URBAN SPRAWL AND SUBURBANIZATION’S NEGATIVE EFFECTS ON CIVIC PARTICIPATION

by

DANIEL C. REED

(Under the Direction of Paul-Henri Gurian)

ABSTRACT

In this thesis, I examine the negative effects that increased urban sprawl and the “suburbanization” of communities in America have had on the civic participation of individuals in its wake. I argue that the effect of suburbia and urban sprawl is the disruption of the patterns of social interaction present in the traditional “community,” which in turn hinders the ability of individuals to participate effectively in their communities. The results of my analysis suggest that different kinds of neighborhoods in which individuals grow up may affect later civic participation. Specifically, I find that the percentage of total businesses in a community which are “mom and pops” can positively affect later participation.

INDEX WORDS: Civic Participation, Community, Social Capital, Suburb, Suburbanization, Traditional Community, Urban Sprawl
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DANIEL C. REED

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DANIEL C. REED

Major Professor: Paul-Henri Gurian
Committee: Audrey Haynes
Brad Lockerbie

Electronic Version Approved:

Maureen Grasso
Dean of the Graduate School
The University of Georgia
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CHAPTER 1
INTRODUCTION

Political scientists and historians have frequently commented on the decline of civic engagement in America in the last 30 years. Since the 1960s, Americans have voted less often, have volunteered for political campaigns less, have attended less political rallies and public meetings, and have generally thought to have been less interested in civic life (Putnam 2000). There have been many suggested culprits for this decline in civic participation: the deteriorating quality of the nation’s public schools, rising rates of divorce, the growth of the welfare state, the public’s disillusion with politics after Watergate and Vietnam, the baby-boomers, and even Supreme Court decisions regarding racial integration and busing. Others have suggested that the decline is relative, that the 1950s and 1960s were periods of unusually high civic engagement, and that America is merely returning to normal levels of civic activity¹.

However, there has been another trend in America in the last half-century which might be partially responsible for the decline in civic participation: “suburbanization.” Normally, when one thinks of the ill effects of suburbia, one might think of its impact on the physical environment. The rise of low density housing and automobile traffic, as well as the boom of the interstate highway system in the 1950s (which helped make living in the suburbs possible) has arguably wreaked havoc on natural ecosystems. But, what have

¹Putnam (2000) notes that the level of civic engagement in America has ebbed and flowed throughout history.
been the social consequences of suburbanization? Some have argued that the sudden surge in available, affordable housing after WWII sparked a pattern of “white-flight,” or the emigration of white, middle-class Americans from cities to the suburbs (Mieszkowski and Mills 1993). As a consequence, many inner cities deteriorated, as their wealth and energy were transported to the suburbs.

But can suburbanization affect rates of civic participation as well? For the purposes of this thesis, I argue that urban sprawl and suburbanization have an adverse effect on the development of social bonds, and therefore they hinder the ability of their inhabitants to participate civically. By separating residences from businesses and public spaces, suburbs effectively sever community and social networks. Conversely, more traditional communities have geographic, residential, and business traits that are more conducive to civic participation.

Much of the potential effect comes from the pressures of increased daily commuting. Basically, if one considers the lives of suburbanized Americans as a constant and hurried journey from workplace to “shopping-place” to home (a sort of “triangle” of daily travel)(Putnam 2000), one can easily see how they might be unable to engage each other in any meaningful way. As will be discussed in Chapter 4, frequent interaction with others in one’s neighborhood is necessary to develop real bonds with the greater community. However, when suburbanites spend several hours a day alone in their cars (commuting and running errands), it can be very difficult to develop social attachments to other members of their communities. In this thesis, I argue that an over reliance on the automobile has detrimental effects on civic engagement.
However, much of the negative effect also comes from the creation of a sort of “pseudo-community” of urban sprawl. The urban sprawl counterpart to suburbs creates the appearance of an urbanized metropolitan area, without many of the traditional components of a functional community, such as public parks, pedestrian-oriented city centers, and other public spaces. Without these kinds of outlets for civic participation, individuals in an urban sprawl environment are effectively isolated from other citizens.

Contrasted with those living in traditional communities (where the inhabitants are practically forced to interact with one another on a daily basis due to the physical layout of their environment), suburbanites have far fewer opportunities for informal “social capital”-building activities. While, obviously, there are many hermits living in traditional communities and socialites living in suburbs, it is possible that the physical layout of inhabited areas either can be conducive to or inhibiting of the civic participation of its inhabitants.

Therefore, I argue that urban sprawl and suburbanization have an adverse effect on the propensity of its individual residents to participate civically. In this paper, I examine the individual-level effects of growing up in traditional and suburban environments on later civic participation. Using national, cross-sectional survey data, I analyze the potential impact of where individuals grow up on their later civic participation. Using data from the 2000 National Election Studies, I examine the potential effect of childhood neighborhood type on future rates of civic participation. In further analysis, combining survey data from the National Education Longitudinal Studies with information about respondents’ childhood neighborhood characteristics
(obtained from US Census data), I show that the type of businesses and the proximity of residences and places of work in a community can positively influence rates of individual civic participation. Unfortunately, I find that the measurements of the percentage of community “residents who get to work without a car” fails to reach statistical significance, therefore it does not support my hypothesis regarding residential location’s effects on participation. However, I show that greater proportions of businesses in a community that are “mom and pop” establishments have a statistically significant, positive impact on the civic participation of individuals who grow up there.
CHAPTER 2

POLITICAL SOCIALIZATION AND CIVIC PARTICIPATION: CAUSES AND EFFECTS

What is Civic Participation?

The concept of civic participation generally refers to activities among the members of a community, whose ultimate goal is the enrichment of the community and its institutions. Civic participation can involve activities at the global, national, regional, state, or local level. Civic participation can also take many forms. Individual political acts such as voting and contacting public officials are often considered to be crucial determinants of good citizenship. However, as Verba, Schlozman, and Brady (1995) note, “it is incomplete and misleading to understand citizen participation solely through the vote” (p. 23-24). Many other aspects of civic participation are associated with involvement in groups. Attendance at community meetings and public hearings, involvement in church groups or the P.T.A., or even regular discussion of citizen issues often requires more than one or two people. As Putnam (2000) notes, “official membership in formal organizations” is “usually regarded as a useful barometer of community involvement” (p. 49).

Membership and activity in a formal group organization often require that an individual incur the costs of relinquishing his own time, money, and energy to the group. The costs associated with group membership can often be a deterrent to joining, and the
energy required for involvement in the group can be even more discouraging (Olson 1965, Moe 1980, Rothenberg 1988). Therefore, those who have incurred the cost of group membership, in light of an incentive to “free ride” on the efforts of others in their communities, sufficiently demonstrate their dedication to the goals of the group (and the larger community) (Hardin 1968, Dawes 1980). While merely signing up to be a member of a group does not guarantee eventual action on behalf of that group (as any member of A.A.R.P. or A.A.A. may tell you), at the very least, group membership indicates that an individual is concerned enough to “get involved.”

Whether the focus is on membership in groups or other community activities, there are several widely recognized factors affecting individual levels of civic participation. Many scholars agree that the level of a person’s formal education has a significant impact on the tendency of that person to participate in his or her community (Almond and Verba 1965; Campbell, Converse, Miller, and Stokes 1960; Barber 1969). Formal schooling not only gives the citizen the analytical tools to make reasonable decisions regarding politics, but it can also instill a sense of “civic duty,” political efficacy, and confidence (Bennett and Kleckca 1970). Socioeconomic factors such as an individual’s occupation and income have also been found to be closely related to participation (V.O. Key, Jr. 1961, Milbrath 1965, Almond and Verba 1965, Barber 1969). People who are in high status positions with considerable earnings often participate more than those at the bottom of the economic ladder. An individual’s political knowledge has also been found to be a contributing factor to both political socialization and civic participation (Langton and Jennings 1968, Carpini and Keeter 1993, Conway, etal. 1981).
Carpini and Keeter (1993) argue that political knowledge is “essential to effective citizenship,” providing the cognitive tools necessary for making decisions regarding voting, as well as support for parties and “contemporary political alignments” (p. 1182). Attitudinal factors such as political efficacy, confidence, and interest in politics have also been found to be positively correlated to political and civic participation (Campbell, et al. 1960, Almond and Verba 1965, Mathews and Protho 1966, Easton and Dennis 1967, Bennett and Kleck 1970). Much of an individual’s propensity to participate civically is based on his or her sense of attachment to the local community; this is reflected by the fact that levels of civic participation have been found to be greater among homeowners than among those who rent (Verba, Schlozman, and Brady 1995; Wolfinger and Rosenstone 1980; Rosenstone and Hansen 1993; Putnam 2000). Lastly, some demographic factors, such as being black, female, and/or from the South, have been found to have a negative association with political participation (Matthews and Protho 1966; Langton and Jennings 1966; Verba and Nie 1972; Verba, Schlozman, and Brady 1995; Humphries 2001).

Political Socialization at an Early Age

While political socialization is an ongoing process, many of the factors influencing adult civic and political participation come from the childhood or teenage years. As Langton and Jennings (1968) state, “it is possible that by the time students

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2While these factors have been found to have an adverse effect of political participation, it is possible that the effect on less directly political forms of civic participation (such as community volunteering or activity in church groups) has a less pronounced, or even positive, effect. However, for the purposes of this research, a negative relationship with civic participation will be the expected result.
reach high school many of their political orientations have crystallized or have reached a temporary plateau” (p. 854). Much of this political socialization is instilled in individuals at an early age, through both formal and informal sources. A child’s socioeconomic status and background (determined in part by the socioeconomic status of one’s parents)\(^3\) (Jennings and Niemi 1968, Bennett and Klecka 1982, Lipset 1960, Litt 1963), as well as the influences of the parents’ own civic orientation and rates of political participation (Beck and Jennings 1982), has been found to be substantial contributors to political and civic orientation in childhood. Beck and Jennings (1982) have found that these factors can influence a youth’s rate of participation well into young adulthood. Much of the formal influence often comes from basic civics education in a child’s school. While civics and social studies education has traditionally tried to integrate the concept of “civic duty” with factual information (about the political system) at all age levels (K-12), historically, a pattern of instruction regarding avenues of civic participation has been informally structured according to the age of the student. According to the National Council for the Social Studies:

In the early grades, students are introduced to civic ideals and practices through activities such as helping to set classroom expectations, examining experiences in relation to ideals, and determining how to balance the needs of individuals and the group. During these years, children also experience views of citizenship in other times and places through stories and drama. By the middle grades, students expand their ability to analyze and

\(^3\)There are both direct and indirect effects of parent SES on children’s political and civic socialization, ranging from the direct influences of child-rearing practices (such as instillation of values, efficacy, and norms) (Easton and Dennis 1967, Lipset 1960) to the indirect influences through youth SES and social class environment (Bennett and Klecka 1982, Connell 1972).
evaluate the relationships between ideals and practice. They are able to see themselves taking civic roles in their communities. High school students increasingly recognize the rights and responsibilities of citizens in identifying societal needs, setting directions for public policies, and working to support both individual dignity and the common good. They learn by experience how to participate in community service and political activities and how to use democratic process to influence public policy. (National Council for the Social Studies 1996)

In the early years, concepts such as “fairness” and the balance between the needs of individuals and the group are emphasized. In later years, students learn the norms of democracy, the importance of participation in community affairs and politics, how to participate in the democratic system, and how to affect public policy through participation. What is more important is that, by the time an individual reaches high school, the emphasis of much of his or her formal civics education has gone from community service to political participation. It is at this level where individuals likely gain the necessary informational tools for civic participation in later life.

However, Litt (1963) argues that it is possible that “attitudes toward political activity are so strongly channeled through other agencies in [a child’s] community that the civic education program’s efforts have little independent effect” (p. 73). Beck and Jennings (1982) have found that involvement in school activities such as sports and clubs can be a profound influence on a child’s civic orientation, which can in turn lead to political participation later in life. As Brady, Verba, and Schlozman (1995) note, although SES can play a vital role in the development of a person’s civic orientation, the development of certain “civic skills” can be equally important. They note that “the acquisition of civic skills begins early in life” (1995, p.273). Early involvement in
certain community institutions, such as church and other nonpolitical organizations, can positively influence this development. Therefore, it is reasonable to suggest that there are other social and environmental factors which influence the political socialization of young people, apart from those of the school.

In fact, much of an individual’s early political socialization may come from these less formal, structured influences, within his or her community. Giving individuals ample opportunities to interact socially may reflect positively on their civic development. Providing numerous outlets for children to interact with others in their communities can give them the necessary social skills and motivation to become actively involved citizens. On the other hand, as some have argued, sheltering children in a homogenous environment, where they are not often exposed to people of varying backgrounds and other walks of life, may in fact make them ill-prepared to live in a diverse society when they grow up (Ledyard 2002; Duany, Plater-Zyberk, and Speck 2000). Therefore, how a child’s community environment is structured could affect his or her early political socialization. Where a person grows up may, in fact, influence how he perceives the world and others around him. This, in turn, could have a profound effect on whether or not the individual decides to involve himself in his community. Community attachment and familiarity with community institutions may depend on the locational and geographic factors of a community, and how that community is defined, which is discussed in the next chapter.
CHAPTER 3

CHARACTERISTICS OF LOCATION

What are “Traditional” Communities?

In this paper, I argue that those individuals living in traditional communities have a greater propensity to participate civically than those in suburban or urban sprawl environments. By traditional “community,” we can refer to both the emotional/cultural and physical proximity and interaction of the inhabitants of a particular area. In this sense, any inhabited area that can be identified by the linkages among its residents (both socially and geographically), can be referred to as a “community.” But, perhaps it would be better to specify this term by contrasting the behavior that occurs in the typical “traditional community” with that of a “suburbanized” area.

The term “traditional community” raises all sorts of idealistic images, ranging from those of happy bands of pre-modern nomads to the “Main Street U.S.A./Ozzie and Harriet” image of the 1950s. While the concept of community has some intangible aspects, one can simply define it as a settled area in the traditional social and spatial form: with relatively well defined geographic and social boundaries (Verba and Nie 1972); geographically proximate and interspersed residential, cultural/social, and economic components; and what is most important, frequent interaction among its residents (Dagger 1981, Verba and Nie 1972). Whether one is focusing on large
metropolises, rural hamlets, or mid-sized towns, these traits give physical settlements their “community” characteristics\textsuperscript{4}.

A “traditional community” is one in which the inhabitants are often able to walk to their place of employment, simply because they live and work in the same area. Specifically, by living in a traditional community, the residents are not required to drive to and from their place of work\textsuperscript{5}(Leyden 2002, Humphries 2001). The benefits of living and working in the same place are many: saved time by not commuting (which can often take up to an hour or more for residents of “bedroom communities”) (Humphries 2001, Putnam 2000\textsuperscript{6}), more opportunities to interact with others on the way to work (which is easier to do while walking on the sidewalk, or even riding a bus across town, than driving alone in a car), the ability to maintain friendships and associations that overlap both home and workplace (which would presumably allow them to be deeper and more meaningful), and the increased sense of attachment to a single geographic and cultural area. Because most people spend eight or more hours a day at work, they could easily expend more time and energy in their place of employment than in their homes (if these two places are very distinct and separate, it begs the question: “which one do people care more about?”)(Putnam 2000).

\textsuperscript{4}It should be noted, however, that several researchers (Dagger 1981, Verba and Nie 1972, Oliver 1999) have argued that smaller communities are more conducive to participation, simply because most residents know one another. In contrast, living in large metropolises makes it is easier for residents to remain anonymous and withdrawn.

\textsuperscript{5}It should be noted that sometimes one has to ride a bus, because the community is just too geographically large! And, in densely urban areas, the use of public transportation is often much more practical than driving.

\textsuperscript{6}As Putnam suggests, “commuting time cuts involvement in community affairs by 10 percent…fewer public meetings, fewer committees chaired, fewer petitions signed, fewer church services attended, less volunteering, and so on” (p. 213).
A traditional community can also be seen as one in which there are established forums for social and civic interaction, which are often located where the participants live. These places include public squares and parks, community recreation centers, “meeting halls” of various sorts, churches\(^7\), and locally owned and located stores and businesses (an often overlooked community gathering place)(Putnam 2000). What gives these institutions special prominence in traditional communities is their locational integration into the residential areas\(^8\) (Humphries 2001). The “mix” of public and private (or residential) spaces is what differentiates a traditional community from a suburban one.

**What are “Suburbs,” and “Urban Sprawl?”**

The terms “suburb” and “urban sprawl” also conjure up a multitude of images that must be narrowed down for the purpose of this research. While the exact empirical definitions used for this research will be defined later, many traits inherent to the concepts of both “suburbs” and “urban sprawl” can be considered to be the polar opposite of those of the well-integrated “traditional community.” One can often use the terms interchangeably, but there are a few distinctions that can be noted. “Suburbs” generally mean those localities that are purely residential by design. Part of the original concept of the suburb was to intentionally separate homes from many of the undesirable elements

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\(^7\) Putnam (2000) uses the word “church” to define all religious organizations or denominations… congregations at mosques, temples, synagogues, cathedrals, etc. fall into this broad category

\(^8\) Perhaps the best way to imagine this traditional geographic mix of homes, businesses, and public spaces is to think about what communities looked like before zoning laws (Leyden, 2002). In a previous era (before the modern concept of “segregating” residential and commercial areas), people may have thought it was perfectly natural to have a store adjacent to a house, the house adjacent to a church, and so forth.
and distractions associated with living next to stores and businesses (Miller 1995, Mieszkowski and Mills 1993). Although not an exclusively 20th Century concept (it has arguably occurred throughout history)(Miller 1995), the characteristics of the modern suburb rose out of the economic boom of the 1950s. As Mieszkowski and Mills (1993) have stated, much of the post-WWII rise of suburbs was a byproduct of the flight of more affluent residents from the “fiscal and social problems of central cities,” which in turn led to “a further deterioration of the quality of life and the fiscal situation of central areas, which induces further out-migration” (p. 137). This snowballing effect is likely the cause for much of the rapid increase in suburbanization (and the decline of traditional city/town centered businesses) over the past 50 years. As Putnam (2000) notes, the number of Americans living in suburbs has more than doubled in this period, going from 23 percent in 1950 to 49 percent in 1996 (pp. 206-7).

As many researchers have noted, suburbanization has arguably led to the “privatization” of American life (M. P. Baumgartner 1988; Oliver 2001; Duany, Plater-Zyberk, and Speck 2000). With the advent of the interstate highway system and cheap mortgages for home buyers in the late 1940s and early 1950s, many Americans were able to buy their own homes in the suburbs (Dagger 1981, Miller 1995). Home ownership and mobility led to a new feeling of economic independence for many Americans. However, while the 1950s and early 1960s can be seen as a boom era for civic activity (M. P. Baumgartner 1988), a growing trend of community detachment eventually followed this new feeling of independence (Putnam 1995). As Putnam states (2000), “far from seeking small-town connectedness, suburbanites kept to themselves, asking little of their
neighbors, and expecting little in return” (p. 210). The “privatization” phenomenon of the suburbanization of the last 30 years can be seen through the proliferation of “gated communities” (where homes are literally sealed off from the outside world) (Putnam 2000), “planned communities” and developments (where residences account for nearly all of the structures) (Miller 1995), “bedroom communities” (developments built for and catering to people who commute long distances to work…often to urban areas) (Leyden 2002, Putnam 2000), and the like. While traditional communities often put great emphasis on public spaces and facilities, new suburban developments have tended to stress privacy and seclusion.

With the rise of the American suburb has come “urban sprawl.” The most common and defining element of a modern suburb is the need to use a car to get to and from it. In fact, most post-WWII suburbs were designed around the automobile (Miller 1995), and they were often planned without other forms of transportation (including pedestrian) in mind (Mieszkowski and Mills 1993, Putnam 2000, Leyden 2002). Once built, many suburbs are often largely inaccessible to any mode of transportation other than the automobile. “Urban sprawl” is often seen as a byproduct of automobile-dependent suburbia (Humphries 2001, Mieszkowski and Mills 1993, Leyden 2002). This is the common term for the relatively poorly planned (and esthetically displeasing) commercial counterpart to suburban residences. Strip malls, fast-food outlets, and supermarkets are its primary components. They are designed to be driven to, with large parking lots and little to no sidewalks or benches (Leyden, 2002). Most of the businesses associated with urban sprawl are typically designed with speed and efficiency in mind.
(“easy in, easy out”), where shoppers seldom are forced to interact much with the proprietors or with one another (Blumberg 1989). Many are corporately owned, large-scale businesses, which can be contrasted with the traditional “corner grocery store” or “Mom and Pop” businesses that exist in more traditional communities (Humphries 2001).

Despite the “privatization” effect of suburbia and urban sprawl on American mass consciousness, there are some aspects of suburban life which may be indirectly conducive to civic participation. Perhaps the corralling effect of suburbanization, in which people of similar ethnicities, incomes, and backgrounds settle in the same neighborhoods, would lead to an increase in civic involvement. In fact, when compared to those in big cities, suburb-dwellers have actually been found to be more, not less, active in their communities (Putnam 2000). Much of this may be due to the fact that many suburbanites tend to be middle and upper-middle class white people (Tittle and Stafford 1992, Baumgartner 1988, Oliver 1999). One might argue that since middle-class, fairly well educated, white people tend to make up the majority of suburban residents, these locations would have the potential to be hotbeds of civic activity. And people of similar backgrounds and interests would naturally mesh well with one another. But, is the relationship spurious? As Putnam (2000) argues, although certain types of people tend to settle in certain types of communities, there are attributes of location that can affect civic engagement, even when other determinants of civic orientation are controlled. He finds that once various individual characteristics (such as race, age, education, income, and region of the country) are controlled, residents of major metropolitan areas (in both central cities and their suburbs) tend to participate far less
than those who live in small towns and rural areas. He also discounts the notion that small towns simply attract more friendly, sociable people. He finds that once location of residence is controlled, there is no correlation between civic engagement and whether or not one would “prefer living in a big city, a suburb, or a small town” (Putnam 200, p. 206).

Putnam (2000) concludes that sometimes individuals “are less engaged because of where they are, not who they are” (p. 206). There are certain aspects of different communities which can be either conducive or detrimental to the levels of civic engagement of their residents. But exactly how can the physical environment in which an individual lives play a part in his civic and social orientation? It may be due to the effect of an individual’s environment on his or her ability to develop interpersonal ties, social bonds, and social networks, which is discussed in the following chapter.
CHAPTER 4

THE SOCIAL CAPITAL ARGUMENT

What is “Social Capital?”

Much of the main theoretical argument for this research can be supported by examining “social capital” theory. As Putnam has suggested, the process of suburbanization and the development of urban sprawl might be disrupting the natural process of an individual accumulating, transferring, and using “social capital” in order to participate in his community effectively (Putnam 2000). The most prevalent theory of social capital essentially states that, by our interactions with social groups and other individuals, we accumulate civic and social skills and benefits, otherwise referred to as “social capital.” The accumulation of these skills and benefits, in turn, allows us to interact with others in more productive and valuable ways. Individuals are believed to create and accumulate social capital from repeated interaction with others in their communities. Social capital, once accumulated, can allow individuals to participate more productively in a civic environment (Putnam 2000).

The social capital relationship with civic participation is believed to be essentially one of two-way causality: social capital is created by participation, however social capital is also thought to cause participation. Supporters of the theory argue that as individuals participate in their communities, they accumulate social capital by developing civic skills, valuable social networks, social ties and emotional bonds to others, confidence in
community institutions, and interpersonal trust (Brehm and Rahn 1997; Putnam 2000, 1995). Once accumulated, social capital allows individuals to participate more productively in their communities, by acting as both a motivator of civic activity, and as a system of “generalized reciprocity” (whereby individuals perform various acts of civility and kindness under the assumption that they will be returned by others at a later time) (Putnam 2000). Essentially, what allows this motivation and reciprocation to occur is a highly-developed system of interpersonal “trust.” Trust, gained from the accumulation of social capital, allows individuals to take the virtual “leap of faith” that is required for the system of generalized reciprocity to work. In other words, an individual will not choose to perform a favor (or act of kindness) for another, unless he has a reasonable amount of trust in his society and its members.

The term “social capital” identifies the inherent value in social networks, as well as one of the most positive byproducts of social interaction. Some might argue that by “commodifying” societal links in this manner, social capital research essentially dehumanizes the study of human interaction. It is, in fact, a very economic approach to a subject that has often been studied rather normatively: that of the “benefits of civic involvement.” While the study of social capital has obvious normative components and implications, it also attempts to treat the effects of social interaction as if they were a transferable good or resource, not unlike Verba, Schlozman, and Brady’s (1995) conception of a “civic skills” resource.

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9 Putnam notes that the author Tom Wolfe, in *The Bonfire of the Vanities*, aptly referred to this sort interaction as a “favor bank.”
While the two concepts are strongly interrelated, it is also important to differentiate between “social capital” and “political participation,” as well as between the sort of actions which define and influence levels of each. As Putnam (1995) argues, not all politically oriented acts lead to the development of social capital, and not all acts associated with social capital are politically oriented. He argues the following:

Political participation refers to our relations with political institutions. Social capital refers to our relations with one another. Sending a check to a PAC is an act of political participation, but it does not embody or create social capital. Bowling in a league or having coffee with a friend embodies and creates social capital, though these are not acts of political participation. (Putnam 1995, p. 665)

Therefore, when examining a “social capital effect,” it is important to focus on activities which involve group activity and interpersonal interaction, rather than on strictly “political” acts. While social capital might lead a person to vote, make campaign contributions, or write a letter to his or her congressman, these sorts of solitary activities would not lead to the development of an individual’s social capital.

How Can Suburbs Affect Social Capital?

Leyden (2002) has applied a social capital argument to the question of whether there may be significant effects of suburbanization on political participation. He argues that “individuals living in complete, mixed-use, pedestrian-oriented neighborhoods have more social capital and are more likely to participate politically than individuals living in modern auto-dependent suburban subdivisions” (Leyden 2002, p. 2). From his analysis of the residents of various neighborhoods in Galway City, Ireland, Leyden found that those respondents living in “traditional” neighborhoods feel more connected to their
communities, are more likely to trust others, are more likely to know their neighbors, and (most importantly) are more likely to contact elected officials to express their community concerns. He has also found that living in mixed-use, pedestrian-oriented neighborhoods is positively correlated to membership in community organizations (Leyden 2002). These results indicate that there may be a social capital effect on civic participation, and that environmental factors may play an important role in this interaction.

Some of the criticism of social capital theory has focused on the fact that it stipulates a resource that grows and shrinks in size, depending on the frequency of its use, and for the most part, social capital and the processes associated with it are incredibly difficult to define and measure tangibly, as well as empirically (Levi 1996, Putnam 1995, Norris 1996). Leyden relies on separate indexed variables (a “political participation index,” a “trust index,” and a “social index”) as proxies for social capital (Leyden 2002). When used in conjunction with other indexes, this can make regression coefficients difficult to interpret (Bohrnstedt and Knoke 1994). Researchers have also had difficulties showing empirically which way the social capital causation arrow points (Putnam 1995, Brehm and Rahn 1997): in other words, is trust causing participation, is participation causing trust, or is it both? Yet, regardless of how one defines and measures “social capital,” the processes associated with it are very relevant to questions regarding how physical environments can affect people’s political socialization. Although direct measurements of an individual’s social capital will not be used for the purposes of this research, the theory behind its formation can shed light on how the
effects of geographical neighborhood characteristics can directly influence civic participation.
CHAPTER 5

DOES GROWING UP IN A SUBURBAN ENVIRONMENT AFFECT LATER CIVIC PARTICIPATION?

Hypotheses

As previously discussed, there are certain attributes of living in a suburban environment which can negatively affect individual levels of civic participation. But, does growing up in suburbia have the same effect? While the research of Leyden (2002) indicates that living in a suburban environment may adversely affect the civic participation of individuals, the effects of suburbia on the political socialization of youths have been largely ignored. From what is already known about how youths are socialized to participate later in life, it is evident that there are strong possibilities for a long term effect. Like the influences of formal schooling, as well as the civic attitudes learned from one’s parents, the geographic and locational characteristics of one’s community environment can have lasting effects on individual political socialization. Environmental factors have the potential to shape how an individual views the world well into the future.

While people have the potential to adapt to changing conditions, it is likely that many of the lessons learned in childhood are not easily forgotten (Brady, Verba, and Schlozman 1995). The lessons learned from a childhood environment include how an individual is socialized to interact with others. Living in an environment which is conducive to the formation of interpersonal trust, positive valuation of social networks,
and positive attitudes toward public life (such as that of a more traditional community) can give a person the potential to participate civically later in life. Conversely, living in an environment which is not conducive to these things (such as that of a suburban or urban sprawl environment), has the potential to retard the growth of civic skills, “social capital,” and attitudes toward one’s later community.

Therefore, I propose the following main hypothesis:

**Hypothesis 1**: The type of location in which an individual grew up can influence the level of his or her civic participation as an adult.

Of course, as previously discussed, certain neighborhood types have the potential to affect participation in various ways. Growing up in a traditional small town environment should have a positive effect on later civic involvement, while exposure to a suburban environment should have a negative effect. And, as discussed in Chapter 3, some researchers have suggested that there have been different effects from suburbanization at different times during the 20th century. Baumgartner (1988) and Putnam (2000) note that the economic boom after WWII created a different type of suburbia than that of previous generations. This new form of suburbia was more expansive, faster growing, and auto-dependent than ever before. Therefore, one would expect there to be a stronger negative effect of suburbia on those born after WWII than in those born before the boom. Therefore, I propose these more specific hypotheses:

**Hypothesis 1A**: Growing up in a small, traditional town after 1945 will positively affect an individual’s later level of civic participation.

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10 Since the emphasis of this research is on the effects of modern suburbia, rather than that of a previous era, the primary analysis will focus on those born after 1945.
Hypothesis 1B: Growing up in a suburb after 1945 will negatively affect an individual’s later level of civic participation.

The Data and Model

To test for the possible influences that a child’s neighborhood characteristics have on his or her later civic participation, we can first examine a large cross-section of Americans from various backgrounds, regions, and age groups. However, this might require the collection of data from up to 60 to 90 years before the time that participation is measured, depending on the ages of the subjects. Fortunately, the 2000 National Election Study included several questions that asked respondents to identify the type of place in which they grew up. Respondents were given a list of eight different types of communities, from which they chose the category that best described where they grew up. The categories were:

A) on a farm
B) in the country, not on a farm
C) in a small city or town (under 50,000 people)
D) in a medium-sized city (50,000 - 100,000)
E) in a large city (100,000 - 500,000)
F) in a suburb of a large city
G) in a very large city (over 500,000 people)
H) in a suburb of a very large city

Figure 5.1 shows the proportions of respondents falling into each category. As one can see, the largest number of those surveyed grew up in a small city or town. The next largest groups grew up in “a suburb of a small city or town,” “in the country, not a farm,” and “on a farm.” Although these are broad, slightly vague categories, open to interpretation by the respondents, it appears as though the 2000 NES sample is
Figure 5.1: Location where 2000 NES Respondents Grew Up

representative of the demographic trends described earlier. Therefore, the sample should be reliable for the purposes of this research.

We can also examine whether there is a more pronounced effect of suburbia on those individuals born after 1945. Although a large proportion of respondents as a whole tend to have grown up in suburbia, when the respondents are broken up into age groups, the proportions dramatically change. Figure 5.2 shows that the largest group of those born before 1945 grew up either on a farm or in a small city or town, with very few growing up in a suburb. In comparison, among respondents born after 1945, the percentages of respondents who grew up in either a suburb of a large city or a small city or town are roughly equal. The differences highlighted here reflect the fact that
suburbanization was far more prolific in the years after WWII (and once again indicates the representativeness of the NES sample).

In this chapter, OLS regression is used to determine the potential effect of childhood neighborhood characteristics on later civic participation. As stated in hypotheses 1A and 1B, growing up in a small town, “traditional,” environment is expected to positively affect later participation, while growing up in a suburban environment is expected to have a negative effect. While there are eight different categories of location from the NES question, they are not definitively ranked in such a way that would allow for the creation of a reliable “urbanicity” scale. Therefore, in order to measure each environment, several dichotomous measures were used. A measure of

Figure 5.2: Location where 2000 NES Respondents Grew Up (By Age)
whether a respondent grew up in either a “small city or town” is coded as 1 (yes) or 0 (no), and is based on the responses falling into the “in a small city or town (under 50,000 people)” category. A measure of whether a respondent grew up in a “suburban environment” is coded as 1 if the response fell into either the “in a suburb of a large city” or “in a suburb of a very large city” categories.

The dependent variable, civic participation, is measured as an aggregation of several parts: these include a summary of reported rates of membership in organizations, as well as separate measures of an individual’s performance of specific group acts which are reflective of an individual’s degree of civic involvement. These are reflective of the kind of civic participation which is the focus of this research, mainly acts which are associated with group activity and interpersonal interaction. The components of each were obtained through a series of questions, in which respondents answered “yes” (coded as 1) or “no” (coded as 0). While each component response addresses a different kind of activity or personal trait (which could reflect general attitudes toward others, attitudes regarding the value of volunteering, as well as opportunities which are available to each respondent), there is a single underlying factor that all of these activities have in common: they are all forms of “civic participation.” Therefore, confirmatory factor analysis is an appropriate method to use in order to isolate this common factor among all of the component questions (Kim and Mueller 1978).

Maximum likelihood factor analysis was used to determine the commonality of the component parts. The component questions are listed in Table 5.1., as well as the

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11For a description of the processes associated with confirmatory factor analysis, see Kim and Mueller (1978)
Table 5.1: Components and Factor Loadings for Civic Participation Index

<table>
<thead>
<tr>
<th>Component Part</th>
<th>Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) “were you able to devote any time to volunteer work in the last 12 months or did you not do so?”</td>
<td>.509</td>
</tr>
<tr>
<td>2) ”during the past 12 months have you worked with other people to deal with some issue facing your community?”</td>
<td>.723</td>
</tr>
<tr>
<td>3) “during the past 12 months did you attend a meeting about an issue facing your community or schools?”</td>
<td>.727</td>
</tr>
<tr>
<td>4) “aside from a strike against your employer, in the past twelve months, have you taken part in a protest, march, or demonstration on some national or local issue?”</td>
<td>.207</td>
</tr>
<tr>
<td>5) “during the past 12 months, have you worked with others from your neighborhood to deal with a common issue or problem?”</td>
<td>.522</td>
</tr>
<tr>
<td>6) “here is a list of some organizations people can belong to--not counting membership in a local church or synagogue, are you a member in any of these kinds of organizations?”</td>
<td>.430</td>
</tr>
</tbody>
</table>

---factor loadings come from the first factor of an unrotated solution: Eigenvalue=2.421

--subsequent factors all had trivial eigenvalues (<1)

--Goodness of Fit: $X^2=24.735$, df=9

---List provided in appendix
factor loadings assigned to each. The factor analysis revealed a single, non-trivial common factor. As suggested, this probably reflects a common “civic participation” factor among each of the activities listed. Therefore, the identification of this common factor is assumed to be that of civic participation.

The factor loadings were then used to weight the values of each component part. The dependent variable for the regression model is measured as a “Civic Participation Index,” which is a summary of weighted “yes” answers to each component question. There were 54 possible values for the dependent variable, ranging from 0 to 3.12 on the summary index, with a mean value of .918. A graph of the distribution of index scores for all respondents is included in the appendix.

Controls included race (white/non white), region (south/non south), “Highest Level of Education Attained” (coded on a 7-point scale), income (coded on a 22-point scale), gender, age (ranging from 18 to 55), a measure of “Confidence and Efficacy” (coded on a 5-point scale of “strongly agree” to “strongly disagree” responses to a single question)\footnote{Confidence and Efficacy was determined by reactions to the statement: “I consider myself well-qualified to participate in politics,” and was coded from 5 to 1. Higher numbers equal positive values.}, and home ownership (yes/no). It is expected that the coefficient for the “small city or town” variable will be positive, while the coefficient for the “suburban environment” variable will be negative.

Results and Analysis

The results of the analysis are listed in Table 5.2. While the adjusted $R^2$ was minimal, the coefficients for both the “Small City or Town” and “Suburban
### Table 5.2: Effects of Childhood Geographic Location on Later Civic Participation
(For Those Respondents Born after 1945)

<table>
<thead>
<tr>
<th>Measure</th>
<th>b-score</th>
<th>Beta</th>
<th>Std. Error</th>
<th>Signif.</th>
<th>V.I.F.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>(-.469)</td>
<td>(.184)</td>
<td>(.011)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grew Up In:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small Town</td>
<td>.060</td>
<td>.082</td>
<td>.023</td>
<td>.466</td>
<td>1.073</td>
</tr>
<tr>
<td>Suburban Environ.</td>
<td>-.104</td>
<td>-.046</td>
<td>.073</td>
<td>.154</td>
<td>1.110</td>
</tr>
<tr>
<td>Race (White=1, Non White=0)</td>
<td>-.025</td>
<td>-.011</td>
<td>.072</td>
<td>.732</td>
<td>1.075</td>
</tr>
<tr>
<td>Region (South=1, Non South=0)</td>
<td>-.170**</td>
<td>-.086</td>
<td>.061</td>
<td>.005</td>
<td>1.022</td>
</tr>
<tr>
<td>Education (1 to 7)</td>
<td>.154**</td>
<td>.244</td>
<td>.022</td>
<td>.000</td>
<td>1.314</td>
</tr>
<tr>
<td>Income (1 to 22)</td>
<td>.006</td>
<td>.022</td>
<td>.011</td>
<td>.552</td>
<td>1.423</td>
</tr>
<tr>
<td>Gender (Male=1, Female=2)</td>
<td>.041</td>
<td>.021</td>
<td>.063</td>
<td>.514</td>
<td>1.151</td>
</tr>
<tr>
<td>Age</td>
<td>.009**</td>
<td>.091</td>
<td>.003</td>
<td>.006</td>
<td>1.174</td>
</tr>
<tr>
<td>Confidence and Efficacy (5 to 1)</td>
<td>.108**</td>
<td>.160</td>
<td>.022</td>
<td>.000</td>
<td>1.164</td>
</tr>
<tr>
<td>Home ownership (Y=1, N=0)</td>
<td>.182**</td>
<td>.093</td>
<td>.064</td>
<td>.005</td>
<td>1.155</td>
</tr>
</tbody>
</table>

*Significant at .05 or less
**Significant at .01 or less

Adj.R²=.154
Std. Error of the Est.=.877
N=914

Environment” measures were in the predicted direction, which may lend some support to both hypotheses 1A and 1B. Growing up in a small city or town appears to be positively correlated with later civic participation, yet it is not statistically significant. The coefficient for growing up in a suburban environment has a small negative correlation of -.138, and is also not statistically significant. The coefficients for the control variables were in the correct direction, with the exception of race. All but race and income were
statistically significant. The low adjusted $R^2$ indicates that only 15% of the variance in civic participation is accounted for by this model.

Further statistical analysis showed that the measures for “Small Town” and “Suburban Environment” were significantly intercorrelated at the .01 level. This multicollinearity may have been affecting the statistical significance of these measures in the overall regression. When the regression was run again, using only the suburban measure, the level of statistical significance for this measure improved. Figure 5.3 shows that while the measure for “Suburban Environment” failed to reach statistical significance at the .05 level, it was very close. The near significance of this measure is suggestive of a possible effect (even though it may not have been shown in this analysis). Therefore, further examination of the potential for locational effects is warranted.

While this analysis suggests that childhood location may have the potential to affect later civic participation, the measurements used to define traditional and suburban environments are very broad. The measures used in this chapter were based on the opinions of the respondents; whether or not someone grew up in a “small” or “large city” is subject to interpretation. They also do not address whether someone grew up in a heavily suburban environment, a slightly suburban one, or what the criteria for categorization should be. Therefore, interpreting the exact meaning of the coefficients should be done with caution.

Also, further analysis revealed that several of the control variables (such as race and education) were significantly correlated with the measures of geographic location. As discussed previously, racial attitudes and socioeconomic factors weigh heavily on
Table 5.3: Effects of Childhood Suburban Location on Later Civic Participation  
(For Those Respondents Born after 1945)

<table>
<thead>
<tr>
<th>Measure</th>
<th>b-score</th>
<th>Beta</th>
<th>Std. Error</th>
<th>Signif.</th>
<th>V.I.F.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>-.451</td>
<td>.182</td>
<td>.013</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grew Up In:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suburban Environ.</td>
<td>-.117</td>
<td>-.052</td>
<td>.070</td>
<td>.098</td>
<td>1.044</td>
</tr>
<tr>
<td>Race (White=1, Non White=0)</td>
<td>-.022</td>
<td>-.009</td>
<td>.072</td>
<td>.764</td>
<td>1.072</td>
</tr>
<tr>
<td>Region (South=1, Non South=0)</td>
<td>-.169**</td>
<td>-.085</td>
<td>.061</td>
<td>.006</td>
<td>1.021</td>
</tr>
<tr>
<td>Education (1 to 7)</td>
<td>.153**</td>
<td>.244</td>
<td>.022</td>
<td>.000</td>
<td>1.314</td>
</tr>
<tr>
<td>Income (1 to 22)</td>
<td>.006</td>
<td>.021</td>
<td>.011</td>
<td>.556</td>
<td>1.423</td>
</tr>
<tr>
<td>Gender (Male=1, Female=2)</td>
<td>.040</td>
<td>.021</td>
<td>.063</td>
<td>.523</td>
<td>1.150</td>
</tr>
<tr>
<td>Age</td>
<td>.009**</td>
<td>.090</td>
<td>.003</td>
<td>.006</td>
<td>1.174</td>
</tr>
<tr>
<td>Confidence and Efficacy (5 to 1)</td>
<td>.107**</td>
<td>.158</td>
<td>.022</td>
<td>.000</td>
<td>1.158</td>
</tr>
<tr>
<td>Home Ownership (Y=1, N=0)</td>
<td>.183**</td>
<td>.093</td>
<td>.064</td>
<td>.004</td>
<td>1.154</td>
</tr>
</tbody>
</table>

*Significant at .05 or less  
**Significant at .01 or less

Adj.R²=.154  
Std. Error of the Est.=.877  
N=914

where a child’s parents decide to live. Furthermore, certain indicators of childhood location might simply be proxy measures of the socioeconomic status of one’s parents (which is highly influential on the later SES of the child). Therefore, it is possible that the measures used here do not accurately reflect the geographic and locational traits of child’s neighborhood which may influence civic participation. Instead, they might be merely echoing existing demographic characteristics.
Lastly, the results of these preliminary analyses, while lending mild support to the main hypothesis, do not address the question of “why?” What is it about small towns and suburbia (apart from the race and socioeconomic status of their residents) which could lead to later civic participation? In the next chapter, I address some of the specific aspects of location which can have a direct effect on political socialization: mainly those of “urban sprawl.” By measuring and testing more specific characteristics of an individual’s childhood environment, one can begin to shed light on the answer.
CHAPTER 6

WHAT ASPECTS OF URBAN SPRAWL AFFECT CIVIC PARTICIPATION?

Theory and Hypotheses

While there may be many factors associated with suburban life that affect rates of civic participation, some scholars have suggested that urban sprawl may be one of them (Putnam 1994, 2000; Humphries 2001; Beaumont 1994; Blumberg 1989). Blumberg argues that when large corporate-chain businesses move into an area, they envelop and eventually take over the markets of the pre-existing small businesses, diminishing the cohesiveness of neighborhood communities. He states that “people who once called the familiar neighborhoods their home ground now drift and wander around the malls…such changes inevitably diminish whatever cohesiveness and community spirit remain in the American city” (Blumberg 1989, p. 166).

This basic argument stipulates that locally owned and operated businesses invest more than just economic capital in their surrounding communities. Small, often family-owned, businesses contribute to the social fabric of their communities. The owners of these kinds of stores tend to emphasize lasting, meaningful relationships with their customers. Customers and proprietors tend to know each other by their first names, and they often associate with one another outside of the marketplace (at a local church or community center, at sporting events, etc.). Locally owned businesses are often located in the same place for decades, because it is often too expensive for them to relocate to
more lucrative locations. In contrast, franchise establishments often close or relocate after only a few years, in an attempt to follow the constant changes in patterns of automotive traffic and residential development (which the creation of new shopping centers often causes, as well) (CNN 2000). They tend to have higher rates of employee turnover, which would limit the chances for customers and proprietors to establish friendships and interpersonal trust (Blumberg 1989). From a social capital perspective, these kinds of traits would hinder the potential for the sort of interpersonal trust that is necessary to cause civic participation. If trust and community networks are necessary for civic participation, then factors that limit their formation may also limit that participation.\footnote{A larger question is whether there is a connection between the post-WWII surge in urban sprawl and the decline in civic participation that has been occurring since the 1960s. In fact, Putnam has suggested that “the changes in scale that have swept over the American economy in these years—illustrated by the replacement of the corner grocery store by the supermarket…or the replacement of community-based enterprises by outposts of distant multinational firms—may perhaps have undermined the material and even physical basis for civic engagement” (Putnam 1994, p. 25).}

Humphries (2001) has suggested that living in an urban sprawl environment can negatively affect civic participation at the individual level. In his 2001 article, “Who’s Afraid of the Big Bad Firm: The Impact of Economic Scale on Political Participation,” Humphries measures the effect of the size, number, density, and independent ownership of the retail businesses in an area on the rates of civic participation of individuals living there, using a combination of Economic Census data (measured at the zip code level) and raw National Election Studies data (with identifiers for individuals’ location of residence)(Humphries 2001). While the results of his analysis are mixed, they indicate...
the potential for an effect of a neighborhood’s business characteristics on the political participation of its residents.

Another suburbanization aspect that Humphries (2001) examines is that of commuting by car. He finds that the aggregate level of commuting in a community has a “strong effect on political participation” (Humphries 2001, p. 678), which indicates that the physical location of residences within a community (and their separation from places of work or business) might be a substantial factor influencing the participation of a community’s residents. Traditional communities often have geographically proximate and interspersed residences and public spaces (often including businesses and workplaces), which have the potential to positively affect the civic development of people growing up in them. Suburban and sprawl environments are residentially, economically, and publicly “segregated,” often requiring the use of cars to travel back and forth from home to work. In fact, the effects of commuting on children’s civic orientation can be direct (from the firsthand experience of shuttling back and forth from home to school, soccer-practice, or the mall) or indirect (through less time spent with parents who must commute long distances each day). As Humphries (2001) suggests, the aggregate level of commuting in an area reflects both a “ripple effect of political disengagement by other community residents caused by the decreased political activity on the part of commuters” and the reality that most “‘bedroom’ communities in which few residents work in the community foster less community attachment among all residents” (p. 682). Commuting not only affects those who commute, but it has a negative impact on communities at large. Furthermore, if this “ripple effect” is possible
among the adults in a community, there is no reason to suggest that its children would be immune from this political disengagement.

As stated previously, one of the most influential aspects of an area’s businesses is in who owns and operates them; specifically, are the businesses primarily small, “mom and pop” operations, or are they large, corporate-owned retail outlets with numerous employees? Small, family-owned operations (with few paid employees) would most likely be representative of traditional communities, which are conducive to the formation of positive civic attitudes on the young people living there. Therefore, I propose the following hypothesis related to the businesses where an individual grows up:

**Hypothesis 2**: A greater proportion of an area’s businesses that are small, “mom and pop” businesses leads to greater future civic participation of the individuals who grow up there.

Secondly, the physical proximity of residences and businesses in an area has the potential to affect how individuals are socialized toward participation in their communities. Part of a child’s civic development involves learning behavior and attitudes from the adults in his or her community, including civic disengagement caused by commuting by car. Whether it is directly causal through the loss of time spent commuting (time which could be spent by commuters on greater community participation), or merely a proxy for greater distance and residential segregation from the larger community, the aggregate level of commuting in an area may have a negative relationship with the future civic participation on individuals who grow up there. Therefore, I propose the following hypothesis:
Hypothesis 3: The lower the level of commuting by car for a given area, the greater the propensity for future civic participation for individuals who grow up there.

The Data and Model

While many characteristics that define traditional, suburban, and urban sprawl environments have the potential to affect levels of civic participation (either immediately on the adult residents living there, or over time through the political socialization of youths who grow up there), measuring all the idiosyncracies of the different physical environments and communities throughout America is neither completely possible nor suggestible. Therefore, for this analysis, only a select group of identifiers (relevant to this research) are used to determine the levels of urban sprawl in various physical communities. To test for the effects of neighborhood characteristics on the later civic participation of children who grow up there, it is necessary to measure independent and dependant variables that have occurred many years apart from one another. Therefore, a longitudinal study of a select group of children over time may be necessary. The National Education Longitudinal Study 1988-2000, which is used in this analysis, tracked a nationwide sample of 8th grade school-children from 1988 until 2000, when most of the original sample were in their mid to late twenties. In the base year, and in each of the four follow-ups, the respondents were surveyed on a variety of topics including rates of group membership, community volunteering, political activity, and other forms of civic participation. Interviews were also conducted with the respondents’ parents, as well as with representatives from each of the schools they attended throughout the twelve-year period of the study. Special permission was given by the National Center for Education
Statistics to obtain the raw data for this study, including the addresses of the schools involved\textsuperscript{15}. Zip codes for the respondents’ schools were used in conjunction with data from the 1987 Economic Census of Retail Trade, as well as the 1990 Census of Population and Housing, which provided the necessary data for measuring the traditional urban sprawl characteristics of the neighborhoods in which the respondents grew up.

While the NELS study is very appropriate for this analysis, there are some drawbacks that should be noted. Fortunately, the initial base year sampled children at an age in which they were still forming their initial civic orientations (Langton and Jennings 1968). However, the most applicable data about rates of civic participation comes from the third follow-up (1994), when the average age of the respondents was around 20 (an age at which individuals’ levels of civic and political interest and activity are often very low)\textsuperscript{16}. The sample is also comprised of a single age cohort, specifically individuals who fall into the “Generation X” category, who are also noted to be uncharacteristically non-participatory (Putnam 2000). Therefore, the effects of location on later participation may be understated in this analysis. The time period of the study is also relatively limited (roughly comprising the 1990s), and it is not necessarily reflective of all the post-WWII residential and commercial trends that have been mentioned previously. And although both private and public school students were interviewed in this study, only public school

\textsuperscript{15}Although the raw data of the respondents’ interviews were made available to this researcher, the identities and other identifying characteristics of the respondents are not displayed in this analysis. Only the zip codes of the schools involved were used in conjunction with the publically available student data; these and other specific individual records (of schools or students) are also not displayed in this analysis. I would like to thank the National Center for Education Statistics for providing the raw data necessary for this analysis.

\textsuperscript{16}The forth follow-up (2000) contained only three questions related to civic participation, all of which pertained to rates of volunteering alone. While applicable to this research, they are not completely representative of the sort of civic participation which is being examined.
zip codes were made available and could be used in this analysis. Therefore, close to 5% of the sample was excluded from this analysis, which may bias the results. Yet, despite these drawbacks, the NELS study is the most appropriate data source available for this analysis.

Maximum Likelihood factor analysis was used in order to assemble the dependent variable (using the same procedures that were used in Chapter 5). The dependent variable is measured as an index of several factor-loaded civic participation measures reported in the 1994 follow-up: including rates of participation in student government (in college), political groups, and social clubs, as well as rates of volunteering for community groups and “political clubs or organizations.” The component parts and their factor loadings are listed in Table 6.1. Once again, only a single, non-trivial factor was revealed (which is assumed to be that of “civic participation”). Responses were weighted, then added together to form a summary index in the same manner as in Chapter 5. Taking all possible combinations of responses into account, this process creates a 15-point index, with values ranging from 0 to 1.96. Because of the types of questions which were asked of them, this analysis examines those respondents who reported attending at least one college or university.\textsuperscript{17}

\textsuperscript{17}This subset of the respondent group was asked a wider variety of civic participation questions than the rest of the panel. The group as a whole was only asked about rates of volunteering, which (as mentioned previously) does not reflect all applicable traits of civic participation. Descriptive statistics of the index are provided in the appendix.
Table 6.1: Components and Factor Loadings for Civic Participation Index
(For Those Respondents Reporting Attendance at One or More Colleges or Universities)

<table>
<thead>
<tr>
<th>Component Part</th>
<th>Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Please tell me if you have participated in any of these activities while attending (name of college or university):”</td>
<td></td>
</tr>
<tr>
<td>1) “student government or political groups?”</td>
<td>.423</td>
</tr>
<tr>
<td>2) “social clubs, fraternities/sororities?”</td>
<td>.571</td>
</tr>
<tr>
<td>3) “volunteer services to community groups?”</td>
<td>.657</td>
</tr>
<tr>
<td>“Please tell which organizations (if any) you have worked with during the past 12 months:”</td>
<td></td>
</tr>
<tr>
<td>4) “youth organizations ie., Little League Coach, Scout Leader, etc?”</td>
<td>.308</td>
</tr>
</tbody>
</table>

--factor loadings come from the first factor of an unrotated solution:
   Eigenvalue=1.718
   --subsequent factors all had trivial eigenvalues (<1)
   --Goodness of Fit: $X^2=7.82$, df=2

The main independent variable for this analysis is measured as two separate aspects of the level of urban sprawl in each respondent’s childhood zip code area, obtained from the Economic Census and Census of Population and Housing data. The “percentage of ‘mom and pop’ businesses” (as a proportion of total businesses) is a measure of the types of businesses within a community; higher percentages indicate
higher levels of traditional community structure. The “percentage of residents getting to work without a car” is a proxy measure for mixed residential and business (or workplace) areas within a community; higher percentages indicate a greater mix (which indicates higher levels of traditional community structure). This measurement includes those who walk, bike, or take mass transit to work. Descriptive statistics for both measures are included in the appendix. While the effect should be small, Hypotheses 2 and 3 predict positive correlations between each measure with the civic participation index.

Controls include race (white/non white), region (south/non south) of childhood school, education (7 categories of “highest post-secondary education attained,” ranging from “none” to “bachelor’s degree”), income (in thousands of dollars), gender, as well as the level of education of the respondents’ parents (measured as the highest level attained by one or both parents: 1 to 6). Descriptive statistics for all variables of the model are included in the appendix. The model is tested using OLS regression.

---

18The term “mom and pop” is used in the Economic Census of Retail Trade to describe those businesses which do not have official, recorded payrolls. The lack of payrolls most often reflect the fact that they are owned and operated by the same people.
19Although walking and biking are better indicators of shorter distances than mass transit, transit has the potential to reflect urban density (which often makes transit necessary). Therefore, all three modes of transportation are included.
20Unfortunately, there were not enough questions in the parent interview portion of the NELS study to make adequate measures of the parents rates of civic participation or civic orientation. Therefore, controls for these potential influences could not be included in the model. Due to the fact that the respondents’ ages did not vary by many years, age was also not included as a control in this model. However, a supplemental regression was run with an additional measurement for age (in years). The coefficient for age was negative (which runs counter to common theory), and it was very statistically non-significant (it had a .951 significance level). The Adjusted R² dropped to .157, and the coefficients for the main independent variable measures were largely unaffected.
Results and Analysis

The results of the analysis are displayed in Table 6.2. While the relatively low adjusted R² indicates that the model only explains a small percentage of the change in the dependent variable, Table 6.2 provides some support for the possible effects of geographic neighborhood characteristics on later civic participation. The first measure of the main independent variable is positively correlated with the civic participation index, which lends support to Hypothesis 2. While most of the control variables did not prove to be statistically significant, the coefficient for “percentage of ‘mom and pop’ businesses” was statistically significant at the .05 level. The b-score indicates that for each percent increase in mom and pop ownership, civic participation is increased by a level of .008 on the civic participation index, which appears to be relatively small. However, accounting for the fact that there were 16 possible values on an index that varied from 0 to 1.96, this would mean that people from a community whose businesses were all “mom and pop” would have 40.8% higher rates of participation than those in areas where there were none. Although there were very few cases in which the percentage of “mom and pop” businesses exceeded 25-30% of total businesses, the

---

21Several statistical tests were performed to evaluate the reliability of the model. A scatterplot of the error terms (and predicted y-values) revealed no discernable pattern, indicating the there were no substantial factors which should have been controlled in the model. Of the 534 cases, only 6 had standardized residuals of greater than two, leaving 98.9% of the cases within a margin of 2 standard errors. Lastly, an R² test revealed that the commuting measure was not significantly influenced by any of the other variables, which shows that its lack of statistical significance was not due to intercorrelation.

22The solution would be as follows:

\[ \frac{.008}{1.96} = \frac{x}{100\%} \]

\[ x = .408\% \]

...therefore, as a percentage, a .008 change on the Civic Participation index is equal to a .408% change in civic participation. So, the difference between a community with no mom and pops and one with 100% mom and pops would be .408(100)=40.8%
Table 6.2: Effects of Childhood Geographic Location on Later Civic Participation
(For Those Respondents Reporting Attendance at One or More Colleges or Universities)

<table>
<thead>
<tr>
<th>Measure</th>
<th>b-score</th>
<th>Beta</th>
<th>Std. Error</th>
<th>Signif.</th>
<th>V.I.F</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>(-.266)</td>
<td>(.100)</td>
<td>(.008)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Childhood Community:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of “mom and pop” businesses</td>
<td>.008*</td>
<td>.097</td>
<td>.003</td>
<td>.016</td>
<td>1.020</td>
</tr>
<tr>
<td>% of residents getting to work without a car</td>
<td>-9.5E05</td>
<td>-.001</td>
<td>.004</td>
<td>.983</td>
<td>1.158</td>
</tr>
<tr>
<td>Race (White=1, Non White=0)</td>
<td>.035</td>
<td>.036</td>
<td>.041</td>
<td>.388</td>
<td>1.111</td>
</tr>
<tr>
<td>Region (South=1, Non South=0)</td>
<td>.056</td>
<td>.055</td>
<td>.043</td>
<td>.186</td>
<td>1.100</td>
</tr>
<tr>
<td>Education (1-7)</td>
<td>.089**</td>
<td>.309</td>
<td>.012</td>
<td>.000</td>
<td>1.122</td>
</tr>
<tr>
<td>Income (in thousands of dollars)</td>
<td>.002</td>
<td>.039</td>
<td>.000</td>
<td>.333</td>
<td>1.023</td>
</tr>
<tr>
<td>Gender (Male=1, Female=2)</td>
<td>-.005</td>
<td>-.005</td>
<td>.038</td>
<td>.896</td>
<td>1.010</td>
</tr>
<tr>
<td>Parents’ Level of Education (1-6)</td>
<td>.075**</td>
<td>.181</td>
<td>.018</td>
<td>.000</td>
<td>1.156</td>
</tr>
</tbody>
</table>

*Significant at .05 or less
**Significant at .01 or less

Adj.R²=.165
Std. Error of the Est.=.440
N=534

The potential effect of these kinds of businesses on civic participation is substantially significant.

It should be noted that the average percentage of mom and pop businesses in a zip code area was just under 10% (see appendix). This would indicate only a 4.8% difference between the civic participation of individuals from an average community and those from areas with no small, family owned stores. Although the effect of “mom and
"pop" businesses in an average community is small, it is not trivial. The statistical and substantial significance of the measure supports the theory that the characteristics of a neighborhood’s business community can have an impact on the political socialization of people who grow up there. More specifically, it could be the ownership and employment traits of a neighborhood’s businesses that account for this influence (as this variable measures). Those businesses that are owned and operated by the same people, often family-owned or “mom and pop” businesses, often provide the sort of stable business environment that is conducive to strong interpersonal bonds within a community.

On a similar note, it should be noted that communities with greater percentages of small, family owned businesses would also have smaller percentages of large, franchise establishments (which, as discussed previously, have the potential to impede the process of developing social bonds within one’s community). Therefore, it may also be the absence of these sprawl-style businesses which is conducive to positive civic orientations. Perhaps more precise measurements of business characteristics would reveal the exact relationship. Some possibilities for better measurements in future research are discussed in the next chapter.

The coefficient for the other geographic measure, “percentage of residents getting to work without a car,” was negative and did not achieve statistical significance. Its low b-score indicates that even the greatest differences between types of commuting in various communities would only affect individual civic participation by about .5%. Although the measure for commuting in this analysis did not prove to be statistically significant, there might still be a connection between the locational patterns of residences
and political socialization of its residents, even if it was not captured here. Perhaps more direct measurements of these kinds of patterns could yield more supportive results.

Several variations of the model were also tested, yielding mixed results. There is a possibility that an individual’s level of educational attainment is largely dependent on the educational attainment of his or her parents. In order to test for an interactive effect, an interactive term was included in the model (as a multiplicative between “Education” and “Parents’ Level of Education”). In a regression with all three measures, as well as one with only the interactive term, the Adjusted $R^2$ went up while the coefficients for both measures of the main independent variable remained largely unchanged. The results of the second alternative model (with only the interactive measure) are included in the appendix.

In separate tests of non whites and respondents living outside of the South, the “mom and pop” measure was positive, yet not statistically significant. However, this was likely due to the small number of cases in each group. In each of these tests, the measure for aggregate commuting was also positively correlated with civic participation, yet statistically non significant. Perhaps future research may be able to better examine the effects of location on different demographic groups.

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23Alternate measures for the main independent variable were also tested, to see if they might be possible substitutes for the measure for aggregate commuting. The mean value of the original measure was 5.3%, and an examination of the distribution of values (for all zip codes in this analysis) indicates that there were very few cases of more than 10%. Due to the skewed nature of the distribution, it is possible that a simple percentage measure is not adequate. Therefore, the values of the original variable were recoded into a dichotomous measure: original values below 5.3% were recoded as 0; values at or above 5.3% were recoded as 1. An additional regression was run, substituting the new measure. Although the b-score was a little higher (-.007), the new measure failed to reach statistical significance (the significance level was .898). The rest of the model was virtually unchanged.
Additional regressions examined the average length of time for commuting, number of retail establishments per capita (Humphries 2001), and percentages of residents who walk or bike to work (not including those who drive or take public transit) for each zip code area. In each of these regressions, the coefficients were in the wrong direction and not significantly significant (although the results for the “mom and pop” measure and all other controls were roughly the same as in the initial analysis).

Measures for percentage of “non-full year” retail establishments (ie: those which were not open for the entirety of 1987, when the census was taken) and percentage of homes dating from before 1949 (meant to reflect changes in residence construction style after WWII) had coefficients that were in the correct direction (negative and positive, respectively), yet they were not statistically significant. Lastly, a broad measure of whether a respondent’s 8th grade school was in a “suburb” of a city (based on Census classifications similar to those for the NES measures used in Chapter 5) was tested. A dichotomous variable for “in a suburb” (no=1, yes=0) had the predicted positive coefficient, yet was statistically non-significant.

While each of these measures reflect various aspects of traditional, suburban, and urban sprawl environments, none of them are theoretically representative of these environments by themselves, therefore they were not seriously considered as variables in the initial analysis. However, in light of the correctly predicted coefficient directions in each of these subsequent regressions, it is possible that they can be used in further research in a composite “Urban Sprawl Index.”
While the main analysis provides some support to the hypotheses, it is very limited in scope. The sample of respondents was limited to those who have attended college, which is not very representative of the greater American population. Also, the years and ages encompassed by this sample are not representative of the greater population, and they may not accurately reflect greater trends among Americans. Lastly, the short time period that elapsed between the occurrence of the independent and dependent variables does not address the question of whether these effects can withstand the test of time. Perhaps the characteristics of a child’s neighborhood have less of an impact on participation as time progresses. However, the results indicate that there is probably some effect of childhood location on later civic participation. Further research with different datasets may be necessary in order to isolate the true effects, as well as their intensity.
CHAPTER 7
CONCLUSION

In this research, I have argued that suburbia and urban sprawl hinder the ability of individuals to participate effectively in their communities, because they disrupt the patterns of social interaction that is present in more traditional communities. More specifically, it was shown that growing up in these environments might lead to a reduced rate of civic participation later in life, because of the effects on the individual’s early political socialization. Like other environmental influences on a person’s early civic orientation and socialization, the type of neighborhood in which someone grows up has the potential to influence his or her civic attitudes either positively or negatively. The physical characteristics of an area have the ability to affect how its inhabitants interact with one another, as well as the frequency in which they do it. Building construction patterns, characteristics of the ownership and size of area businesses, and the degree to which residents must utilize automobiles to get around can all affect the attitudes of individuals inhabiting that area. Traditional communities have geographical characteristics that provide a healthy environment for political socialization and civic participation. But suburban and urban sprawl environments lack these forums for human interaction, and they negatively affect residents’ attitudes toward each other and their communities. Suburban and urban sprawl environments are oriented around maintaining their inhabitants’ personal privacy, rather than emphasizing civic culture.
Children who grow up in different types of environments will be socialized to behave differently, just as adults do. The lessons that they learn from others in their communities, as well as the availability of opportunities for social interaction, can influence their future behavior toward other citizens. Those individuals who do not have ample opportunities for human interaction, and are not encouraged to do so, will not be inclined to behave positively toward their future communities. Those who do not form positive bonds with their greater communities as children may not be predisposed to invest much time and energy in bettering their future communities.

In this research, I have shown that the way in which a neighborhood is geographically and socially oriented has the potential to affect this socialization. Although the measured effects were small, they were identifiable, and they warrant further investigation. In Chapter 5, I examined the effects that various neighborhood types have on a large cross-section of Americans of all ages. Although statistical significance was not achieved, the analysis suggested that growing up in a post-WWII suburban environment could be negatively correlated with later civic participation, while small-town influences might be positive. In Chapter 6, an analysis of a select group of school children and their neighborhoods highlighted some of the specific characteristics of traditional neighborhoods which might be conducive to later civic participation. The analysis showed that greater proportions of small, “mom and pop” businesses in a particular area can have a positive effect. Although the effects of community characteristics were not profoundly large, they were strong enough to warrant further investigation of this aspect of political socialization research.
There are several improvements that could be made to refine this research and would perhaps indicate stronger, more specific and interpretable, effects. An analysis using different datasets, with samples of respondents that are more representative of the greater population, would help to reveal the true effect of a neighborhood’s businesses on its residents. Exact information regarding business ownership (such as whether the owners of a particular business are locally based, or whether they are part of a nationwide franchise) might be more reliable than using employment records. And perhaps an examination of individuals at different ages and different years would help researchers get a better idea of the potential effect of community characteristics on later political participation. Lastly, while the measure for “percentage of residents who get to work without a car” is an adequate proxy for residential/workplace interspersion, it is possible that more direct measures (using zoning information or locally gathered data) would reveal stronger effects.

Throughout this paper, I have identified many characteristics of traditional, suburban, or urban sprawl environments that can be either conducive to or restrictive of later civic participation. Although the focus was placed on business ownership and location of residential areas, there are many other avenues that can be pursued. Potential analysis of geographic, neighborhood characteristics could include measures of the number and type of public, community facilities, as well as where they are located. The theory in this paper regarding traditional neighborhood effects (as well as much of social capital theory) would stipulate that more community centers, playgrounds, public parks, and other public spaces create more opportunities for interaction with others in the
community (and, therefore, greater potential for civic participation). Another interesting way of examining public facilities would be an analysis of who uses them, as well as how often they are used. Unfortunately, this requires collecting data from municipalities and local governments; a nationwide study would require a great deal of time and effort spent at the data collection stage.

Another facet of this research area involves examining the automobile dependency of a particular area. As stated in previous chapters, suburban and urban sprawl communities are generally designed and built with the automobile in mind. A very direct measure of the degree to which traveling by car is a virtual “requirement” in a particular neighborhood would be a simple tally of the number of accessible sidewalks in that area. Many shopping centers and bedroom communities have no sidewalks at all; traditional small-town or urban neighborhoods often have sidewalks on every street. If an individual has more opportunities to greet a neighbor on the street, perhaps he would be more attached to his neighborhood. Another indicator of automobile dependency would be a measurement of building density. Apart from sparsely populated rural areas, suburban environments are some of the least dense living environments in America. This sort of density information might be included from local government zoning records, as well as raw Census data. However, once again, data collection would be a considerable challenge.

As Putnam (2000) has suggested, randomly bumping into someone on the sidewalk or waving to them from across the street builds social capital.
Perhaps the biggest obstacle to further research on communities is the lack of accessible data. While data at the zip code level is adequate for the research presented here, it may not allow for the sort of precise measurements that may be needed when examining socially and geographically diverse communities (such as those of major metropolitan areas). Perhaps tabulations at the Census block level would reveal more detail about the true nature of “neighborhoods.” And while precise data about zoning, city planning, streets, sidewalks, and public facilities can be obtained from most local governments, this researcher knows of no national data set with this kind of information. Building this kind of data set (and maintaining it as communities change) is too daunting a task for most researchers.

Another source of data that is necessary for researching civic attitudes from childhood is a longitudinal study. While the NELS study used in this research had a wealth of information, it did not have enough data regarding political attitudes, participation, and civic involvement to adequately measure civic participation. While the General Social Survey and various pilot studies of the National Election Study track respondents over time, they normally only include adults. Developing longitudinal studies of younger respondents, with survey questions that are civically and politically oriented, is necessary in order for further research in this area to be possible.
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Lipset, Seymour Martin, Political Man, Garden City, New York: Doubleday, 1960


Milbrath, Lester W., Political Participation, Chicago: Rand McNally and Co., 1965

Miller, Laura J., “Family Togetherness and the Suburban Ideal,” Sociological Forum, Volume 10, Issue 3 (September, 1995), 393-418


Rosenstone, Steven J. and John Mark Hansen, Mobilization, Participation, and Democracy in America, New York: Macmillan, 1993


Appendix for Chapter 5: National Election Studies and Measures

1) Question Wording for 6th Component of Factor Analysis:
“Here is a list of organizations people can belong to. There are labor unions, associations of people who do the same kinds of work, fraternal groups such as Lions or Kiwanis, hobby clubs or sports teams, groups working on political issues, community groups, and school groups. Of course, there are lots of other types of organizations, too. Not counting membership in a church or synagogue, are you a member of any of these kinds of organizations?”
1: Yes
5: No
8: DK

(the responses to this question and other component questions were recoded for the summary index)
2) Civic Participation Index for Chapter 5:
Once question responses were weighted and summed, an index of 54 possible values was formed. The index values ranged from 0 to 3.12. The number of cases for each value was as follows:

NES Civic Participation Index (summary of factors 1-6)
APPENDIX B

Appendix for Chapter 6: National Education Longitudinal Study and Measures

1) Civic Participation Index for Chapter 6:
Once question responses were weighted and summed, an index of 16 possible values was formed. The index values ranged from 0 to 1.96. The number of cases for each value was as follows:

![Chart showing the distribution of Civic Participation Index values. The x-axis represents different index values ranging from 0.00 to 1.96, and the y-axis represents the count of cases. The chart shows a peak around index value 0.31, with a decreasing trend as the index values increase.]
The majority of respondents scored a zero on this index (71% of the cases). Among those who scored positive values, the proportions were as follows:

![Bar chart showing distribution of Civic Participation Index values.]

**NELS Civic Participation Index (sum of factors 1-4)**

2) **Frequencies for all Variables in the Model:**

<table>
<thead>
<tr>
<th>Valid Cases</th>
<th>Civic Partic.</th>
<th>% Mom and Pop</th>
<th>% Getting to Work W/o a Car</th>
<th>Race</th>
<th>Region</th>
<th>Educ.</th>
<th>Income</th>
<th>Gender</th>
<th>Parent Educ.</th>
</tr>
</thead>
<tbody>
<tr>
<td>704</td>
<td>654</td>
<td>670</td>
<td>712</td>
<td>712</td>
<td>706</td>
<td>608</td>
<td>712</td>
<td>706</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>.2524</td>
<td>9.564</td>
<td>5.315</td>
<td>.6320</td>
<td>.3315</td>
<td>2.004</td>
<td>.7805</td>
<td>1.52</td>
<td>2.982</td>
</tr>
<tr>
<td>Min</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>1</td>
<td>1.00</td>
</tr>
<tr>
<td>Max</td>
<td>1.96</td>
<td>100.0</td>
<td>32.51</td>
<td>1.00</td>
<td>1.00</td>
<td>6.00</td>
<td>200.0</td>
<td>2</td>
<td>6.00</td>
</tr>
</tbody>
</table>
3) Graphs of Both Measures of the Main Independent Variable:

% of Zip Code Area Businesses that are "Mom and Pops"

% of Zip Code Residents Who Get to Work Without a Car
4) Results of Chapter 6 Model: with an Educational Interactive Measure Included

<table>
<thead>
<tr>
<th>Measure</th>
<th>b-score</th>
<th>Beta</th>
<th>Std. Error</th>
<th>Signif.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>-.072</td>
<td>.090</td>
<td>.421</td>
<td></td>
</tr>
<tr>
<td>Childhood Community:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of “mom and pop” businesses</td>
<td>.010*</td>
<td>.096</td>
<td>.003</td>
<td>.016</td>
</tr>
<tr>
<td>% of residents getting to work without a car</td>
<td>-5.8E04</td>
<td>-.006</td>
<td>.004</td>
<td>.897</td>
</tr>
<tr>
<td>Race (White=1, Non White=0)</td>
<td>.034</td>
<td>.034</td>
<td>.041</td>
<td>.414</td>
</tr>
<tr>
<td>Region (South=1, Non South=0)</td>
<td>.053</td>
<td>.052</td>
<td>.042</td>
<td>.207</td>
</tr>
<tr>
<td>Income (in thousands of dollars)</td>
<td>.002</td>
<td>.044</td>
<td>.000</td>
<td>.275</td>
</tr>
<tr>
<td>Gender (Male=1, Female=2)</td>
<td>-.003</td>
<td>-.004</td>
<td>.038</td>
<td>.924</td>
</tr>
<tr>
<td>Educational Interactive (Education * Parents’ Level of Education)</td>
<td>.032**</td>
<td>.409</td>
<td>.003</td>
<td>.000</td>
</tr>
</tbody>
</table>

*Significant at .05 or less  
**Significant at .01 or less

Adj.R²=.170  
Std. Error of the Est.=.438  
N=534