within-school

variance in the anticipated voting outcome.

Similar to the other civic outcomes, parental discourse about political and social

issues related to higher anticipated civic behavior while time spent with peers was

negatively related. Discourse with peers did not have a statistically significant fixed

effect, but did have a significant random effect ($\tau = .01$, $\chi^2 = 146.22$, $p < .05$). This result

signifies that the relation between discussion with peers and anticipated voting varied

Table 9. *Multilevel model of students' anticipated voting (n = 2,482)*

	Model 1: Student characteristics	Model 2: Social relationships	Model 3: School experiences	Model 4: School environment	Model 5: Neighborhood environment	Model 6: Full model	Model 7: Full model + interactions
FIXED EFFECTS							
Intercept	-.03	-.03	-.03	-.07**	-.04	-.06**	-.05**
Mean peer discourse						-.05	-.01
School confidence				.25**		.10	.09
School climate				.08		.01	.14+
School curriculum				.46***		.23*	.23*
School SES				.40***		.23***	.23**
Northeast					.01	.01	.04
Affluence					.08	-.01	.01
Poverty					-.06	.02	.04
Racial diversity					-.06	-.02	-.02
Foreign-born residents					.19	.47+	.44+
POVxSchCurr							.16**
FORxSchClim							-1.17*
Female	.22***	.19***	.09*			.09*	.09*
Latino	-.14+	-.14*	-.12*			-.06	-.07
Black	-.20**	-.13*	-.17*			-.08	-.09
Asian	.00	-.01	-.08			-.09	-.10
Multiracial	-.04	-.06	.03			.06	.05
American Indian	.24	.22	.16			.19	.20
Immigrant	-.13	-.19*	-.19*			-.18*	-.17*
SES	.24***	.18***	.16***			.13***	.13***
Discuss with parents		.32***	.24***			.23***	.23***
Discuss with peers[a]		.05	.02			.03	.04
Northeast							-.13*

Note. The table contains HLM coefficients (under fixed effects) and variance components (under random effects). Unless otherwise stated, variables have been centered on the grand mean.

[a] Variable is centered on the group mean.

+ p < .10, * p < .05, ** p < .01, *** p < .001

Table 9. (continued)

	Model 1: Student characteristics	Model 2: Social relationships	Model 3: School experiences	Model 4: School environment	Model 5: Neighborhood environment	Model 6: Full model	Model 7: Full model + interactions
Evening with peers		-.04+	-.03			-.02	-.02
Confidence in participation			.14***			.12***	.13***
Open climate[a]			.09***			.10***	.10***
School climate							-.10
Foreign-born residents							.28+
FORxSchClim							.94+
Civic curriculum			.16***			.15***	.15***
RANDOM EFFECTS							
Between-school (Intercept)	.04***	.03***	.02***	.003	.08***	.01+	.01
Discuss with peers		.01*	.02**			.02**	.02**
Open climate			.01*			.01*	.01*
Within-school	.85	.76	.64	.91	.91	.64	.64

Note. The table contains HLM coefficients (under fixed effects) and variance components (under random effects). Unless otherwise stated, variables have been centered on the grand mean.

[a] Variable is centered on the group mean.

$^+ p < .10$, $^* p < .05$, $^{**} p < .01$, $^{***} p < .001$

between schools, a relation which is explored further in later models. Note that the addition of the social relationship variables to the model was related to changes in some of the demographic characteristics. Net of the influence of social relationships, immigrant status was associated with lower anticipated voting. With the social relationship predictors in the model, an additional 9 percent of the within-school variance in anticipated voting was explained.

Individual students' civic experiences in schools (including confidence in participation, open climate for discussion, and civic curriculum) were positively related to reports of anticipated voting behavior. The fixed effect of open class climate indicates that as experience of an open climate increased by one standard deviation, anticipated voting increased by .09 SD. The significant random effect of open class climate ($\tau = .01$, $\chi^2 = 152.03$, p < .05) signifies that the strength of this relation varied between schools. The introduction of the school experience variables was related to a reduction in the negative influence of evening time spent with peers and accounted for an additional 14 percent of within-school variance in the outcome. The within-school model (including student demographics, social relationships, and school experiences) explained 30 percent of the variance in anticipated voting that occurs within schools.

Between-school Model

Three of the four school environment variables were highly related to the voting outcome. Higher levels of school confidence in participation and school civic curriculum predicted higher anticipated voting among students, and a similar association occurred between school SES and average voting expectations. The large decrease in the intercept's variance component (τ; from .09 in the unconditional model to .003 in Model

4, Table 9) indicates that these characteristics of the school environment explain 97

percent of the between-school variance in adolescents' anticipated voting. In contrast, the

neighborhood context did not contain any significant predictors. However, the

neighborhood variables accounted for 11 percent of the between-school variance in the

outcome.

Full Model

When all of the contexts of influence, and characteristics of adolescents, were

considered simultaneously there were many changes in the significance of predictors (see

Table 9, Model 7). Females still had higher anticipated voting than males, but the gap

narrowed as other variables were introduced. The positive relation between individual

students' SES and the outcome also was attenuated by the inclusion of the level-2

predictors. In the full model, the white-Latino and white-black gaps in civic behavior

both were reduced to non-significance. Further exploration indicated that the reduction of

the Latino coefficient to non-significance coincided with the introduction of the school

civic context variables, and the addition of these variables and school SES reduced the

Black coefficient to non-significance. These findings implicate inequalities in civic

learning opportunities and the school environment in the civic engagement gaps between

white students and racial minority students.

There also were some changes in the level-2 predictors. School confidence in the

effectiveness of participation was no longer significant, and school average curriculum

and SES were attenuated though still statistically significant. Therefore, school average

curriculum and school SES have an additional positive effect on students' anticipated

voting over and above students' own experience of a civic curriculum and their own socioeconomic status.

Initially, the school average climate for discussion was not a significant predictor, however the addition of interaction terms that include this variable (in Table 9, Model 7) appear to have increased the fixed effect. However, a hypothesis test for the influence of the school average climate indicated that this effect was not significantly higher than the effect of individual students' experience of an open climate.

Finally, in the full model one of the neighborhood variables became a stronger predictor of civic behavior. Holding the influence of all other predictors constant, as the proportion of foreign-born residents in the neighborhood increased, so did students' anticipated voting behavior.

Interactions Between Predictors

There were numerous interactions between contexts producing differential effects on adolescents' anticipated voting. I will first present the level-2 interactions, in which measures of the school and neighborhood environments have interactive effects on students' average expectation of voting behavior. Next I will describe a cross-level interaction between student experience of an open climate, averaged to the school level, and the proportion of foreign-born residents in the surrounding neighborhood. I will then present a cross-level interaction between peer discourse and Northeast region on student voting.

The first level-2 interaction, between neighborhood poverty and school civic curriculum, is illustrated in Figure 9. In schools with low civic curriculum, students had lower anticipated civic behavior regardless of the neighborhood context. Higher levels of

Figure 9. Interaction between neighborhood poverty and school civic curriculum on students' anticipated voting
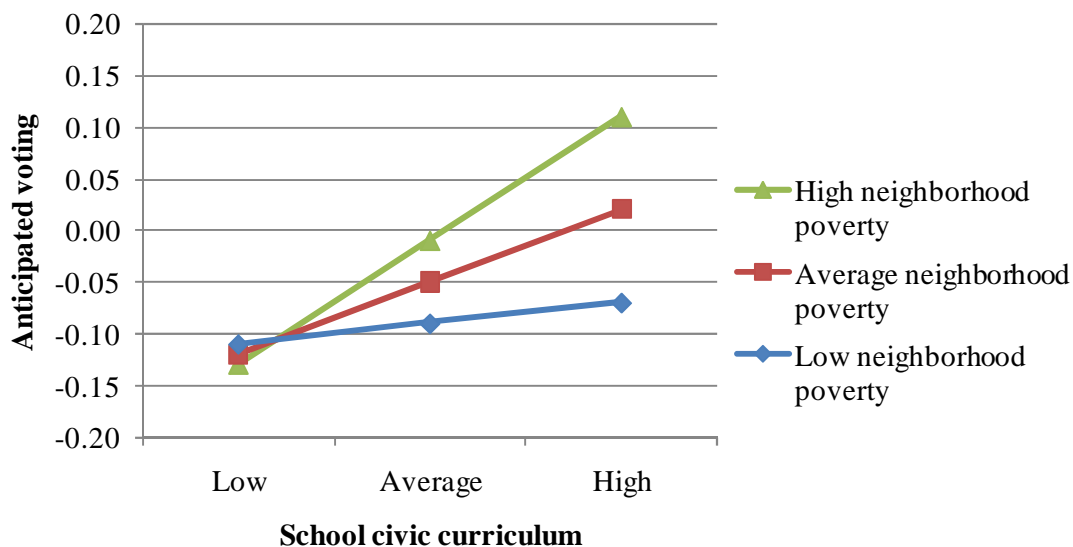
school civic curriculum related to increases in the civic outcome in all neighborhoods, but the growth was most pronounced in high-poverty neighborhoods. It appears that school civic curriculum is more beneficial to youth attending schools in high-poverty neighborhoods than those attending schools in low-poverty neighborhoods.

The second interaction between the school and neighborhood context is illustrated in Figure 10. In this interaction the proportion of foreign-born residents in the neighborhood moderated the relationship between school climate and students' anticipated voting. [14] In the neighborhoods with a high proportion of foreign-born

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[14] Because of the restricted range for this variable, "low" proportions of foreign-born residents are actually indicative of no foreign-born residents in the neighborhood. For ease of interpretation and consistency with the other measures, I maintain the use of the term "low." "Average" proportions of foreign-born residents include neighborhoods where 1 to 22 percent of the residents are immigrants (this is approximately ± 1 SD), and "high" proportions of foreign-born residents include neighborhoods where 23 to 54 percent of the residents are immigrants. Since the maximum amount of foreign-born residents in any neighborhood is 54 percent, "high" foreign-born population should be interpreted in relation to low and average, rather than in reference to 100 percent of the population.

Figure 10. Interaction between neighborhood foreign-born population and school climate on students' anticipated voting
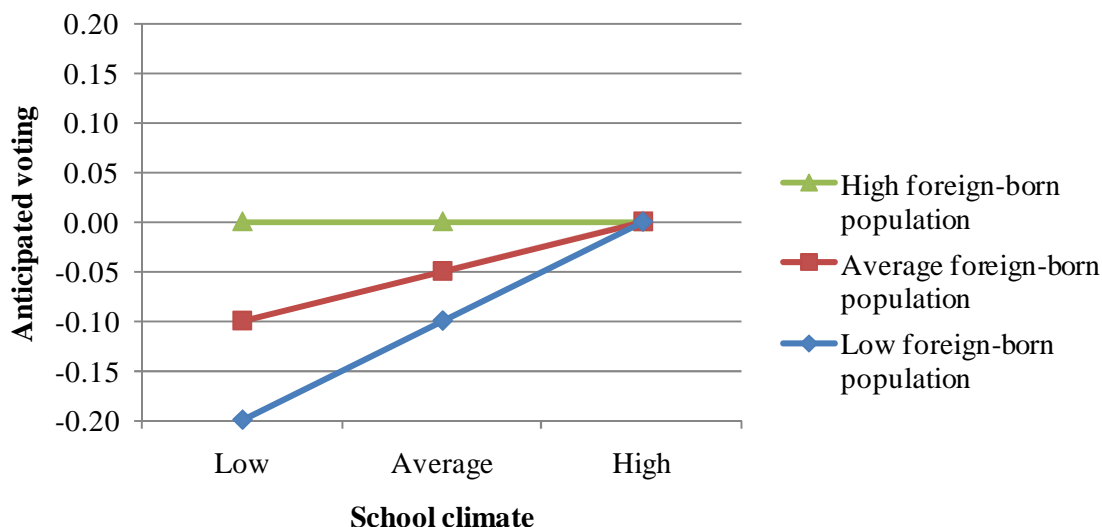
residents, school climate was not related to students' voting intentions, while in neighborhoods with low immigrant populations, school climate had a beneficial effect on adolescents' anticipated civic behavior. According to this interaction, school climate is especially important in schools with no or few immigrants in the surrounding neighborhood.[15] Another interpretation of this interaction is that in schools with low open climate, the differences in adolescents' anticipated voting by the neighborhood foreign-born population are quite pronounced. In contrast, a high open climate acts as an equalizer for students' anticipated voting behavior across different neighborhood contexts.

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[15] All interactions involving the neighborhood proportion of foreign-born residents should be interpreted with caution because of small cell sizes with regard to low foreign-born neighborhoods. Only 4 schools are located in low foreign-born neighborhoods, indicating that the graphs include data points where 2 or fewer schools are represented.

Note that of the 18 schools located in neighborhoods with high proportions of foreign-born residents, only 2 schools were characterized as having a low school climate and 2 schools were characterized as having a high school climate. In the majority of schools located in high-immigrant neighborhoods (14 schools), the school climate for discussion is considered average. Therefore, there is less variance in the overall school climate for discussion in neighborhoods with higher proportions of immigrants.

I now describe a cross-level interaction that is related to the proceeding interaction. The interaction pertains to the random effect of students' personal experience of a class climate in which open discussion is encouraged and supported. Overall, student experience of an open class climate was positively related to anticipated voting behavior, but this experience conferred even more of an advantage in neighborhoods with higher proportions of foreign-born residents (illustrated in Figure 11).

Figure 11. Interaction between neighborhood foreign-born population and student experience of an open climate on students' anticipated voting
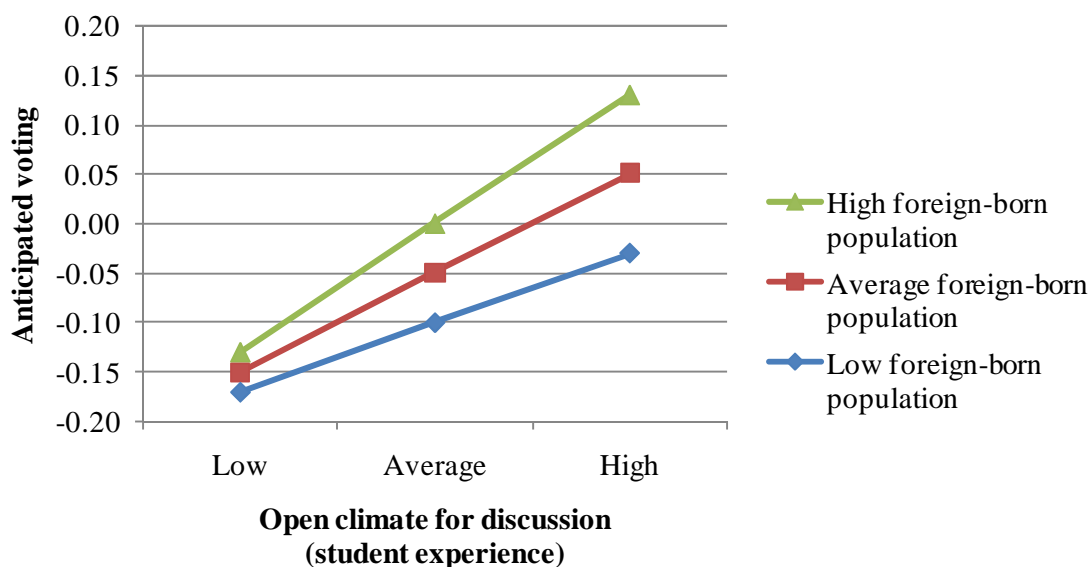
This interaction is particularly interesting when compared with the interaction illustrated in Figure 10. In Figure 10 it is apparent that the school mean open climate was not important for adolescents' voting intentions for students who attended school in high foreign-born neighborhoods. The interaction illustrated in Figure 11 clarifies that for this group of students (in high-foreign born neighborhoods), it is the personal experience of an open climate that is important. Classrooms that support students' discussion of political and social issues may be particularly important in schools located in neighborhoods with high proportions of foreign-born residents because students in these neighborhoods have fewer models for active citizenship.

There is a further interaction between the neighborhood characteristic of foreign-born residents and the school climate on the student climate slope (illustrated in Figure 12). Essentially, the difference in the open climate slope based on the neighborhood foreign-born population is larger in high-climate schools than in low-climate schools. In neighborhoods with a high proportion of foreign-born residents, the school climate had only a slight (although positive) influence on the relation between individual students' experience of an open climate and their anticipated voting. This finding is consistent with the relationships depicted in Figures 10 and 11. In neighborhoods with a low foreign-born population, as the level of open school climate increased, the student experience of an open climate was less related to the civic outcome (indeed, the slope is zero in schools with high school climate).

These level-2 predictors modeled on the open climate slope explained 5 percent of the between-school variance in students' experience of an open climate (this figure was determined by calculating the reduction in the exact variance components from the HLM

Figure 12. Interaction between neighborhood foreign-born population and school climate on student experience of an open climate-anticipated voting slope
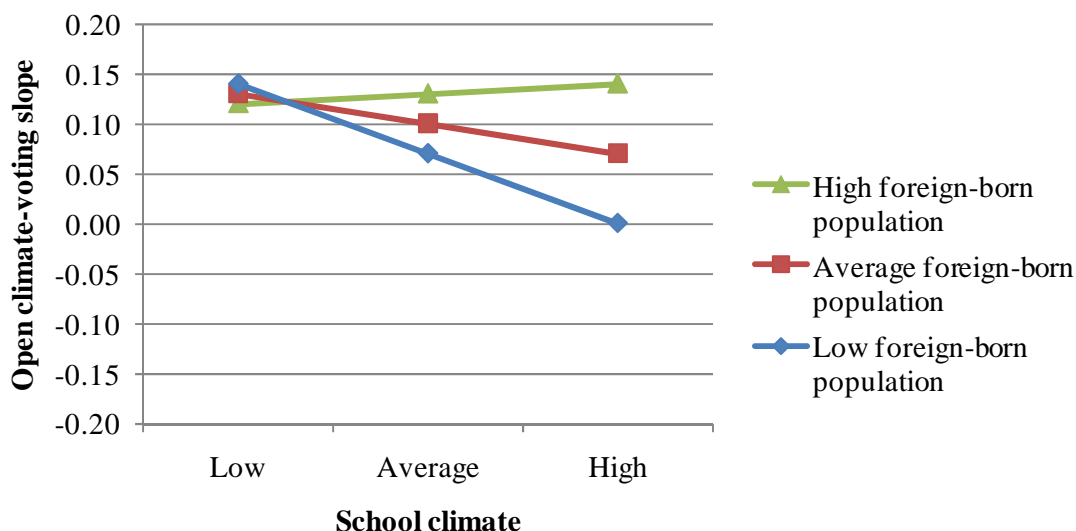
output rather than the rounded up figures in Table 9). In the final model, open climate maintained its randomly varying relation with the civic outcome.

The final interaction pertains to a level-1 variable with a significant random effect. Overall, discourse with peers was not significantly associated with students' anticipated voting. However, the effect on anticipated voting varied between schools, and differed according to geographic region (illustrated in Figure 13). In the Northeast, peer discourse was actually related to lower levels of anticipated voting. In the rest of the country, discussion with peers about political and social issues related (albeit, minimally) to increased expectations of civic behavior.[16]

Additional analyses revealed that the distribution of peer discourse is the same in the Northeast as in the rest of the country, meaning that students in the Northeast are not

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[16] Note that the comparison group for Northeast is "other" because it is the only region variable included in the analysis. If the other dichotomous region variables had been included in the model, the comparison group would be West (the intended reference group).

Figure 13. Interaction between Northeast region and peer discourse on students'
anticipated voting
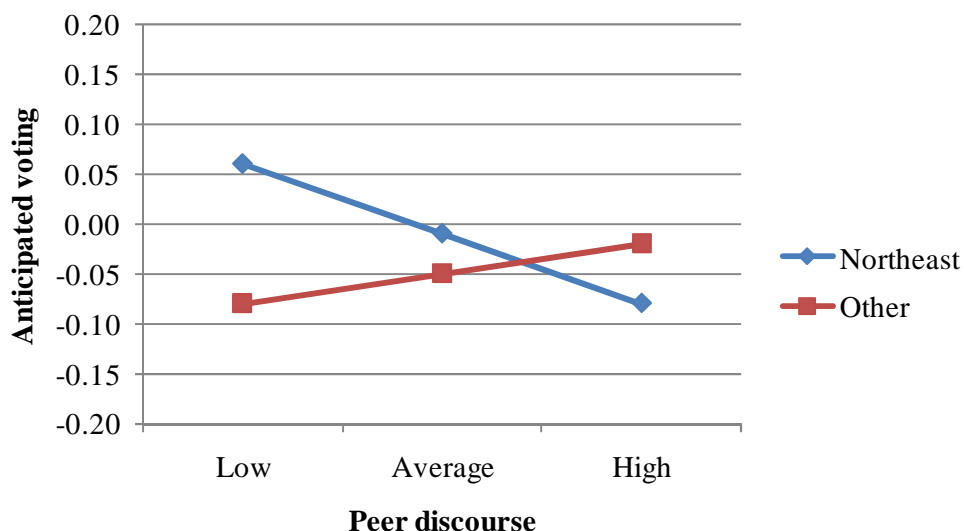
more or less likely to have high levels of peer discourse. It appears that peer discourse is
less beneficial in contributing to civic behavior in the Northeast region of the country,
perhaps indicating cynical attitudes among youth in that particular region.

Modeling Northeast region on the peer discourse slope explained 11 percent of
the between-school variance in the role of peer discourse (again, this figure is based on
the reduction in the precise variance components rather than the rounded variance
components). In the final HLM model of adolescents' anticipated voting, the level-1 and
level-2 predictors explain 30% of the variance within schools and 89% of the variance
between schools in adolescents' anticipated voting. So much of the between-school
variance was explained that the intercept's random effect was reduced to non-
significance in the final model.

Summary

Female gender and SES were positively associated with adolescents' anticipated voting. Latino and black students were initially less likely than white students to report voting intentions, but the civic engagement gaps were reduced to non-significance once the school environment was considered.

The discussion of political topics with parents predicted higher voting intentions, and although discussion with peers was not directly related, the region of the country moderated the peer discourse association. Civic-related experiences in school were positively associated with anticipated voting. The role of an open class climate for discussion was complicated in that it was moderated by the school average climate and a further interaction with the proportion of foreign-born residents in the neighborhood. There were additional interactions between the school and neighborhood contexts, some indicating enhanced benefits for students attending schools in high-poverty and high foreign-born neighborhoods.

<div align="center">*Anticipated Community Participation*</div>

The last civic outcome of interest is students' anticipated participation in community and service activities. According to the unconditional model, the majority of the variance in the community participation outcome lies within schools (97 percent) and 3 percent of the variance in the outcome lies between schools. Results of the modeling of predictors of community participation are given in Table 10.

During initial analyses it became apparent that many of the level-1 variables had significant random effects: gender, Latino, SES, parent discourse, peer discourse, time spent with peers, confidence in participation, open climate, and civic curriculum.

Table 10. *Multilevel model of students' anticipated community participation (n = 2,439)*

	Model 1: Student characteristics	Model 2: Social relationships	Model 3: School experiences	Model 4: School environment	Model 5: Neighborhood environment	Model 6: Full model	Model 7: Full model + interactions
FIXED EFFECTS							
Intercept	.01	.00	.00	-.01	.01	.00	.01
School confidence				.11		-.03	-.09
School climate				.02		-.05	-.02
School curriculum				.35**		.26*	.27*
Mean female enrollment				.43*		.43*	.41*
School SES				-.06		-.09	-.06
South					.19**	.14*	.13*
Affluence					.03	.05	.06
Poverty					.05	.05	.08
Racial diversity					-.04	-.04	-.04
Foreign-born residents					.41	.25	.19
POVxSchCurr							.14*
Female[a]	.47***	.46***	.38***			.39***	.37***
School SES							.29*
School climate							-.32*
Latino	.05	.01	.02			-.01	.00
Black	.08	.14+	.13+			.12	.11
Asian	.20*	.20*	.14+			.12	.11
Multiracial	.16	.17	.24+			.24+	.23+
American Indian	.32*	.31+	.32+			.34+	.37*
Immigrant	.08	.03	.03			.02	.01
SES	.07**	.02	.00			.01	.01
Discuss with parents		.24***	.17***			.17***	.16***
Discuss with peers		.14***	.11**			.11**	.11**

Note. The table contains HLM coefficients (under fixed effects) and variance components (under random effects). Unless otherwise stated, variables have been centered on the grand mean.

[a] Variable is centered on the group mean.

+ p < .10, * p < .05, ** p < .01, *** p < .001

Table 10. (continued)

	Model 1: Student characteristics	Model 2: Social relationships	Model 3: School experiences	Model 4: School environment	Model 5: Neighborhood environment	Model 6: Full model	Model 7: Full model + interactions
Evening with peers		.02	.02			.03	.03
Confidence in participation			.13***			.12***	.12***
Open climate			.07**			.07*	.07*
Civic curriculum[a]			.15***			.15***	.16***
South							.12*
Foreign-born							.57**
RANDOM EFFECTS							
Between-school (Intercept)	.03***	.03***	.03***	.01*	.02***	.02***	.02***
Female	.10***	.09***	.08**			.08**	.07**
Civic curriculum			.02**			.02**	.02**
Within-school	.87	.78	.70	.97	.97	.69	.69

Note. The table contains HLM coefficients (under fixed effects) and variance components (under random effects). Unless otherwise stated, variables have been centered on the grand mean.

[a] Variable is centered on the group mean.

[+] $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Based on subsequent models, the size of the variance components, and theoretical relevance I selected gender and civic curriculum to have random effects. I conducted a completely separate analysis in which I allowed Latino to vary randomly, but I ran it separately because the degrees of freedom were greatly reduced (df = 88 rather than 118 as with most of the other predictors). I first present findings for the full-sample model (with gender and civic curriculum set to vary randomly), and then findings from the model with the reduced sample (with Latino set to vary).

Within-school Model

The demographic characteristics that were positively related to student expectations to participate in community and service activities include female, Asian, American Indian, and SES. Females' anticipated community participation was almost half a standard deviation higher than males, however this relation varied between schools ($\tau = .10$, $\chi^2 = 175.14$, $p < .001$). In comparison to white students, Asian and American Indian students reported higher anticipated community participation (.20 and .32 SD higher, respectively). Student SES was not as highly-related as with other civic outcomes, but increases in SES did predict higher community participation. The demographic characteristics explained 10 percent of the within-school variance in the outcome.

The aspects of social relationships that predicted student anticipated community participation were discourse with parents and discourse with peers. Higher levels of discourse within each context were associated with higher community participation. With the inclusion of the relationship variables the SES predictor reduced to non-significance and the predictor for black students now indicated a positive relationship with community participation. These changes indicate that high-SES and white students have higher levels

of positive civic-relevant experiences in the home, because the civic engagement gaps are reduced when these experiences are held constant. The social relationship variables accounted for an additional 10 percent of within-school variance in anticipated community participation.

Students' civic-related experiences in school also were associated with the civic outcome of anticipated community participation. Student confidence in the effectiveness of school participation, experience of a classroom climate open for discussion, and experience of a civic curriculum all predicted higher anticipated community participation among adolescents. The relation between civic curriculum and the outcome varied between schools ($\tau = .02$, $\chi^2 = 164.35$, $p < .01$), which was explored further in later models. Once the school experience variables were added to the model (i.e., their influence was accounted for), the positive coefficients for female and Asian were somewhat attenuated. Additionally, multiracial identification was now associated with higher community participation. The school experience variables explained an additional 8 percent of the variance in the outcome that occurs within schools. In total, the within-school model accounted for 28 percent of the within-school variance in students' anticipated community participation.

Between-school Model

A small number of the school and neighborhood context variables were related to students' anticipated community participation. As the average civic curriculum experienced by students in a school increased, so did students' anticipated civic behavior. Likewise, increases in the proportion of female students related to increases in anticipated community participation. The only neighborhood variable that was significantly related

was location in the South. Students reported higher community participation in the South than in the rest of the country. There is a common perception that the South is associated with higher levels of religious affiliation and participation, which would likely relate to higher intentions to participate in community service activities. Further analyses revealed that 44 percent of youth in the South reported participating in a religious organization, compared to 42 percent of youth in the rest of the country. Therefore, the assumption that higher reports of anticipated community participation in the South are attributed to level of religiosity is not strongly supported.

The school environment accounted for 67 percent of the between-school variance in anticipated community participation, while the neighborhood environment accounted for 33 percent of the variance.

Full Model

In the full model of adolescent community participation female gender remained highly related to the civic outcome. However, the positive coefficients for black and Asian reduced to non-significance. A systematic investigation revealed that the introduction of neighborhood poverty to the model was attributed with the reduction of the black coefficient, while the reduction of the Asian coefficient coincided with the addition of the school civic context variables. Net of the influence of the other predictors, the positive association between being multiracial and community participation, and between American Indian and the outcome, increased in magnitude.

School curriculum and mean female enrollment maintained their positive associations with anticipated community participation. However, hypothesis tests indicated that the contextual effects were not statistically significant.

Interactions Between Predictors

There was one significant school by neighborhood interaction on average student community participation (illustrated in Figure 14). The school civic curriculum was positively related to students' anticipated community participation across neighborhood contexts. However, in high-poverty neighborhoods the beneficial influence of school civic curriculum was even more apparent. In high-poverty neighborhoods, students attending schools with high mean civic curriculum had community participation expectations that were .24 SD higher than students attending schools with low mean civic curriculum. In low-poverty neighborhoods, the difference based on school civic curriculum was much smaller at .08 SD. Therefore, in terms of the relation to the civic outcome of participation in community activities, higher levels of school average civic

Figure 14. Interaction between neighborhood poverty and school curriculum on students' anticipated community participation
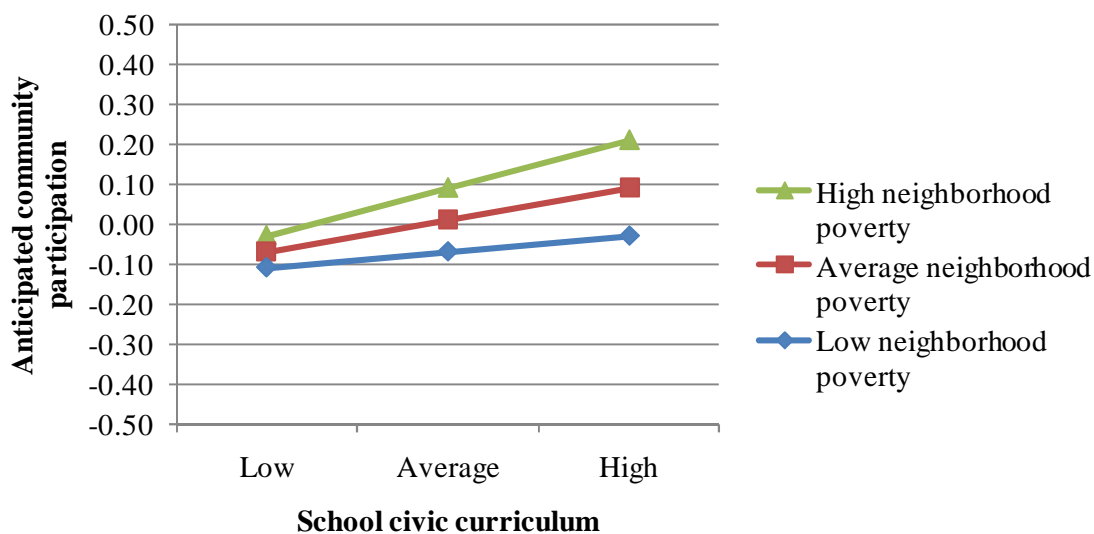
curriculum are beneficial for all students, but are particularly beneficial for students attending schools in high-poverty neighborhoods. It is worth mentioning that the same interaction occurred for the anticipated voting outcome.

Recall that two level-1 predictors varied randomly between schools: student gender and personal experience of civic curriculum. Overall, female gender was positively associated with anticipated community participation. This positive association was compounded in high-SES schools (this cross-level interaction is depicted in Figure 15). For this particular outcome, high-SES schools are affiliated with a strengthened gender gap in civic behavior (.51 SD difference favoring females), while low-SES schools are affiliated with a smaller gender gap (.23 SD). There may be different levels of social pressure on males and females to participate in service activities and this aspect of the school environment may make social pressures more or less salient.

The opposite association occurred for school average open climate. As school climate increased, the association between gender and community participation decreased (illustrated in Figure 16). Therefore, average school climate served to reduce the gender gap in anticipated community participation. I investigated this interaction further because of the possibility that the increase in the average experience of an open climate benefitted males to the detriment of females; meaning that as the number of males perceiving a supportive and encouraging environment increases the number of females necessarily decreases. Further analyses did not support this hypothesis: the student population in high open climate schools was, on average, 56 percent female. In comparison, the average proportion of females in low climate schools was 48 percent. Taken together, school SES

Figure 15. Interaction between school SES and student gender on students' anticipated community participation
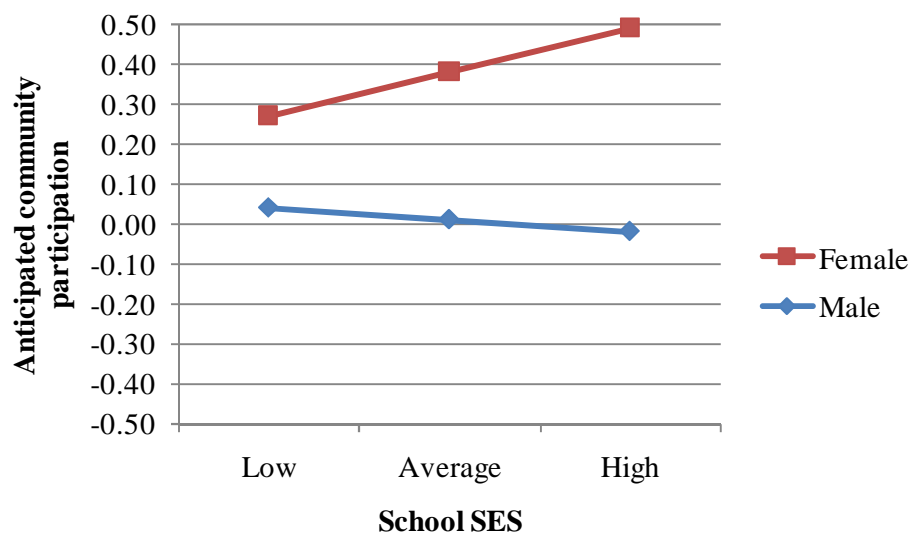
Figure 16. Interaction between school open climate and student gender on students' anticipated community participation
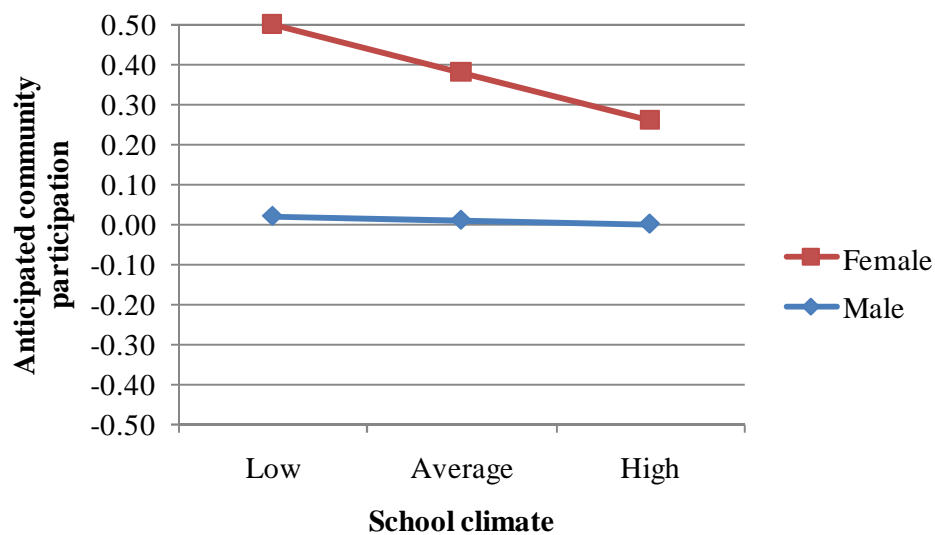
and school climate significantly moderated the female slope and explained 13 percent of the between-school variance in the influence of gender.

The other cross-level interactions pertain to the random effect of student experiences of a civic curriculum in school. Student exposure to a civic curriculum was positively associated with anticipated community participation, but the strength of the relation was stronger in the South (Figure 17) and in neighborhoods with higher proportions of foreign-born residents (Figure 18). These interactions indicate that the beneficial effect of exposure to a civic curriculum is more pronounced in the Southern region of the country and in neighborhoods with higher proportions of immigrants. Experiencing a civic curriculum in which students learn about cooperation and contribution may broaden students' perspectives and civic commitment in these particular environments.

Figure 17. Interaction between Southern region and student civic curriculum on students' anticipated community participation
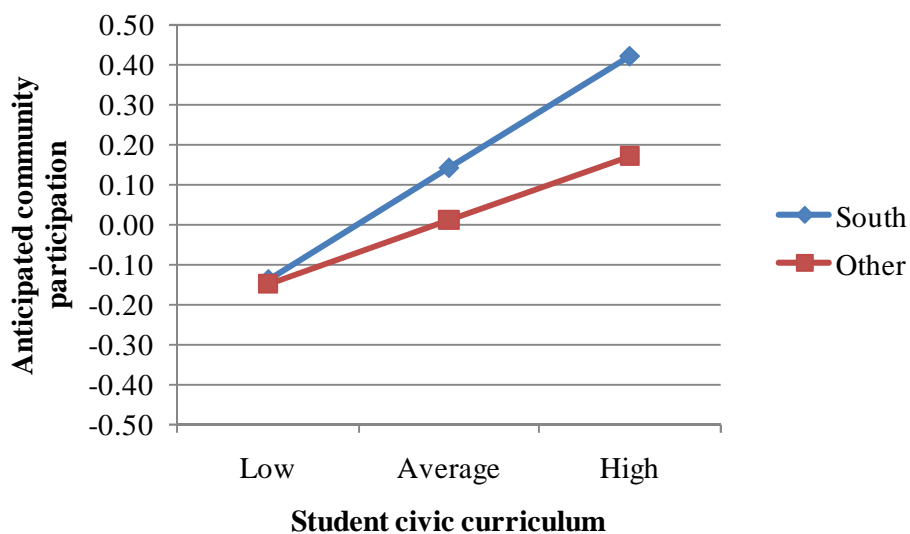
Figure 18. Interaction between neighborhood foreign-born population and student civic curriculum on students' anticipated community participation
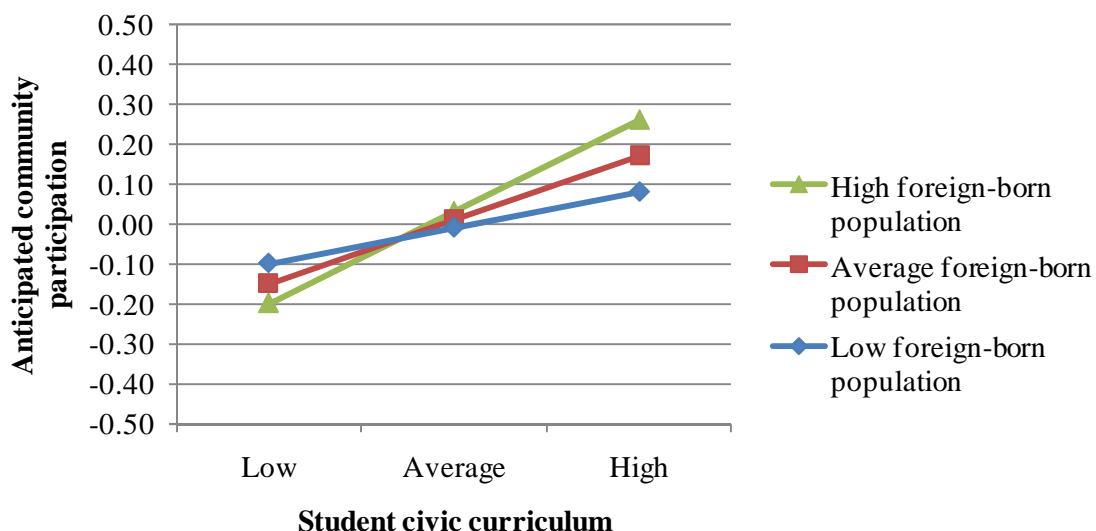
     These level-2 variables significantly moderated the civic curriculum-community participation relationship, explaining 20 percent of the between-school variance in this relationship (using precise figures from HLM output to estimate the reduction in variance). In the final model, level-1 and level-2 predictors explained 29 percent of the variance within schools and 33 percent of the variance between schools in students' anticipated community participation.

Anticipated Community Participation with Latino as a Randomly-varying Slope

     To examine the Latino predictor as randomly varying I ran the anticipated community participation model a second time. The only difference is that I changed gender and civic curriculum to only have fixed effects and changed Latino to have a random effect. The findings of this analysis are available in Table 11, but I will not be discussing them in great detail. It is evident from the table that the size and significance

Table 11. *Multilevel model of students' anticipated community participation with a random Latino slope*

	Model 1: Student characteristics	Model 2: Social relationships	Model 3: School experiences	Model 4: School environment	Model 5: Neighborhood environment	Model 6: Full model	Model 7: Full model + interactions
FIXED EFFECTS							
Intercept	.00	-.01	-.01	-.01	.01	.00	.00
School confidence				.15		-.05	-.10
School climate				.03		-.05	-.01
School curriculum				.37**		.11	.11
Mean Latino enrollment				-.03		.02	.04
School SES				-.08		-.07	-.05
South					.19**	.14**	.14**
Affluence					.03	.05	.06
Poverty					.05	.06	.08
Racial diversity					-.04	-.04	-.04
Foreign-born residents					.41	.24	.20
POVxSchCurr							.13*
Female	.50***	.49***	.41***			.41***	.40***
Latino[a]	.06	.04	.02			.03	.01
Racial diversity							.15[+]
Black	.10	.15*	.15*			.12	.14[+]
Asian	.20*	.19*	.12			.12	.13
Multiracial	.17	.18	.26[+]			.26*	.27*
American Indian	.32*	.30[+]	.35*			.37*	.38*
Immigrant	.11	.06	.06			.04	.04
SES	.07**	.02	.00			.02	.02
Discuss with parents		.24***	.18***			.18***	.18***
Discuss with peers		.14***	.11**			.11**	.11**

Note. The table contains HLM coefficients (under fixed effects) and variance components (under random effects). Unless otherwise stated, variables have been centered on the grand mean.

[a] Variable is centered on the group mean.

[+] p < .10, * p < .05, ** p < .01, *** p < .001

Table 11. (continued)

	Model 1: Student characteristics	Model 2: Social relationships	Model 3: School experiences	Model 4: School environment	Model 5: Neighborhood environment	Model 6: Full model	Model 7: Full model + interactions
Evening with peers		.02	.02			.02	.02
Confidence in participation			.12***			.12***	.12***
Open climate			.06*			.06*	.06*
Civic curriculum			.15***			.14***	.14***
RANDOM EFFECTS							
Between-school (Intercept)	.02**	.02**	.02**	.01**	.02***	.02**	.02**
Latino	.12**	.17**	.08*			.08*	.07*
Within-school	.88	.79	.73	.97	.97	.73	.73

Note. The table contains HLM coefficients (under fixed effects) and variance components (under random effects). Unless otherwise stated, variables have been centered on the grand mean.

[a] Variable is centered on the group mean.

+ p < .10, * p < .05, ** p < .01, *** p < .001

of the effects are highly-similar to models in Table 10. Therefore, I focus only on the relation of Latino and expected community participation

In the final model (Table 11, Model 7), the direct relation between Latino ethnicity and adolescents' anticipated community participation was not significant but this relation varied between schools ($\tau = .12$, $\chi^2 = 127.98$, $p < .01$). Neighborhood racial diversity moderated the relationship by enhancing the positive relation between Latino ethnicity and anticipated community participation (this relation is illustrated in Figure 19). For Latino students, neighborhood racial diversity had a positive influence on anticipated community participation; Latino students in highly diverse neighborhoods reported plans for civic participation .22 SD higher than in neighborhoods with low levels of diversity. The opposite occurred for non-Latino, or more specifically white, students (since white is the reference group in the analysis). This interaction indicates that aspects

Figure 19. Interaction between neighborhood racial diversity and Latino ethnicity on students' anticipated community participation
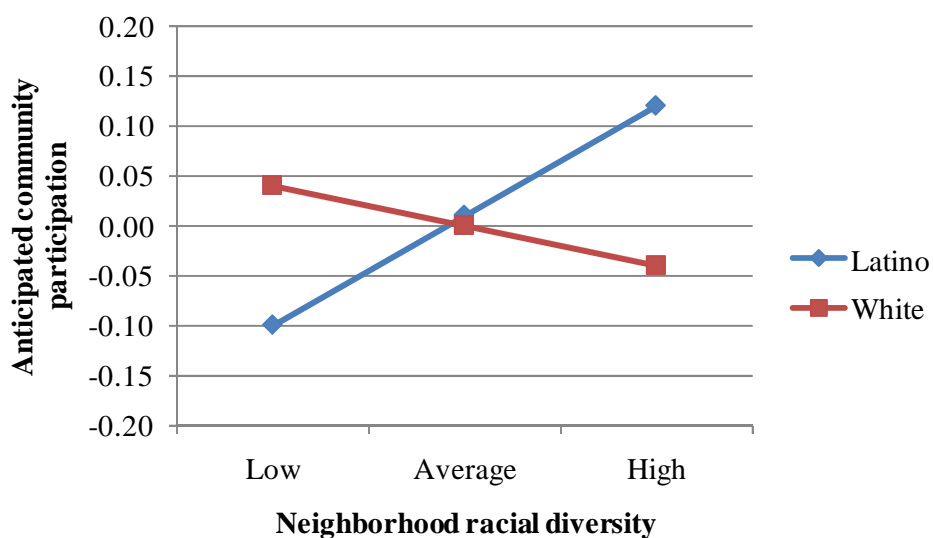
of racially diverse neighborhoods, such as community sentiment, may facilitate the civic development of Latino youth. This interaction reduced the Latino variance component by 13 percent. In the full model, 42 percent of the between-school variance in the Latino slope was explained.

Summary

The findings for anticipated community participation were comparable to the other civic outcomes in that many characteristics of adolescents and their relationships and experiences related to the outcome. Female gender was consistently a positive predictor of community participation, but the strength of the relation was influenced by characteristics of the school environment that either attenuated or amplified the gender effect. Multiracial and American Indian students were more likely to expect to participate in this civic activity, while black and Asians were not once neighborhood and school environment variables were held constant. A separate analysis examining neighborhood effects on the Latino slope found that neighborhood racial diversity benefitted Latinos by enhancing their anticipated civic participation.

Political discourse with parents and peers and civic-related experiences in schools all were directly related to higher expectations of community participation. School and neighborhood environment variables interacted with each other, with other contexts, and with the adolescent for a differential effect on community participation.

<center>*Synthesis of HLM results*</center>

It is apparent from these analyses that, although quite nuanced, important connections between adolescents and their environment, and between different aspects of the environment, are associated with civic knowledge, attitudes, and behavior. Here I will

give a brief summary of findings across the four outcomes with a focus on patterns within groups of predictors. The final model for each civic outcome is depicted in Table 12, where patterns can be seen for groups of predictors. A more extensive synthesis of these findings (including interpretations and further discussion) is presented in Chapter 5.

Female gender was a positive predictor of three of the civic outcomes, but was negatively related to civic knowledge once the influence of relationships and experiences were considered. Findings for anticipated community participation indicate that holding aspects of the school environment equal can attenuate or amplify gender differences in civic outcomes. Generally, female adolescents are reporting higher levels of positive civic-relevant experiences within the contexts of family and school.

The findings on race varied greatly based on group membership and the outcome examined. However, there are important results indicating that inequalities in civic learning opportunities and the school environment are implicated in race-based civic engagement gaps. For two of the civic outcomes (knowledge and anticipated voting), the negative Latino effect reduced to non-significance once school context variables were introduced to the model. There were similar findings for black students. Detailed interpretations of these findings are explored in the discussion section of this paper (Chapter 5), but generally the findings indicate that when Latino and black students are exposed to civic experiences and environments that are comparable to white students, the race-based civic engagement gap is greatly reduced.

Immigrant students had lower civic knowledge and anticipated voting, indicating that these students may have less exposure to democratic concepts and principles and fewer models for civic participation. However, it should be noted that this analysis does

not control for the language spoken in the home, which may be related to immigrants'

lower civic outcomes.

Table 12. *Summary of multilevel models of context effects on adolescents' civic outcomes*

	Civic knowledge	Support minority rights	Anticipated voting	Anticipated community participation
FIXED EFFECTS				
Intercept	-.04	-.03	-.05**	.01
Mean peer discourse			-.01	
School confidence	-.04	.30**	.09	-.09
School climate	.22*	.14	.14$^+$	-.02
School curriculum	-.06	-.01	.23*	.27*
Mean female enrollment				.41*
School SES	.43***	.09	.23**	-.06
Northeast			.04	
South		-.16**		.13*
Affluence	.05	-.02	.01	.06
Poverty	.01	-.07	.04	.08
Racial diversity	.01	.02	-.02	-.04
Foreign-born residents	-.53*	-.34	.44$^+$	.19
POVxSchConf	.15*			
POVxSchCurr			.16**	.14*
POVxSchSES		.04		
DIVxSchClim	-.21*			
DIVxSchSES		.02		
FORxSchClim			-1.17*	
Female	-.09*	.36***	.09*	.37***
Latino	-.09	.26***	-.07	.00
Black	-.34***	.10	-.09	.11
Asian	.02	.25**	-.10	.11
Multiracial	.09	.21$^+$	.05	.23$^+$
American Indian	-.59*	-.08	.20	.37*
Immigrant	-.12*	-.08	-.17*	.01
SES	.17***	.07***	.13***	.01
Discuss with parents	.14***	.04	.23***	.16***
Discuss with peers	-.02	-.02	.04	.11**
Evening with peers	-.12***	-.06*	-.02	.03
Confidence in participation	.04	.27***	.13***	.12***
Open climate	.08***	.08**	.10***	.07*
Civic curriculum	-.02	.11***	.15***	.16***
VARIANCE EXPLAINED				
Between-school	.83	.71	.89	.33
Within-school	.10	.33	.30	.29

$^+$ p < .10, * p < .05, ** p < .01, *** p < .001

Conversely, students of high socioeconomic status may have more exposure to democratic concepts through a range of experiences, as well as more models for civic participation. SES was associated with more positive scores on every outcome except community participation, although the strength of its relation often was reduced by the addition of measures representing the contexts of influence.

Political discourse with parents proved to be a very important predictor of adolescents' civic outcomes. Discourse was positively related to all four outcomes, although the relation with support of minority rights was reduced to non-significance when civic-related experiences in school were added. Controlling for a range of relevant variables, discourse with parents was positively related to adolescents' civic knowledge and measures of anticipated civic behavior. Through discourse with parents, adolescents are exposed to ideas and perspectives about citizenship and civic issues, which promotes the construction of knowledge and understanding.

In contrast, peer discourse was not highly related to the civic outcomes, though this measure did predict higher expectations of participation in community and service activities. In the Northeast, higher peer discourse was related to lower anticipated voting. The other measure of peer interactions, time spent with peers in the evening, was a negative predictor of student knowledge and support of minority rights. Interactions with peers in which issues and ideas are discussed are positively related to civic outcomes, while unproductive time spent with peers relates to negative outcomes.

Students' civic-related experiences in school may be crucial to the development of civic outcomes. They were highly related to the civic outcomes, and always in a positive direction, indicating that informal aspects of schooling are related to students'

civic engagement. Unexpectedly, student experience of a civic curriculum predicted higher scores on all civic outcomes except for knowledge. This finding, possibly indicating that this measure captures diverse classroom experiences without a focus on content, will be explored further in the discussion section of this paper.

It seems prudent to differentiate between individual civic experiences in school and the average civic environment of the school. Individual civic experiences were consistently directly related to the civic outcomes while the school civic environment occasionally had a direct effect over and above the individual's experience. However, for each outcome, the school environment interacted either with another context (specifically, the neighborhood) or with adolescent demographic characteristics for a differential effect. These interactive effects indicate that schools in disadvantaged neighborhoods can facilitate resilience by creating an environment in which students are empowered, participate in discourse, and learn about political ideals.

The neighborhood measures typically were indirectly related to students' outcomes, but there were a few direct relations. In schools located in high-immigrant neighborhoods, students had lower civic knowledge but higher anticipated voting. In schools located in the South, students had less supportive attitudes regarding minority rights but higher expectations of community participation. The meaningful effects of the neighborhood context tend to occur indirectly by moderating the influence of schools. Specifically, schools' provision of civic learning opportunities relates to civic outcomes for all students, but aspects of the neighborhood context (such as the level of poverty) can make the opportunity structures in schools more or less important.

Variance Explained

The final point of discussion involves consideration of the ability of the statistical

models to account for within and between-school variability in the outcome. Comparing

across outcomes, the predictors accounted for more within-school variance for support of

minority rights, anticipated voting, and anticipated community participation than civic

knowledge. The highest proportion of within-school variance accounted for was 33

percent (for support of minority rights). Since the proportion of variance explained by the

model is similar to R^2 in its assessment of model fit then .33 is satisfactory. Comparing

across contexts, civic experiences in school accounted for the most variance in the

outcomes, followed by adolescent demographic characteristics and the social relationship

measures.

The models explained higher proportions of the between-school variance in the

outcomes, possibly because the between-school variance components started out much

lower than the within-school variance components. The models were particularly strong

(i.e., explained more variance) for anticipated voting, civic knowledge, and support of

minority rights, but were not as explanatory for anticipated community participation.

Considering each context, the school environment measures explained more variance in

the civic outcomes than the neighborhood environment measures.

In comparison to the anticipated effect sizes for each context (discussed in

Chapter 3), the measures in the current study exceeded expectations. Adolescents'

demographic characteristics, civic experiences in school, and the neighborhood

environment had more predictive power (meaning that they explained higher proportions

of variance) than anticipated. However, aspects of social relationships had smaller effects

than anticipated based on prior research.

CHAPTER 5

DISCUSSION

Research on civic engagement indicates that adolescents display different levels of civic engagement, which may partially be the result of contextual factors. However, some contexts may be more salient for particular groups of young people, and the relation between contextual influences and civic outcomes may vary depending upon the specific type of engagement. The goal of this study was to understand more about the manner in which multiple contexts of influence related to adolescents' civic engagement (i.e., the processes that occur within the contexts), including whether this relation differed for youth of particular demographic subgroups or depending upon the particular civic outcome. This study extended previous research by simultaneously examining measures from multiple contexts (family, peers, school, and neighborhood), including how contexts are interrelated in their influence. Characteristics of adolescents were specifically examined rather than merely controlled for their effects. Additionally, since I employ a dataset with a nationally-representative sample the findings can be generalized to American 14-year-old students.

This chapter begins with a synopsis of main points from my investigation of context effects on adolescent civic engagement. Next I give a summary of specific findings, placing each within the context of previous research and offering explanations for particular findings and patterns of results. I present potential implications pertaining to theory, methodology, and settings in which findings might be applied, and the chapter concludes with a discussion of limitations and suggestions for future research.

Main Points

Before discussing specific findings it seems prudent to highlight major points that have emerged from the analysis. Although this study included a large number of predictor and outcome measures, patterns of results indicate three main points.

One, there is a civic engagement gap among adolescents in the United States based on students' demographic characteristics. The most disadvantaged groups are males, and black, American Indian, immigrant, and low-SES youth. Civic learning opportunities and experiences in multiple settings do suppress these gaps, but many still persist. Explanations for the continuation of engagement gaps include systemic and historic discrimination, absence of active role models, and lack of exposure to other positive experiences. If civic engagement signifies civic competence, then there are groups of young people who are not adequately prepared to be functioning members of the polity and society. Additionally, there are likely to be cumulative effects for young people who are represented in more than one of the disadvantaged groups (for instance, low-SES black males).

Two, parental discourse and civic experiences in school are civic learning opportunities that are consistently beneficial. Through discourse with parents, adolescents construct knowledge and internalize civic values and beliefs. Civic-relevant experiences in school enable adolescents to learn through social and democratic processes. The civic environment in school was less consistently, though positively, related to students' civic outcomes. However, inequalities in the school environment seem to be responsible for some of the civic engagement gaps between racial minority and white students.

Third, the neighborhood environment generally did not have a direct relation with adolescents' civic outcomes (although there are a few exceptions), but was involved in many interactive effects. Aspects of the neighborhood context influence adolescents' civic outcomes through interactions with the school environment, students' civic experiences, and to a lesser extent students' demographic characteristics. The interactive effects indicate that students who may traditionally be deemed at a disadvantage (either because of poor school or neighborhood conditions) experience more benefits from increases in civic learning opportunities than students in advantaged circumstances.

Summary and Interpretation of Findings

To facilitate an examination of patterns of findings within each context, I summarize findings based on groups of predictors (e.g., adolescent, family, and school) rather than based on each civic outcome. Within each sector I will address how the research questions pertaining to that group of predictors were answered, describe how results converge or conflict with previous research, and consider practical and theoretical explanations for the findings. Recognizing that this study was not experimental, I cannot argue that particular contexts contributed to specific outcomes. However, I can speculate about specific mechanisms that could explain the relations that I have found.

Student Characteristics Associated with Civic Outcomes

This study confirms that student demographic characteristics are related to civic outcomes, but the relations are quite complicated. Specifically, the associations for particular characteristics often differ for the four civic outcomes. The relations are further complicated by moderating influences of civic experiences and opportunity structures in schools and neighborhoods. Contrary to the expectation that the associations between

demographic characteristics and the civic outcomes would vary between schools, this generally was not the case (with the exception of female and Latino in relation to community participation). An explanation for the dearth of random effects is that, in the CIVED dataset, there may not have been enough schools with sufficient data to find random effects, or there was not enough variance in demographic characteristics inherent in the schools. For example, an examination of the random effects of being black on the civic outcomes can only involve schools that have at least one black student and at least one student of another race. Schools where all of the students are black, or all the students are another race (specifically, white), are dropped from the analysis because those schools inherently do not have any variance in the predictor. As schools drop out of the analysis, the sample decreases (especially at level 2) and relations are less likely to be statistically significant.

Alternatively, the association between demographic characteristics and civic outcomes may just be constant across schools in the U.S., regardless of how many schools were included in the dataset. The most plausible explanation is that demographic characteristics are superficial measures, while cognitive or psychological measures might have had significant random effects. For instance, students' self-efficacy probably would have been related to civic engagement (based on prior research such as Pasek, Feldman, Romer, & Jamieson, 2008) and might have been a stronger predictor than demographic characteristics. The association might have varied because some students are inherently more efficacious than others, some students are more reliant on their efficacy to produce results or initiate change, and some students have deliberately nurtured their efficacy as a protective factor under disadvantaged circumstances. As a result, this aspect of an

adolescent's psyche might have been more strongly related to the civic outcomes and might have been more important for some adolescents than others.

Although there were few random effects of student characteristics, there were many fixed effects. In the following subsections I discuss how each demographic measure was related to civic engagement (across the four civic outcomes), including a focus on plausible explanations and patterns of findings.

Students' Gender

Gender was related to each civic outcome in a manner that typically favored females. Adolescent females expressed higher support for the rights of minorities and higher anticipated participation in formal and informal civic activities. Initially there was not a gender difference in knowledge, however, after controlling for a range of civic experiences and contexts, civic knowledge was highest among adolescent males. In other words, females generally had more positive civic outcomes, but disparate civic learning opportunities are somewhat responsible. When these experiences are held constant males surpass females in civic knowledge.

The initial finding that no difference existed between males and females in civic knowledge was consistent with recent results of adolescents' NAEP scores (Lutkus & Weiss, 2007). However, in the current study males had higher knowledge levels once inequalities in aspects of social relationships and civic experiences in school were held constant. Correlation analyses at the study's onset indicated that female gender was related to higher discourse with parents, more civic experiences in school, and less time spent in the evening with peers. Controlling for the differences in these experiences, males have higher civic knowledge than females. The finding that experiences and

relationships create a gender gap in knowledge indicates that female adolescents are having higher levels of positive civic-relevant experiences within the contexts of family and school. According to research in political science, discussion in the family has been shown to relate positively to females' civic engagement (Campbell & Wolbrecht, 2006). Perhaps female adolescents are not only experiencing higher levels of political discourse in the home but benefit from it in a way that male adolescents do not. Conversations with parents about political issues may help girls to familiarize and identify with the political world, having an "increasing returns" effect on females' interest and knowledge (Campbell & Wolbrecht, 2006). Male adolescents' conversations with parents about political and social issues may be briefer or less constructive.

While females spend more time discussing with parents, male adolescents are involved in more idle time with peers in the evening. Although time spent with peers itself is not a predictor of student knowledge, there may be other experiences that are associated with hanging out with peers that have not been captured in the current analysis. An important distinction must be made between spending time with peers after school and spending time with peers in the evening. After-school interactions are more likely to be activity-based (e.g., sports or clubs) and to be monitored by adults (such as a coach or a stay-at-home parent). Interactions between 14-year-olds in the evening, outside the home, are less likely to be supervised by adults or to involve constructive activities. These male peer groups may have norms that do not support positive development, including the development of civic engagement, and this contagion mechanism may be at work more for male adolescents than female adolescents.

In contrast to the finding on civic knowledge, gender gaps in the other civic outcomes favored females. The largest gap, still moderate in magnitude, occurs in anticipated community participation. In the literature it is quite common to find that females participate, or expect to participate, in more community and service activities than males (e.g., Dávila & Mora, 2007a; Keeter, Zukin, Andolina, & Jenkins, 2002). The current study extended prior research with the discovery that the relation between gender and anticipated community participation varied between schools. Overall, females reported higher anticipated community participation, but aspects of the school environment made the gender gap either more or less pronounced. One would expect that as the socioeconomic status of a school increased, student anticipated community participation also would increase because of social pressure from the school and parents for youth to contribute and more discretionary time to participate in service activities. Although there was not a significant main effect, the interaction between student gender and school SES indicates that these social pressures or conditions may be much stronger for females.

Attending an affluent high school amplified the relation between gender and the civic outcome such that the difference between females and males became quite large (depicted in Chapter 4, Figure 15). Perhaps in affluent schools there are more opportunities to participate in service activities and females are more likely to take advantage of these opportunities. There could be additional social pressure from peers and from parents to participate in such activities, and this pressure may be higher for females because of traditional gender norms and social expectations. It is also possible

that in wealthy schools there is more pressure toward social action for females while pressure on males may be related to academics or athletics.

A recent study examining gender gaps in adolescents' support of women's rights found similar results (Barber & Torney-Purta, in press). The predictors and civic outcomes are not identical to the current study, but conceptually the results are similar. Overall, female adolescents were more supportive of women's rights than males. However, the gap between males and females was larger in schools characterized by higher mean educational aspirations (an aggregate measure of students' expectations of further education). Evidently school affluence, measured in terms of resources or educational aspirations, is associated with significantly higher levels of civic engagement for female adolescents but not for males.

In the current study, the aspect of the school environment that made the gender gap less pronounced was the overall climate for open discourse (depicted in Figure 16). Males were not particularly responsive to this contextual factor, but females did not benefit from a high school climate for discussion. Indeed, females' anticipated community participation was highest when there was an average perception that the school was not an open climate for discussion. This finding converges with other research in that a supportive climate for discussion in schools related to a smaller gender gap in the civic outcome (Barber & Torney-Purta, in press).

A plausible explanation is that individual female students are more likely to have this experience in school (as indicated by the positive correlation) and therefore the school environment pertaining to open discourse is not as beneficial. Perhaps there is even a "threshold effect" in which higher levels of the experience, even at the school

level, are no longer beneficial. Females may benefit from the school-wide practice of an open climate for discussion, but only to a point. More is not necessarily better for the students who have already acquired meaningful concepts and skills.

These findings indicate a gender-based civic engagement gap that typically favors females, although there are specific instances in which males are at an advantage. As stated previously, the nature and magnitude of the gap changes depending upon the specific outcome. There is also evidence, across the civic outcomes, of a race-based engagement gap.

Students' Race

The current study's findings on race and civic engagement are comparable to results of prior research (including Levinson, 2007, and Lutkus & Weiss, 2007). In comparison to white students, racial minorities tended to have lower levels of civic knowledge, but higher support of minority rights and anticipated community participation (with no significant differences in anticipated voting behavior). Accounting for differences in social interactions, civic-related experiences, the school environment, and the neighborhood environment reduced some of the racial differences to non-significance. The findings provide support for the assertion that race-based differences in civic engagement are partially the consequence of contextual influences. For some young people, individual experiences of democratic processes and learning civic topics are particularly important. For others, the overall school environment was most essential. Given that five racial groups were examined, and there was much variation in the direction and strength of the relations with the civic outcomes, I present findings separately for each group.

American Indian. American Indian students had very low civic knowledge, indicating low knowledge of fundamental democratic principles and skills in applying such knowledge. The finding is not particularly surprising given that the democratic principles and institutions guiding this country historically did not benefit this particular group of people. It is quite possible that American Indian students prefer not to learn about or understand a country that has greatly disadvantaged their people. It is also conceivable that there are salient aspects of American Indian culture not captured that would explain their lower knowledge levels. Qualitative research indicates that schooling on American Indian reservations, and particularly methods for teaching civic education, encourages the development of a civic identity that deliberately conflicts with traditional American Indian identities and culture (Whitman, 2007). Therefore, in an effort to remain connected to the native community, American Indian adolescents may deliberately disengage from school and from civic education.

American Indian students reported higher levels of anticipated community participation than white adolescents. This finding may be a reflection of these students' desire to promote social change and improvement in a specific American Indian community.

Multiracial. Multiracial students had higher levels of civic engagement than white students, including more supportive attitudes of minority rights and higher anticipated community participation. The findings indicate that multiracial students reflect the internalization of democratic principles and have an understanding and commitment to the informal civic activities that contribute to the maintenance of a democracy. It is reasonable to assume that multiracial students have had more exposure to diverse groups

of people given that their relatives, by definition, would be from different racial groups. This exposure may have contributed to increased acceptance of others and a commitment to social-movement participation.

Asian. Asian students generally looked very similar to white students in their levels of the civic outcomes, however, Asian youth expressed higher support for the rights of minorities. Initially Asian students also reported higher anticipated community participation, which is consistent with prior research that found that Asian students had higher participation rates in community activities (Dávila & Mora, 2007a; Lopez et al., 2006). I have expanded on prior research by examining contextual influences, which in this case explained the difference between Asian and white students. Specifically, accounting for differences in the school environment, Asian and white students reported equivalent expectations of participation in community activities.

Black. The relations between black racial status and the civic outcomes were quite complicated. Black students had considerably lower civic knowledge than white students, and controlling for a range of civic experiences and contexts of influence did not eliminate this relation. Although the knowledge gap between white and black students was somewhat suppressed once the school environment measures were added to the model, the gap remained moderate in size. Since I considered a range of measures from a range of contexts, inequalities in these civic learning opportunities and characteristics of the surrounding context cannot be blamed for the knowledge gap. It is possible that other aspects of civic learning opportunities in schools or in homes that were not analyzed here would be able to explain more of the civic knowledge gap between black and white students, such as teacher qualifications or academic tracking (Zirkel, 2008). There also

may be societal opportunity structures that are responsible (reflecting a macrosystemic influence), such as a history of color-based discriminatory practices or more subtle forms of systemic racism. The most apparent explanation is that, similar to American Indian students, black youth are not interested in gaining knowledge of systems and levels of government that do not benefit them or the people who have shaped their worldview.

Although considering various civic learning opportunities and environments did not negate the knowledge gap, these same measures did account for the initially negative relation between black racial status and anticipated civic behavior. Initially black students reported lower expectations of voting, indicating that they were not interested in civic activities formally aligned with government institutions. However, this negative relation was diminished by the inclusion of the school environment measures (including the civic context and average SES). In this sense, the gap between white and black students in anticipated voting is attributed to inequalities in civic environments in schools and going to school with many students of low socioeconomic status. When these aspects of the school are held constant, there is no civic behavior gap between black and white students. Perhaps some of these inequalities in the school environment have diminished given recent findings that black young adults now have higher voting rates than any other racial group (Lopez et al., 2006).

Latino. Many of the findings indicate that contexts enhance the civic engagement of Latino adolescents. As with black students, Latino students initially reported lower anticipated voting behavior than white students, but the gap was completely suppressed by the inclusion of measures of the civic environment in schools. Essentially, there is no civic participation gap if Latino students attend schools where students, on average,

participate in democratic processes, feel comfortable having open discussions with teachers and other students, and learn about topics that are civic in nature. In accordance with the model of situated learning (Lave & Wenger, 2002), these school-wide beliefs and practices may enable Latino students to have more meaningful group experiences and stronger feelings of belonging to the school community. The same measures of the civic environment in school, plus the school's mean SES, were responsible for the elimination of the civic knowledge gap between Latino and white students. For Latino students, a strong civic environment and the presence of students of high socioeconomic status in their school eliminated the gap in civic engagement in a way that individual students' civic experiences in schools could not. Otherwise stated, when inequalities in the school environment, meaning the average experiences of students within the school, are held constant Latino students are not lacking in any aspect of civic engagement. Indeed, in some outcomes (e.g., support minority rights) they actually surpass white students. I have explored several explanations for these findings.

The first explanation is that the label of "Latino" ethnicity is a proxy for differences in school environments and overall quality. When students who identify themselves as Latino are exposed to a generally supportive school environment, an environment that enables them to more fully understand and capitalize on aspects of the educational system, their level of civic competence is as high or higher than white students. It is also possible that these aspects of the school environment are indicative of more specific practices and programs in the school. For instance, schools with more supportive civic environments and higher affluence may offer tutoring or translation programs, or more opportunities for cross-cultural student groups and other activities that

facilitate positive development. The parents of students of high socioeconomic status may press for good teachers and civic-related experiences.

Although it is certainly encouraging that aspects of the school environment can reduce the gap between Latino and white students in civic engagement, one must wonder why individual students' experiences do not have as strong a relation (i.e., do not reduce the gap to non-significance). Perhaps this finding can be attributed to Latinos only attending schools at extreme ends of the school quality spectrum. For instance, individual Latino students who report having civic-related experiences in school may primarily attend low-income segregated schools. Segregated schools are not typically associated with high-quality teachers, resources, or facilities. In this scenario, individual students may have positive experiences, but they are likely to be outliers. If the average student does not have positive experiences, then there will be an overall school climate that is negative. Therefore, the negative school environment negates individual students' positive experiences.

In contrast, the opposite scenario could take place in that Latino students generally attend high-quality schools where students, teachers, and administrators have many resources at their disposal. In such an environment educators can provide more opportunities for civic experiences and a school environment that is supportive of these meaningful activities. In this scenario, there may be a compounding effect of individual students' civic experiences. Latino students, having experienced open discourse and collaboration, are more likely to associate with students with the same positive experiences. This supportive environment creates a sense of morale that becomes more important to individual students' outcomes than their own personal experience.

There is one last finding worthy of discussion relating to Latino students' civic outcomes. A supplemental analysis indicated that Latino students were not more or less likely than white students to expect to participate in community and service activities. However, white and Latino students were differentially responsive to the amount of racial diversity in their schools' surrounding neighborhoods (Figure 19). While white adolescents were less likely to want to participate in community activities in diverse neighborhoods, Latino youth thrived in this context. This discovery is similar to Harell and Stolle's (2008) finding that neighborhood racial diversity predicted lower levels of trust among racial majority adolescents and adults, but was not related to minority residents' trust levels. Perhaps in more homogonous (and likely, more white) neighborhoods, Latinos do not feel as comfortable participating in community activities and would hesitate to venture out into the neighborhood. In diverse neighborhoods there might be more of a community sentiment where Latino youth are encouraged to interact with others and participate in activities. Neighborhood racial diversity may be related to different types of collective socialization for white and Latino youth.

Additionally, neighborhood racial diversity was positively associated with neighborhood poverty so there is likely a greater need for volunteerism and time spent on social causes in highly-diverse neighborhoods. Unlike white students, Latino students seem to respond to this need with a desire to help. These findings conflict with earlier studies, conducted by Costa and Kahn (2003) and Putnam (2007), in which the researchers declared that racial diversity was uniformly related to negative civic outcomes. For 14-year-old Latino students, neighborhood racial diversity is a positive contextual factor.

Patterns based on student race. There are striking patterns based on student race across the civic outcomes. Multiracial and Asian students have civic outcomes that are comparable to, and sometimes favor, white students. Students of these races seem to be incorporated into the American educational system, which has benefitted their civic engagement (by incorporated I refer to an understanding of how the system works and an ability to thrive). American Indian students have not adapted to the educational system or society, and their low knowledge of democratic principles reflects this lack of adaptation.

When Latino students have comparable experiences and environment as white students, this racial minority group is civically engaged. Despite other lines of research indicating that Latino students have poor outcomes in schools, it appears that equivalent opportunity structures within the school can greatly improve these outcomes. In some ways, black students also benefit from school-wide practices. However, there is still a considerable gap in civic knowledge between black and white students. The next line of inquiry is why, in the current study, does the school context not benefit black students to the same extent that it benefits Latino students? It is possible that black students do not feel as accepted by their non-minority peers and therefore the relationships and interactions between black and white students (or between black students and white teachers) are more strained. Perhaps even in a supportive school environment black students are still discriminated against, or at least have the perception of discrimination. Considering the lives of black students, there may be norms endemic to the black community, resulting from generations of experienced discrimination, that encourage black students to distrust the educational system and therefore disengage from learning activities (Ogbu, 2002). It is probable that each of these explanations is related to the

persistence of the knowledge gap for black students, including aspects of the macrosystem that were not captured. The current study indicates that black students have not incorporated into the American educational system to the same extent as Latino students and therefore are not being prepared for active citizenship to the same extent.

To some degree, this study's findings pertaining to student race converge with other researchers' reports that racial minority students receive fewer opportunities for socially constructed learning and the development of civic competencies (Kahne & Middaugh, 2008). I have expanded on prior research by confirming that most racial minority students (including Latino, multiracial, and Asian) fair quite well when provided with civic learning opportunities and environments that are equivalent to those made available to white students. It is these learning opportunities that can be used to reduce the civic engagement gap. This gap, as proposed by Levinson (2007), places too many young people at a political disadvantage and also threatens democratic ideals and the health of the polity.

Students' Immigrant Status

In the current study immigrant students had lower levels of civic knowledge and lower anticipated formal civic participation, which is consistent with prior research (e.g., Lopez & Marcelo, 2008; Torney-Purta et al., 2006). Immigrant students, depending upon the age of migration to the U.S., may not have gained enough exposure to democratic processes and principles either through schooling, news sources, or models of civic behavior. For instance, if the parents of immigrant students are not naturalized citizens, immigrant youth are less likely to have role models for formal civic participation. Unfortunately, the dataset contains limited information pertaining to immigrant students,

only whether the students were born outside the U.S., but not their nation of origin or any other aspect of cultural socialization processes.

Immigrant students' support of minority rights was no different than non-immigrant students' support, conflicting with the expectation that immigrant students would report higher support for the rights of ethnic minorities given the likelihood that the students themselves are ethnic (or racial) minorities. It is possible that immigrant adolescents interpreted the questions about support for minorities as pertaining to "other" minorities, not their particular group. Therefore, immigrant students may have responded based on the supposition that the questions pertained to other ethnic groups, leading to a more negative (although not statistically different) response, which is similar to the unsupportive attitudes of American Indian students. Out-group prejudice occurs even between racial minority groups (Simpson & Yinger, 1985). Perlmutter (2002) posited that members of racial minority groups are prejudiced against other minority groups (in addition to the racial majority group) because of a complex array of personal discrimination experiences, perceptions of preferential treatment, and distrust.

Students' Socioeconomic Status

Students' socioeconomic status was related to civic engagement in a manner consistent with prior research (including Lutkus & Weiss, 2007; McIntosh et al., 2007; and Spring et al., 2007). As expected, students who have access to more intellectual and material resources at home have more positive civic outcomes. Affluent students display higher levels of civic knowledge, more supportive attitudes for the rights of minorities, and higher anticipated voting behavior. Affluent students did not have higher expectations of community participation once the influence of social relationship

measures were taken into account. These findings converge with other research and support the notion of a social class-based civic engagement gap. Young people with more access to intellectual and material resources are able to acquire more knowledge through the resources at their disposal, interact with educated and cultured people, and have role models for civic participation. It would be difficult to ensure that all youth have these experiences because many of them take place in the home.

The relations between socioeconomic status and the civic outcomes did not differ in systematic ways between schools (i.e., did not vary randomly). Indeed, the civic engagement gap by SES is consistent across most of the civic outcomes, but is small in magnitude once multiple contexts of influence are considered.

Patterns Based on Student Demographic Characteristics

There were many instances in which demographic characteristics of adolescents predicted their level of civic engagement, and I have offered numerous explanations for these associations. However there is one explanation that I have not yet discussed, which is that the patterns of findings may be attributed to student perception rather than socialization processes. Specifically, the association between student demographic characteristics and civic outcomes may be attributed to how adolescents perceive different types of civic engagement. I have assumed that these different measures of civic engagement, although more salient for some groups of students, have the same basic meaning for every group.

To illustrate, I understood anticipated community participation to be a measure of a social-movement related civic activity in which adolescents can contribute to their communities or causes that they believe to be important. Recall that items included in the

measure ask students whether they expect to volunteer in the community, collect money for a social cause, and collect signatures for a petition. As mentioned previously, perhaps American Indian students (who were very high on this measure) interpret these items in reference to volunteerism in their own community and contributions to social causes related to American Indians. Students identified with a less cohesive racial group identity, for instance white youth, may think of volunteering in general outside of their own community, or volunteering to accrue service hours for high school graduation requirements. Likewise, for females, signing a petition may be seen as initiating social change through a collective effort, while males may see it as an opportunity to express a personal opinion (or vice versa). It is possible that students in different demographic groups think differently about the civic engagement outcomes, especially the outcomes pertaining to attitudes and behavior.

Relation Between the Family Context and Civic Outcomes

Although the family context was not the focus of this study, it is clear from the results that parents play an important role in adolescents' political socialization. Political discourse with parents was positively related to civic knowledge, attitudes, and anticipated behavior, indicating the consistency with which socialization occurs in the home. With the exception of adolescents' support of minority rights (a relation that was suppressed by students' civic experiences in school), discourse with parents maintained its positive relation with the civic outcomes even after other contexts of influence were considered. This finding indicates that the role of discourse with parents is consistent even if it is small in magnitude. The relation between parental discourse and civic

engagement did not vary between schools, rather it was constant as a positive experience for all students.

Although the CIVED study does not include parental civic knowledge or attitudes, it is assumed that these cognitive and affective factors would be passed on through discourse (Jennings & Niemi, 1968). Unlike civic behavior which would be more explicitly modeled, knowledge and attitudes may be modeled in the home through discourse. The discussion of political topics and ideas, especially with more-informed adults, enables adolescents to construct their own knowledge through the cognitive assessment of their parents' values and beliefs. Therefore, parents serve as role models from whom adolescents can infer civic values and beliefs.

The finding that adolescents who discuss political topics with their parents have higher knowledge levels and higher anticipated civic behavior is consistent with prior research (e.g., Andolina et al., 2003; McIntosh et al., 2007; Pancer et al., 2007). The relation was strongest for anticipated voting, followed by anticipated community participation and civic knowledge. The importance of voting may be the easiest for parents to communicate to their children. I expected that civic attitudes also would be easily communicated and modeled between parents and children, similar to findings by Hart et al. (2004). However, parental discourse about political and social issues was not related to adolescents' support of minority rights in the current study.

Parental discourse is one of the mechanisms by which youth learn to become citizens, supporting the existence of collective socialization processes in the home (Jencks & Mayer, 1990). Through discourse with parents, adolescents are exposed to ideas and perspectives about citizenship and civic issues, which promotes the

construction of knowledge and understanding of these issues. Therefore, adolescents actively construct their civic knowledge, ideals, and values, which may translate to their level of civic participation.

Relation Between the Peer Context and Civic Outcomes

Although political discourse with parents was consistently related to adolescents' civic outcomes, discourse with peers typically was not an important predictor. Perhaps discourse with peers (within the domain of political issues) is not as influential on civic outcomes because at the age of 14 years, peer discussion about politics may be relatively vacuous. Utilizing concepts from Jencks and Mayer (1990), perhaps collective socialization processes that occur in the home are stronger than contagion processes that occur within peer groups, at least for civic engagement.

Political discourse with peers was not related to students' civic knowledge or attitudes, however, youth expectation of participating in community and service activities was higher among those who discussed politics with their peers. Adolescents who discuss politics with each other are likely to be more aware of what is happening in the world outside their school and neighborhood, which may be related to conscientiousness. It is logical that conscientious young people would be more inclined to participate in community activities, including volunteering, collecting money for a social cause, and collecting signatures for a petition pertaining to an issue of interest. Therefore, discourse with peers may predict youth community participation because it actually represents a measure of discourse between prosocial peers. Previous research indicates that peer encouragement to participate in volunteer or political activities is more highly related to adolescents' orientation toward civic and political responsibility than peers' actual

participation in these activities (Da Silva et al., 2004). Therefore, these findings indicate that there are contagion processes (Jencks & Mayer, 1990) within adolescent peer groups, but only as it pertains to social-movement related citizenship and not conventional citizenship.

There was one random effect on civic engagement within the peer context. Although discourse with peers was not a significant predictor of adolescents' anticipated voting behavior, the relation between peer discourse and anticipated voting varied between schools (depicted in Figure 13). Throughout most of the country, adolescents benefitted slightly from peer discourse in that higher levels of discourse predicted higher anticipated voting behavior. However, young people in the Northeast region of the country did not benefit from peer discourse. In the Northeast region, higher levels of peer discourse predicted lower levels of anticipated voting. The differences are quite small, but unexpected. The Northeast is known for being the oldest and most established region of the country, as well as the most liberal in ideology. Perhaps, in the Northeast, discussion among young people is especially likely to lead to a cynicism about the country and politics. The more adolescents discuss political issues, the more pessimistic and distrustful they are, and the less likely they are to want to partake in civic activities related to formal governmental institutions and officials. This finding may be an additional example of the threshold effect (similar to the finding that females did not benefit from a higher climate for discussion in schools) in which a specific group of students does not benefit from higher levels of a particular experience.

As more evidence of contagion of peer norms, adolescents who spent time with peers in the evening displayed lower civic knowledge and support of minority rights. This

measure may be an indicator of time spent with antisocial peers in unconstructive pursuits. The assumption that spending time with one's friends in the evening is not likely to be time spent constructively is somewhat supported. Youth knowledge of democratic principles and support of democratic ideals pertaining to minority groups was lowest among adolescents who spent more time with their friends in the evening and outside the home.

Research on adolescence often examines the peer context because it is the developmental period in which peer influence becomes highly salient. Although not the focus of the current study, there is evidence that experiences with peers are somewhat related to adolescents' civic engagement. Interactions with peers in which issues and ideas are discussed are positively related to civic outcomes, while unproductive time spent with peers relates to negative outcomes. These findings support the proposition of Jencks and Mayer (1990) that there is contagion of peer norms and attitudes that relate to adolescent development.

Relation Between the School Context and Civic Outcomes

The school context, a component of the microsystem that is of particular interest, is in many respects associated with students' civic outcomes. It is important to differentiate between the two ways in which the role of the school context in adolescents' civic engagement was examined. The first aspect of the school context pertains to individual students' civic-relevant experiences at school (level-1 measures). The second aspect of the school context pertains to the average environment experienced by all students in the school, including the mean level of civic-relevant experiences and the average SES (level-2 measures). Therefore, the school context plays the role of providing

individual students with specific experiences and also creating an environment in which additional influences may occur. Here, I discuss the two aspects of the school context separately (integrating the discussion only for interactions between student civic experiences in school and the overall civic environment).

Civic Experiences in School

Across the contexts examined, student confidence in school participation, perception of open classroom climate, and experiences learning civic topics had the most consistently positive relationships with students' civic outcomes. The nature of the relations between civic-relevant experiences and the civic outcomes varied between schools on multiple occasions (for each outcome except civic knowledge). In many instances these relations were influenced by school demographics, the average civic environment of schools, neighborhood demographics, and school by neighborhood interactive effects. These findings contribute to a growing body of literature that informal aspects of schooling are related to students' civic engagement (e.g., Andolina et al., 2003; Flanagan et al., 1998; Vieno et al., 2005).

Student confidence in participation. Recall that student confidence in the effectiveness of participation was a measure of students' real-world experiences of democratic processes such as student representation, the organization of student groups, and the experience of the collective making an appreciable difference in what happens in school. Students who are more confident in the effectiveness of participation are assumed to have observed or experienced these processes at work, understood their effectiveness, and felt empowered by the process. Qualitative studies indicate that student participation

in decision making and change efforts in schools are meaningful experiences that allow students to have a sense of ownership and belonging in school (Mitra, 2004).

In the current study, students with this civic experience in school expressed higher support of the rights of minorities, which reflects the internalization of democratic principles and an understanding of issues related to diversity. These students also reported higher expectations of participating in formal and informal activities that promote democracy and the maintenance of the polity. These findings support the assertion that 14-year-olds benefit from democratic experiences in school several years before the general public considers them to be full-fledged citizens. Civic experiences in school facilitate students' civic engagement and prepare young people to be active citizens, indicating how school inputs can contribute to the development of an engaged citizenry. The positive outcomes associated with student beliefs that the school is an effective school community support Lave and Wenger's (2002) assertion that students learn through the social processes that occur within schools, in particular through a sense of belonging. Empirically, a sense of belonging in the school has been found to relate to civic participation in other studies as well (e.g., Kahne & Sporte, 2008).

Student confidence in participation was not predictive of civic knowledge, which was counter to the expectation that applied experiences with democratic processes would be related to knowledge of democratic principles and skills in applying such knowledge. Admittedly, the civic knowledge test items pertain more to democratic concepts and structure rather than processes, indicating that process-based experiences may not directly relate. Perhaps the connection between participating in democratic processes, understanding fundamental principles, and knowledge of democratic institutions and

structure needs to be made more explicit in schools. This connection could be made through discourse and reflection on how students effectively work together, because creating meaning out of school experiences is how students acquire meaningful concepts (Wenger, 1998).

The school and neighborhood environments conditioned the relation between youth confidence in participation and their support of minority rights. Student confidence was related to more supportive attitudes among all students, but this civic-relevant experience conferred more benefit for students attending low-SES schools, as well as for students attending schools in low-poverty neighborhoods. Although this cross-level and cross-context interaction is quite complicated, the most basic interpretation is that in low-SES schools, the positive relation between this civic experience and students' civic attitudes is impervious to the level of neighborhood poverty. In high-SES schools, the association is differentially susceptible to neighborhood poverty.

The following interpretations of this series of interactions (in Figures 5 through 7) are grounded in the assumption that students who have high confidence in the effectiveness of participation have either worked with other students, or observed students working together, and seen results associated with their actions. Otherwise, students would not report that student groups can make a difference and that students should be active in their school. It is likely that exposure to these types of experiences and group processes, especially if they were positive experiences, would relate to higher tolerance in general because patience and understanding are important psychological components of group efforts, both of which should contribute to tolerance. Higher general tolerance may be translated to higher support of the rights of others, and more

specifically the rights of ethnic minorities. It is possible that in low-SES schools there are fewer opportunities for these experiences (i.e., a smaller range of opportunities available) and that the baseline level of student experiences is low. Since the baseline is low, any occurrence of contact with others in which students work together toward change efforts may have more meaning because it is a rarity, and the incremental increase in the benefit (or the outcome) would be greater with each experience. Therefore, in low-SES schools, student experiences and confidence in participation are highly related to their civic attitude regardless of the degree of neighborhood poverty. Conversely, high-SES schools have a lot of tools at their disposal, likely offering more out-of-class and extracurricular activities where students could work together. Since they have a larger range of experiences, a little extra (e.g., the difference between an average amount of empowerment activities and a high amount) is not as beneficial for students.

There was an additional interactive effect between school SES and neighborhood racial diversity on the association between student confidence and supportive attitudes (in Figure 8). Student confidence in participation predicted more supportive attitudes, but especially in low-SES schools located in neighborhoods with little racial diversity (recall that this finding pertained to one school). The positive relation between this civic experience and students' civic attitudes in low-SES schools is not impervious to the level of neighborhood diversity as was the case with neighborhood poverty. Again, student confidence in participation is especially important in low-SES schools (in terms of the relation to supportive attitudes), but the relation decreases with higher amounts of neighborhood diversity. One might expect that students attending low-SES schools in low-diversity neighborhoods might actually be the most intolerant group (based on

inadequate experiences and insufficient exposure to diverse groups of people). However, these students may have a limited range of experiences, so when they do interact with other students in efforts to improve the school it is especially beneficial in terms of their supportive attitudes. An interesting component of this interaction is that in high-diversity neighborhoods, the relation between student confidence in participation and support of minority rights is uniform (and moderately positive), regardless of school SES.

Open climate for discussion. I have just discussed the findings pertaining to students' confidence in the effectiveness of participation in their school, which is inferred to be a measure of students' feeling of empowerment in the school. The next measure of students' civic experiences is whether students have opportunities to express and understand different sides of social issues in the classroom. While the previous measure (student confidence) is a reflection of experiences in the school as a whole, this measure (open climate) pertains more to experiences in the classroom. Additionally, students were encouraged to report based on experiences in any class related to history, civics, or social studies, not just the class in which the testing took place.

The experience of an open climate for discussion was not as strong a predictor as confidence in participation (or civic curriculum, to be discussed in the subsequent section), but it was the most consistent predictor of the civic outcomes. Students who have had this civic learning opportunity in school are higher on all four measures of civic engagement, indicating that negotiating meaning through the expression and understanding of different viewpoints is particularly important for the development of adolescents' civic engagement, as proposed by Wenger (1998). Student experience of an open classroom climate was the only civic learning opportunity in school that predicted

students' knowledge levels, which supports Torney-Purta's (1995) proposition that the exchange of ideas and perspectives about political and social issues contributes to the construction of knowledge. Intervention research has found that student participation in programs that facilitate deliberative dialogue between students and teachers also is associated with higher levels of civic skills and a sense of belonging in the schools among students who participated in the programs (Borgida, Worth, Lippmann, Ergun, & Farr, 2008).

For students' anticipated voting behavior, the relation between student experience of an open classroom climate and the civic outcome varied between schools. Further, the proportion of foreign-born residents in the surrounding neighborhood conditioned the association. Specifically, individual students' experience of an open class climate was even more beneficial in high foreign-born neighborhoods (depicted in Figure 11). It is understood that experiences with open and respectful discourse should be related to positive outcomes for all young people, but students attending schools in neighborhoods with more immigrants especially benefit from the experience. As with other interactive effects, it could be related to a restricted range of experiences in this particular community so that any increase in positive experiences will be related to greater gains in civic outcomes in comparison to communities where students might be exposed to a broader range of experiences, within and outside of school. Perhaps in high-immigrant neighborhoods students are not as aware of civic practices (because of fewer adult role models that are familiar with civic participation) and therefore increased levels of open discourse in school enhance students' understanding of the rights and responsibilities of citizens, such as voting. Classrooms that support discussion of political and social issues

are particularly important in schools located in high foreign-born neighborhoods, apparently because of students' increased exposure to viewpoints that facilitate the acquisition of meaningful skills, which they translate to applied behavior.

The relation between individual students' experience of an open climate for discussion and their anticipated voting was so strong in high foreign-born neighborhoods that the average open climate in the school did not make a difference (although, recall that there was not as much variance in the open climate in the school in these neighborhoods). Conversely, in neighborhoods with a low foreign-born population, as the average open climate in the school increased, individual students' experience of an open climate became less important in relation to the civic behavior (Figure 12).

This interaction is particularly interesting because although the school open climate may be high, not all students have experienced an open climate in their classroom interactions with teachers and peers. In neighborhoods with low proportions of foreign-born residents, perhaps students behave more as a group, or are more likely to follow the crowd, which is why as the average school climate increases the individual experience is less important. In high foreign-born neighborhoods, students may think more for themselves in that it is their own experience and their own perception that relates to their anticipated voting.

Civic curriculum. The last measure of civic experiences in school is students' experience of a civic curriculum in the school. Students who learned about the importance of democratic practices and ideals, such as cooperation, contribution, and patriotism, expressed higher support for the rights of minorities and higher anticipated civic participation. Contrary to expectations, experiencing a civic curriculum was not

related to students' civic knowledge. Civic curriculum in the current study reflects measures of diverse experiences without a strong content focus, and may more accurately represent the general or informal civic curriculum. In contrast to the formal civic curriculum (which includes specific content such as historical events or government structures), the informal curriculum pertains more to the acquisition of applied skills rather than content knowledge. That is not to say that informal aspects of the civic curriculum cannot be important for the development of knowledge, but rather that adolescents are not connecting these classroom experiences to an abstract understanding of democratic principles and institutions.

Although this aspect of a school's civic curriculum did not predict knowledge, it was positively related to the other civic outcomes and the relation between civic curriculum and anticipated community participation varied between schools. Learning about democratic ideals such as cooperation and contribution conferred more benefit in the South and in neighborhoods with high proportions of foreign-born residents (depicted in Figures 17 and 18, respectively). Students in the South anticipated higher levels of community participation (a direct relation). It is possible that students in the South are more likely to contribute in reference to their own community or to people who are similar to them either in physical appearance (such as race) or religious affiliation. Perhaps experiencing a civic curriculum in which students learn about other groups of people broadens their target area of populations to serve or social issues of concern.

The interaction between students' experience of a civic curriculum and the neighborhood foreign-born population indicates that greater focus on civic ideals is particularly beneficial for students attending schools in high-immigrant neighborhoods.

Just as student experiences of an open climate for discussion predicted higher scores in students' anticipated voting, experiences of a civic curriculum predicted higher scores in students' anticipated community participation. This pattern of findings indicates that students attending schools in neighborhoods with high proportions of foreign-born residents are particularly responsive to civic experiences in schools. It could be attributed to students in these neighborhoods usually having a smaller range of activities and experiences, both in school and out-of-school, and their incremental gain from civic-related experiences being greater than students who have access to a larger range of experiences. Another possibility is that in high foreign-born neighborhoods there actually are higher levels of collective socialization toward civic activities (at least for voting in which the foreign-born population has a significant direct effect), so students in these schools seek out additional civic experiences.

Civic and Demographic Environment in School

Individual students' civic experiences in schools were consistently and directly related to students' civic outcomes, while the average of these student experiences (the civic environment in school) had relations that were less explicit. Demographic characteristics and civic environments of schools were directly related to students' civic outcomes on a few occasions, but there were numerous interactive effects associated with the strength of the relationship between student demographic characteristics and the civic outcomes and also between individuals' civic-relevant experiences and the civic outcomes (discussed previously). Measures of the school environment also interacted with measures of the neighborhood environment for moderated relations with civic

outcomes. These interactions are discussed in the subsequent section on neighborhood influences.

The only direct relations between the school demographic environment and students' civic outcomes occurred for the average socioeconomic status of students in the school (recall that early in the analyses it became apparent that the racial composition of the school was not significantly related and was therefore removed from the analyses). School SES was positively related to students' civic knowledge and anticipated voting behavior. The strong relations are consistent with other research on the positive influence of school SES (e.g., Caldas & Bankston, 1997). School SES is presumably related to aspects of the learning environment that were not included in this study, including classroom resources, qualified teachers, and high-quality facilities which may contribute to the knowledge levels of all students in the school. This finding is related to Jencks and Mayer's (1990) concept of institutional resources in that the quality of the school is important for all students' outcomes. As expected, high-SES schools predict better civic outcomes, but the finding is important because the effect is over and above the effect of individual SES. The implication is that students with socioeconomic backgrounds which put them at risk for poor civic outcomes, as found in prior research, can have more positive civic outcomes if they attend high-SES schools.

The direct effects of the school civic environment on students' civic outcomes generally were not significant when considered in addition to the effects of individual students' experiences, with two notable exceptions. School climate was directly related to students' civic knowledge and school curriculum was directly related to students' anticipated voting. Attending a school in which other students have opportunities to

express and understand different sides of social issues in the classroom is related to higher knowledge levels beyond whether an individual student has experienced this open discourse. Likewise, a school environment in which students learn democratic ideals benefits students' anticipated civic participation regardless of their own learning experience. The school climate finding is consistent with Vieno et al. (2005), who found that students' perception of the school climate and the aggregated school climate measure both were positive predictors of the examined outcome.

Patterns of Findings in the School Context

The pattern of findings pertaining to the school context indicate that ensuring that students have enhanced civic learning and engagement opportunities in school is an effective way to advance adolescents' civic knowledge, attitudes, and behavior. Schools seem to act as communities of practice (Lave & Wenger, 2002) in which students' civic development is enhanced through belonging to the school community and having experiences that create meaning for abstract democratic principles and practices. These findings relate to a line of research and programs involving civic engagement interventions in school. Pasek et al. (2008) evaluated the effects of students' exposure to a school program designed to increase student civic engagement. In the program, students learned about the political system through engagement with community problems, deliberated with teachers and peers, and learned and practiced engaging with political leaders. Looking at long-term effects of the program (one year later), school program exposure was not directly related to students' civic knowledge. Rather, it was only through the increase in internal efficacy that the program related to the civic outcome. This particular intervention indicates that applied experiences with civic activities do not

directly translate to increases in knowledge and that more explicit connections need to be made in the classroom.

Relation Between the Neighborhood Context and Civic Outcomes

Prior research on adolescence found that neighborhoods often were directly or indirectly related to adolescent development, indicating that this environment was an important context to consider in an investigation of context effects on adolescents' civic engagement. In this analysis, measures of the neighborhood, indicating the collective characteristics of the population within a physical space, were rarely directly related to students' civic outcomes. However, the neighborhood was still an important context in that it moderated the influence of students' demographic characteristics, students' civic experiences in school, and the overall civic environment of schools on civic outcomes. The preponderance of indirect effects indicates that the neighborhood context is relevant to the lives of adolescents, particular by exerting an influence through schools. These interactive effects, as well as the few direct relations between neighborhood characteristics and the civic outcomes, are discussed here. It is worthy of note that the majority of the interactive effects indicate that students who may traditionally be deemed at a disadvantage because of neighborhood conditions actually experience additional benefits from increases in civic learning opportunities in schools.

Neighborhood Poverty

Neighborhood poverty was not directly related to any of the civic outcomes, but in three instances this contextual measure conditioned the effects of the school environment measures. Specifically, in high-poverty neighborhoods the positive relations between the civic environment in school and students' civic outcomes are even stronger.

The enhanced associations in impoverished neighborhoods occur for the following relations: school confidence in participation and students' civic knowledge (Figure 3), school civic curriculum and students' anticipated voting (Figure 9), and school civic curriculum and students' anticipated community participation (Figure 14).

Throughout this discussion I have proposed explanations for the interactions found between multiple contexts; those explanations apply to the neighborhood poverty interactions as well. In low-poverty neighborhoods, schools may provide their students with a large range of learning opportunities and activities. Therefore, when students experience a more effective student government or learn about democratic ideals it may not have a large benefit because the students already are exposed to so many experiences. Conversely, in high-poverty neighborhoods schools may not be able to provide such a range of experiences so a higher level of a particular experience makes a big difference to students and their civic engagement. In line with the collective socialization model, adult role models in high-poverty neighborhoods may not impart positive civic attitudes or models for civic behavior (Hart & Atkins, 2002), therefore hands-on experiences within the school context are particularly important.

A related explanation is that schools in low-poverty neighborhoods make more extracurricular activities available to their students, including a larger range of academic clubs and sporting teams, debate team, and after-school programs that involve tutoring or learning unique academic subjects. Because these students can participate in so many activities after school (and presumably benefit either socially or academically) they do not benefit as much from in-school activities and interactions that encourage the same kind of skill acquisition. Students attending schools in high-poverty neighborhoods do

not have access to as many extracurricular or out-of-school activities, and therefore in-school programs are more influential on their development. Regardless of the explanation, improvements in the civic environments in schools have a larger impact on students in disadvantaged communities.

Schools in high-poverty neighborhoods can capitalize on these neighborhood influences by ensuring that the student body is having experiences of democratic processes and learning about democratic ideals and practices. It is encouraging that these opportunity structures have an enhanced benefit in the schools where they are most needed. Schools in impoverished neighborhoods cannot easily provide an extensive range of learning experiences or boost the amount of extracurricular activities provided because resources affect the availability of such experiences. Schools can focus on aspects of the school environment that do not require additional financial resources but rather commitment and ingenuity on the part of the educators.

Neighborhood Racial Diversity

There was one interaction between neighborhood racial diversity and a school environment measure in relation to students' civic knowledge. In neighborhoods characterized by high racial diversity, the level of open climate for discussion in the school was not related to students' civic knowledge, while in low-diversity neighborhoods the relation was quite pronounced (Figure 4). Given that the mean level of open climate for discussion was low in low-diversity and high-diversity neighborhoods (in comparison to neighborhoods characterized by average levels of racial diversity), the explanation that students are merely unwilling to engage in real discussion applies to both extremes. Therefore, it is necessary to explore other explanations.

Assuming that in high-diversity neighborhoods students have more exposure to people who are different than them, students may have already heard differing opinions on political and social issues and been exposed to the sharing of ideas. In racially-homogenous areas, students may not have been exposed to opinions that differ greatly. Therefore, a school environment that supports the open discussion of political and social issues and exchange of different ideas may greatly contribute to students' construction of knowledge.

A less optimistic interpretation is that students attending schools in racially diverse neighborhoods are exposed to but disregard other students' opinions and perspectives because of negative experiences with "others" in the neighborhood, or because of inadequate teacher facilitation. Hess and Avery (2008) reported, based on a review of current literature, that teachers may be less willing to discuss contentious political and social issues in classes with more racial diversity, and in communities with more immigrant residents. If teachers are less comfortable with leading and facilitating class discussion under conditions of diversity, perhaps high levels of open discourse actually involve negative discourse between students. Although different opinions are shared the discourse may not beneficial. In comparison, in low-diversity neighborhoods teachers are presumably more comfortable with encouraging discourse about contentious issues. Feeling more at ease, teachers can be more skillful in facilitating discussion and students can benefit more from the interactions.

Neighborhood Foreign-born Residents

The only Census-based neighborhood measure that was independently related to adolescents' civic outcomes was the proportion of foreign-born residents in the school's

neighborhood. In neighborhoods with high proportions of foreign-born residents, adolescents had lower knowledge levels but higher expectations of voting. These neighborhoods will contain fewer role models that are knowledgeable about the country's institutions and democratic policies. Additionally, neighborhoods with higher proportions of immigrants will likely contain higher numbers of individuals who are non-native English speakers. These individuals are less likely to be able to tutor students, talk to them about political and historical events, or make other contributions to the civic knowledge of local youth.

However, students attending schools in neighborhoods with higher proportions of foreign-born residents had higher anticipated voting levels. This finding is quite interesting because it conflicts with the common perception that immigrants are not interested in civic participation. Immigrants generally display lower levels of civic engagement, including voting (Bass & Casper, 1999; Lopez & Marcelo, 2008), volunteering, and participation in community associations (Verba, Schlozman, & Brady, 1995). However, citizenship status (and therefore the legal ability to vote) and fear of deportation are likely explanations for the lack of civic participation. It seems that for immigrants, voting may be viewed as the easiest way to assimilate into the American political system. The finding of this direct effect indicates that there is something about communities with high immigrant populations that inspires young people to be active citizens, regardless of their own immigrant status. It is possible that in high-immigrant neighborhoods residents are conscious of the rights and responsibilities of citizens (or aspiring citizens) and that they inspire adolescents to take advantage of the opportunity to vote, which is not possible in all countries.

A less optimistic explanation is that non-immigrant students attending schools in high-immigrant neighborhoods could have negative attitudes toward immigrants and therefore be interested in voting specifically for candidates that endorse anti-immigrant policies. Whether the reason is positive or negative, in high foreign-born neighborhoods adolescents seem to be more interested in this aspect of the political process.

Perhaps it is not that students in high foreign-born neighborhoods are particularly interested in political participation, but rather than students in low foreign-born neighborhoods are incredibly uninterested. Residents of all ages in these neighborhoods may be the most comfortable with the current state of the country. In their neighborhood of native-born Americans everything runs smoothly because of similarities in language and cultural practices. If people are comfortable they may also be apathetic and less inclined to vote for change. They may believe that inactive civic participation is one way to preserve the current state of the system.

In addition to the independent association between the immigrant population in neighborhoods and students' civic outcomes just discussed, the neighborhood proportion of foreign-born residents moderated the relation between average perception of an open climate in school and students' anticipated voting (Figure 10). The positive relation between attending a school with a high open climate for discussion and students' anticipated voting was not as strong in high foreign-born neighborhoods. This interaction is similar to the interaction between neighborhood racial diversity and school climate (on student knowledge). In high foreign-born neighborhoods there might be more interactions with community people who are racially and nationally different who are likely to have different perspectives on political and social issues. For students who have already had or

at least observed these interactions in the neighborhood, having the experience in school is not as unique. Students in low foreign-born neighborhoods do not have access to the diversity of people and therefore benefit more from exposure to different ideas and perspectives in school. Alternatively, because of teachers' possible discomfort with discussing controversial issues in diverse settings (Hess & Avery, 2008), the teaching practices in schools located in neighborhoods with low proportions of foreign-born residents may be more conducive to civic development.

Southern Region

Although not a neighborhood characteristic per se, the geographical region in which the school (and neighborhood) was located was examined to determine if regional differences were apparent in adolescents' civic engagement. For the most part, region was not related to students' civic outcomes. However, students attending school in the South were less supportive of minority rights and expressed higher anticipated community participation. The Southern region of the United States is known for its racial tension, which may explain why students attending school there are not as supportive of the rights of minorities. A recent survey of adults found that 65 percent of adults in the South would prefer to live in a community composed of a mix of different races, indicating a slight preference for racial diversity. However, only 23 percent preferred to live in a community with a large immigrant population (Taylor, Morin, Cohn, & Wang, 2008; note that the Midwest actually had the lowest preference for diverse communities.) Perhaps students in the South interpreted the questions regarding ethnic minorities as referring to ethnic immigrants.

Patterns of Findings in the Neighborhood Context

With the exception of the proportion of foreign-born residents, the neighborhood context was not directly related to adolescents' civic engagement. This finding, which was consistent across the four outcomes, indicates that neighborhoods are for the most part indirectly related to adolescents' development. Of course this statement must be qualified because I investigated the neighborhood in which the school is located (which may not be the home neighborhood), so it is the school's neighborhood that is primarily indirectly related to students' outcomes. The mechanisms through which neighborhoods influence student outcomes include the availability of institutional resources (especially the school quality) and the provision of different possibilities for collective socialization.

The findings that neighborhood characteristics generally are indirectly related to adolescents' civic outcomes conflict with most research on neighborhood effects. Many studies have found a direct connection between the neighborhood context and students' civic outcomes, however there are notable distinctions between the current study and other research. First, other studies tend to examine the home neighborhood rather than the school neighborhood (the theoretical implications of this distinction are discussed in the next section). Second, the studies usually do not include relevant measures from all four contexts of influence examined in the current study (e.g., Atkins & Hart, 2003; Hart et al., 2004). Third, neighborhood measures that had direct effects were either combined composites of Census measures and adolescents' personal experiences (Theokas & Lerner, 2006) or measures of adolescent perceptions of the neighborhood (Kahne & Sporte, 2008). These are the most feasible explanations for discrepancies between studies.

Although there are ways in which the current findings conflict with prior research, particularly pertaining to whether neighborhoods have direct or indirect effects, there also are ways in which this study builds on and expands other research. Most notable is the discovery of complex interactions between the neighborhood context and other aspects of adolescents' lives. It is these complex interactions that Bronfenbrenner (1979) believed were the foundation of development. Findings also support the proposition that neighborhoods relate to adolescent development through processes inherent in more proximal contexts and relationships (Bronfenbrenner, 1986; Jencks & Mayer, 1990).

Implications for Theory, Research, and Practice

Theoretical Implications

The findings of this study have implications for the conceptual understanding of development within context, methodological considerations, and educational practice. I employed Bronfenbrenner's (1979) ecological systems theory as the framework for my study because it is one of the few theories that not only focuses on development as a function of interactions between the person and their environment, but also proposes that different aspects of the environment are interrelated in their influence on development. Bronfenbrenner's (1989) person-process-context model is supported by the current study in that adolescents' civic outcomes varied as a function of characteristics of the person and of multiple systems of influence. In particular, there are processes inherent in these contexts that help to explain how contexts influence youth development. Processes that seem to be most important pertain to aspects of interpersonal relationships with parents (specifically discourse), patterns of activity within schools, institutional resources within neighborhoods, and the collective socialization that occurs in neighborhoods. Therefore, I

have provided empirical evidence for processes related to human development, as proposed by Lave and Wenger (2002) and Jencks and Mayer (1990).

Bronfenbrenner (1986) originally posited that neighborhoods were a distal environment that belonged in the exosystem, which is a system of influence that exerts its influence indirectly through more proximal persons and institutions. At the beginning of the study this assertion was challenged because many studies have found direct links between neighborhood characteristics and youth development. However, the difference between most research on neighborhood effects and the current study is that I examined the neighborhood in which the school is located, while other studies primarily examined the neighborhood in which the child or adolescent lived. The only other study to examine the school's neighborhood (Lay, 2006) also only found indirect effects. Therefore, my findings indicate that the school's neighborhood should be considered as part of the exosystem because the neighborhood primarily exerts its influence through the school. The determination of the school's neighborhood as a component of the individual's exosystem enriches our ideas about the exosystem (in particular, by providing a different example than parents' workplace), including how it exerts an influence on development (by moderating the influence of other contexts). Although not explicitly measured in the current study, aspects of the neighborhood such as the generation of tax revenue and social and physical conditions can influence schools through the ability to attract and pay qualified teachers, program funds, and the availability and quality of the facilities and learning materials (Connell & Halpern-Felsher, 1997; Gershoff & Aber, 2006)

The findings from the current study are consistent with the tenets of ecological systems theory and my identification of specific proximal processes may enrich our

understanding of the nature of complex interactions between people, processes, and context. Collective socialization occurs through parents as they communicate their civic beliefs and values (in the adolescent's microsystem). Youth also learn civic values through their peers (a microsystem component), where contagion processes are in effect. Schools (a microsystem component) act as a community of practice in which adolescents learn and develop skills through social processes and interactions (as proposed by Lave & Wenger, 2002, and Wenger, 1998). In school adolescents can have meaningful experiences that contribute to their identity as citizens. Specific processes by which students create meaning and enhance learning include: empowerment through group processes, deliberative discourse, and the acquisition of democratic ideals. Unfortunately, the current study is not able to contribute to our understanding of mesosystemic influences on development because there were not any significant interactions between parent, peers, and school measures (though for the most part these interactions were not specifically investigated).

Finally, the neighborhood context also exerts an influence on development and because of the indirect relation it is considered a component of the exosystem. The neighborhood influence occurs through the processes I have already discussed: the collective socialization of attitudes toward civic participation (mostly through parents but also through residents), the contagion of peer norms, and the quality and availability of institutional resources, in particular the neighborhood's school (in accordance with the mechanisms proposed by Jencks & Mayer, 1990). The neighborhood may provide other locations for civic experiences and activities that contribute to development, but the school appears as the most influential resource. The institutional resource mechanism was

more important in the current study than in previous research, perhaps because of the examination of the school's neighborhood rather than the home neighborhood. Leventhal and Brooks-Gunn (2003) proposed that schools are one of the neighborhood's primary institutional resources and are of particular importance for adolescents, an assertion that is supported here.

Methodological Implications

The current study provides further support for the value of not controlling for student demographics, the existence of distinguishable types of school experiences, and the importance of examining multiple contexts of influence on development. It would benefit researchers to refrain from unreflectively controlling for students' demographic characteristics, and to investigate these characteristics for possible interactions with contexts of influence. There were not as many randomly-varying characteristics as expected, but there were interesting interactions in which students were differentially influenced based on their gender and race. Even when the characteristics were limited to fixed associations with the civic outcomes, the strength of the relations often were influenced by the addition of experiences in other contexts (for instance, the relations between Latino and the civic outcomes were reduced to non-significance with the addition of other contexts). Had student demographics only been controlled for, I would not have seen important ways in which contexts related to the civic engagement of diverse groups of young people.

The current analyses also indicate that there are distinguishable types of school experience that relate to civic outcomes. Confidence in the effectiveness of school participation concerns the experience and observation of democratic processes in the

school, a measure that appears reflective of student empowerment. Openness of classroom climate is a measure of the experienced discussion of social issues, including the expression of differing opinions and viewpoints, within a supportive classroom environment. Exposure to a civic curriculum (or rather, an informal civic curriculum) is a measure of student learning about democratic ideals in school. These experiences related positively to students' civic outcomes, but the strength of the associations varied depending on the type of school experience. For instance, students' experience of an open climate for discourse was the most consistent predictor (i.e., positively related to all four outcomes), but had the weakest associations. The aggregates of the school experiences also interacted with aspects of the neighborhood in a different manner. School average confidence in participation and civic curriculum interacted with neighborhood poverty for a differential effect on students, while school average climate tended to interact with the neighborhood racial composition and immigrant population. Recall that confidence in participation and civic curriculum are measures of civic experiences in the school, while climate was technically a measure of civic experiences in the classroom. This distinction was not particularly important in the current study, but it might be responsible for some of these patterns. The differential strength of the associations between the school experience measures and interactions with other contexts indicate distinct aspects of civic experiences.

The most important methodological implication is the utility of simultaneously examining the role of multiple contexts in development, including interactions between those contexts. In the current study I captured a great deal of information (albeit, complicated information) about the systems of influence in which adolescents develop

civic competencies and learn to be functioning citizens. Perhaps the inclusion of these salient contexts, as well as a range of experiences within contexts, is responsible for this study's ability to explain more variance in the outcomes in comparison to prior research. A complex picture of context effects on civic engagement has been revealed, a picture that would not have been complete without the inclusion of all four contexts.

Application of the Results

The proposition that schools can enhance civic education and contribute to civic engagement by having more effective school practices (Torney-Purta, 2002) is strongly supported. Effective school practices, including opportunities for students to participate in democratic processes, a culture that encourages open and respectful discussion, and a curriculum where students are exposed to democratic ideals, is especially important in schools located in high-poverty neighborhoods. Other lines of research confirm that increased levels of student voice and active participation in low-income schools contribute to growth in efficacy, belonging, and competence for students who may not have found meaning in their school experiences (Mitra, 2004). Considering other evidence of a civic engagement gap (Levinson, 2007) and a civic learning opportunity gap (Kahne & Middaugh, 2008), the current findings indicate that the engagement gap is narrowed when the learning opportunity gap is reduced. Schools, although implicated in the existence of a civic engagement gap, have the potential to narrow the gaps between different groups of students. Students acquire meaningful concepts, knowledge, and skills through civic-related experiences, and schools could better serve students by ensuring that such experiences are available.

Implementing these practices would require teachers to make adjustments to the way they teach and discuss political and social issues and democratic ideals, such as lesson plans that involve student discourse and debate, and homework assignments that require students to do research on a particular side of an issue. Administrators could facilitate civic engagement by providing more opportunities for groups of students to organize and work together, either to help solve problems in the school or in the community. All of these changes may require additional time and planning, but they would not necessarily require additional financial resources.

There are also educational implications associated with the finding of threshold effects in which students who already have positive experiences in school (or adequate levels of positive outcomes) do not benefit beyond a certain point. This threshold effect occurred for females' anticipated community participation in that a higher level of open climate for discussion in the school was not beneficial. The threshold effect also relates to the explanations provided for the less-pronounced benefit of civic learning opportunities among youth in advantaged settings. Of course these are exploratory findings and experimental research would provide more insight as to when and why threshold effects occur.

Although more specific research is needed, for instance with targeted groups or targeted interventions, it is clear that the classroom and school environments are important for the development of civic competencies among American youth. Specific activities and experiences may be more beneficial for particular groups of young people, or for students attending schools in neighborhoods with distinct characteristics. Educators could capitalize on these interactions with targeted interventions based on their school

population or location. Again, this approach could make the most out of limited resources.

Limitations of the Study

Researchers have extensively examined the role of different contexts of civic engagement, but few have attempted to parse out the influence of multiple socializing agents and contexts. I have discovered some distinctions between the contexts and offer how they may be differentially related to multiple aspects of civic engagement. Therefore this study extends previous research by demonstrating that contextual factors are differentially (and interactively) related to civic engagement. Additionally, the nationally-representative sample enables findings to be generalized to the national population of 14-year-olds. However, there are methodological issues, specifically pertaining to measurement and omitted variables, that are important to note.

The first methodological issue pertains to the measurement of different aspects of civic engagement, in particular the behavioral outcomes. The two behavioral measures (anticipated voting and anticipated community participation) are a measure of adolescents' future participation in civic activities, rather than their actual behavior at the time of the study. Although prior research has found that adolescents who report intentions to vote do so years later (Campbell, 2007), it is not possible to assess the relation between anticipated behavior and actual behavior in the current study. However, the anticipated voting measure at least captures 14-year-olds' interest in future civic behavior, which is almost certainly related to the actualization of civic participation.

Like many studies on the civic engagement of young people, the current study employs cross-sectional data and utilizes correlational analyses. Therefore, I can only

report on relations or associations between predictors and the civic outcomes and any inferences about causal relations (or explanations) must be speculative. For instance, the finding that peer discourse and students' anticipated community participation are related may actually mean that youth who participate in community activities end up talking to their friends about social issues to which they have been exposed. Additionally, interactions between the school and neighborhood contexts have been discussed as if the neighborhood moderates the school's relation to young people's outcomes. This interpretation was selected based on the assumption that the neighborhood is a more distal context than the school and therefore moderating influences would come from further away from the individual. However, it is possible that the opposite occurs and that it is the school that moderates the neighborhood influence (although this may be more of a conceptual issue and not particularly relevant to the application of the results).

Although many aspects of social contexts were considered, it is not possible to capture every influential factor. I measured the quantity of discourse with parents and peers, but it is likely that the quality of discourse would also be related (such as specific topics discussed or the nature of the interaction). Aspects of the formal civic curriculum in schools and measures of teacher quality (e.g., years of teaching experience or a subject-specific degree) might have related more strongly to the civic outcomes, especially civic knowledge. While processes that occur within families, peer groups, and schools were examined, the employed datasets did not enable an investigation of the role of processes in neighborhoods. Neighborhood measures were limited to demographic and social characteristics which, although similar to predictors used in other neighborhood research, generally were not directly associated with students' civic outcomes. Measures

such as neighborhood collective efficacy, social control mechanisms, and social capital might have been stronger predictors. Finally, pertaining to the adolescent, it is possible that psychological factors for adolescents would have been important predictors (and might have varied between schools). This includes measures of psychological functioning or well-being, feelings of inclusion, and self-efficacy.

The final limitation pertaining to included variables involves the simultaneous examination of neighborhood poverty and neighborhood affluence. Early in the analyses it became apparent that the significant effects of poverty (including significant interactions) would negate the effects of affluence, and vice versa. Additionally, these measures have a high negative correlation. If the two measures are strongly inversely related, one must question the utility of employing both measures. In the current study I employed both predictors in order to be consistent with prior research (although I decided to focus on poverty interactions), however it is evident from the results that neighborhood affluence did not contribute to the analyses above the contribution made by the neighborhood poverty measure.

While most research on neighborhood effects examines the neighborhood in which young people reside, the current study examined the neighborhood in which adolescents attend school. Although the home and school neighborhoods are likely to be highly-similar in their demographic and social characteristics, no information was available on the extent to which students' homes and schools are located in the exact same neighborhood. Therefore, interpretations were made in relation to the neighborhoods in which schools are located, not in reference to where youth live.

It might be considered a limitation that the CIVED data are from 1999 and therefore are somewhat dated. Although other large-scale datasets used for comparable purposes also were collected in the 1990s (including the NELS and NHES), it is recognized that the data are nearly 10 years old. More recently collected data might reflect changes based on educational policy, especially the No Child Left Behind Act of 2001, such as an increased emphasis on student test scores in science, math, and reading.

All of the limitations I just discussed provide opportunities for future research. In particular, it would be beneficial to examine adolescents' psychological factors, process variables from the neighborhood context, and interactions within contexts (for instance, the interaction between neighborhood poverty and neighborhood diversity). Additional suggestions for future research are presented in the next section.

Future Research

The current study involved the investigation of a range of civic engagement outcomes, including adolescents' civic knowledge, attitudes, and behavior. However, because of technological advances (especially the internet) and the emergence of new salient social issues (e.g., renewable energy), young people at present may be engaged in a much larger array of civic activities. Young people can blog about social and political issues, sign online petitions, and instantly communicate their stance on an issue by forwarding an email to hundreds of their friends. Researchers such as Harell and colleagues (2008) are just beginning to examine these aspects of engagement, and future studies should continue to expand the definition of civic engagement in order to capture this range of activities. As with the more traditional civic outcomes examined in the

current study, different groups may be more or less engaged in modern types of civic engagement.

Another appropriate line of research would be to examine the conditions and processes in schools located in neighborhoods characterized by high levels of poverty and high proportions of foreign-born residents. I discovered many interactions based on these neighborhood characteristics, which indicate that higher levels of civic learning opportunities make a substantial difference for students in these schools, sometimes dramatically improving their civic outcomes. These findings, based on large-scale datasets, are complemented by qualitative research. Mitra (2004) found that school programs implemented to increase student voice benefitted students' sense of agency, belonging, and competence in a school consisting mostly of racial minority and immigrant students.

Findings based on large-scale datasets can be used to generate research questions for programmatic and intervention research. Through intervention studies, researchers can investigate the processes found in the current study to be related to adolescents' civic outcomes. One line of inquiry for intervention research involves the examination of the relation between student confidence in participation and civic outcomes. Specific research questions could include: What accounts for the link between student empowerment and civic development? Is the process similar for students of different gender or race? What role does efficacy play in the effectiveness of an empowerment program? How do other students and teachers facilitate or impede empowerment? How are interactions with adults outside of school (including parents) associated with the program's success? This mixed-methods approach can contribute to a more thorough

understanding of how schools can facilitate adolescents' civic engagement, including how schools can capitalize on the influence of neighborhood social and demographic characteristics.

Conclusion

This study has revealed many ways in which adolescents are being prepared for functioning citizenship in a way that benefits their overall development. Parents and peers facilitate preparation by discussing political and social issues, challenging the construction of knowledge, and providing models of conscientious citizens. Schools provide opportunities for hands-on experiences of democratic processes, a supportive environment for sharing different opinions, and a learning environment in which democratic ideals are communicated to students. Neighborhoods facilitate civic engagement by enhancing positive experiences in other contexts, specifically in schools. In some instances, youth are differentially prepared for functioning citizenship, but inputs within different contexts can reduce the disparities in adolescents' civic competencies. In particular, civic experiences in schools contribute to the preparation of youth for active citizenship and equal access to these experiences reduces civic engagement gaps between students of different demographic groups.

The decade from 1999 (when students were tested) through 2008 (when a black man was elected president) is a unique time in the social and political history of the United States and a remarkable time to be an American citizen. The election of the country's first black president signifies a level of unprecedented acceptance of democratic ideals. The political discourse changed, the demographics of active citizens changed, and young people especially were empowered through the success of a

grassroots political movement. Because of the 2008 presidential election, adolescents gained early exposure to civic experiences and an understanding of how groups of citizens contribute to democratic processes. Hopefully all young people received these inputs—necessary for the development of competent citizens—in order for the next generation to be adequately and equally prepared for active citizenship.

APPENDIX A

Table A1. *Descriptive statistics of original CIVED and Census variables (used to*

construct composite measures)

Variable	M	SD	Minimum	Maximum
Level-1 variables				
Discuss national politics with parents	2.64	.96	1.00	4.00
Discuss international politics with parents	2.32	1.00	1.00	4.00
Discuss national politics with peers	2.04	.90	1.00	4.00
Discuss international politics with peers	1.75	.83	1.00	4.00
Student learned to…				
Understand people[a]	.89	.32	.00	1.00
Cooperate with others[a]	.91	.28	.00	1.00
Contribute to solving community problems[a]	.73	.44	.00	1.00
Be a patriotic citizen[a]	.67	.47	.00	1.00
Be concerned about other countries[a]	.75	.43	.00	1.00
Importance of voting[a]	.73	.45	.00	1.00
Level-2 variables[b]				
Educated residents	.79	.11	.39	.96
Professional residents	.31	.11	.12	.69
Unemployed residents	.04	.02	.01	.13
High-income households	.22	.14	.05	.74
Residents below the poverty line	.14	.08	.02	.39
Households receive public assistance	.04	.03	.00	.20
Female-headed households	.13	.06	.03	.42

[a] Dichotomous variable where the mean indicates the proportion represented in the sample of 2,729 students.
[b] All level-2 variables are neighborhood measures where the mean indicates the proportion represented in the sample of 119 schools.

APPENDIX B

Correlation Guidelines and Tables

Composites were formed based on theoretical relatedness and the strength of the association between variables as indicated by correlation coefficients. Guiding criteria for interpreting the size of a correlation coefficient is that an absolute value of .00 to .30 is little and possibly circumstantial, .31 to .50 is low, .51 to .70 is moderate, .71 to .90 is high, and .90 to 1.00 is very high (Hinkle, Wiersma, & Jurs, 2003). However, determining whether the relationship between two variables is meaningful also depends on characteristics of the variables (e.g., the scale) and whether the relationship conceptually makes sense. Pedhazur (1997) posits that threshold values for determining whether the correlation between two variables indicates problematic collinearity are inconsistent and often inadequate. Decisions to construct composite measures from original CIVED and Census variables were based on the magnitude of correlation coefficients, whether variables were conceptually related, whether their correlations with the outcomes followed similar patterns, and accordance with prior research.

Table B1. *Correlations among original CIVED variables (prior to constructing composite measures)*

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Parents discuss national topics	–	.68**	.50**	.41**	.19**	.24**	.17**	.13**	.18**	.14**	.19**	.16**
2. Parents discuss international topics		–	.40**	.58**	.17**	.21**	.14**	.11**	.17**	.08**	.17**	.15**
3. Peers discuss national topics			–	.65**	.11**	.19**	.08**	.04	.18**	.12**	.16**	.14**
4. Peers discuss international topics				–	.11**	.17**	.08**	.03	.16**	.09**	.15**	.13**
5. Confidence in school participation					–	.32**	.30**	.29**	.27**	.18**	.20**	.18**
6. Class climate						–	.30**	.26**	.24**	.20**	.24**	.20**
7. Understand							–	.41**	.27**	.19**	.24**	.20**
8. Cooperate								–	.22**	.17**	.26**	.21**
9. Contribute									–	.30**	.29**	.26**
10. Patriotic										–	.32**	.34**
11. Concerned											–	.34**
12. Voting												–
Outcomes												
Civic knowledge	.18**	.22**	.06**	.09**	.13**	.18**	.17**	.14**	.00	-.09**	.07**	.07**
Support minorities	.16**	.14**	.06**	.06**	.40**	.27**	.27**	.20**	.15**	.07**	.19**	.13**
Vote	.35**	.33**	.19**	.20**	.34**	.31**	.29**	.25**	.24**	.14**	.20**	.25**
Community participation	.30**	.26**	.21**	.21**	.29**	.24**	.21**	.16**	.23**	.15**	.20**	.15**

* p < .05, ** p < .01

Table B2. *Correlations among original Census variables (prior to constructing composite measures)*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. White	–	-.38**	-.77**	-.38**	-.47**	-.07	-.44**	.46**	.26**	-.49**	.17	-.48**	-.61**	-.81**
2. Latino		–	-.08	.12	.47**	.53**	.66**	-.59**	-.26**	.28**	-.11	.39**	.45**	.24**
3. Black			–	-.13	-.05	-.22*	.24**	-.27**	-.26**	.41**	-.23*	.39**	.41**	.85**
4. Asian				–	.60**	-.02	.57**	.03	.20*	-.04	.23*	-.06	.11	-.06
5. Multiracial					–	.34**	.56**	-.20*	-.10	.14	-.01	.14	.31**	.15
6. American Indian						–	.24**	-.28**	-.28**	.30**	-.29**	.29**	.32**	.04
7. Foreign-born							–	-.28**	.10	.15	.21*	.12	.22*	.08
8. Educated								–	.73**	-.50**	.63**	-.82**	-.74**	-.58**
9. Professional									–	-.37**	.87**	-.58**	-.56**	-.53**
10. Unemployed										–	-.39**	.66**	.67**	.61**
11. High income											–	-.64**	-.53**	-.44**
12. Poverty line												–	.82**	.64**
13. Public assistance													–	.73**
14. Female headed households														–

* p < .05, ** p < .01

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