

PUBLIC LIBRARIES AND SOCIAL CAPITAL IN THREE NEW YORK CITY NEIGHBORHOODS

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Abstract

This study uses the social capital concept to explain geographical variation in public library use. Applying Putnam's social capital theory, we examine how social capital in three New York City neighborhoods affects usage of local branch libraries. A survey was conducted to understand differences in public library use and social capital in the neighborhoods. Diversity and segregation indices were included as additional measures of social capital. The study found that neighborhoods with higher levels of social capital, especially bridging social capital, tend to have higher public library use.

Introduction

The neighborhood has long been a framework for studies in human geography. These neighborhood studies often focus on housing, segregation, crime and environmental protection. Public libraries have received little attention. This omission overlooks the important roles that public libraries play in neighborhoods. Public libraries are democratic institutions that provide all residents equal access to the information necessary to participate in public affairs (Lees 1997). They serve as loci of neighborhoods by offering public spaces for individuals to meet formally and informally. In disseminating information and hosting events such as public hearings, public libraries influence and modify neighborhoods. As Putnam & Feldstein (2003, p. 35) put it, a branch 'library is an active and responsive part of the community and an agent of change'. Given the significance of the information age, public libraries should be an indispensable part of neighborhood research.

Research on the use of public libraries has traditionally centered on the human, economic, and cultural capitals of library users. Many surveys (Scheppke 1994; Vavrek 2000) have found that the typical public library users were white, middle class and well educated. When geographic factors were considered in library research, analysis was limited to the spatial accessibility of the libraries in terms of the physical distance between the libraries and the library users (Freestone 1978; Obokoh & Arokoyu 1991). Geographic variation in public library use has been relatively unexplored, despite the fact that some public libraries, often in disadvantaged neighborhoods, are utilized much less than others. This study is part of a broader research agenda that examines the effects of neighborhood characteristics on geographic variation in public library use in New York City. While a previous study (Japzon & Gong 2005) analyzed in detail the human, economic, and cultural capitals traditionally considered in library studies, we focus on the effect

of neighborhood social capital on public library use in this study. We use Putnam's social capital theory as a framework and analyze how the social capital in three New York City neighborhoods affects the usage of their branch libraries.

In addition to bringing a new perspective, neighborhood social capital, to the study of public libraries, this study adds to the use of the social capital concept in geography. While there have been pervasive applications of the social capital concept in many social sciences such as urban planning and urban studies (for examples, see Forrest & Kearns 2001; Putnam 2004), its use in geography has been limited to only a few (Li *et al.* 2002; Merrett 2002; Mohan & Mohan 2002; Hardwick 2003; Johnson *et al.* 2005; Schnur 2005). This study explores a spatial and a structural dimension of social capital, such as racial/ethnic diversity and segregation, in affecting geographic variation of public library use. It expands the use of the social capital concept in geography and in turn contributes to the social capital literature by adding a geographic/spatial perspective.

The remainder of the paper is divided into six sections. First, social capital theory is introduced with an emphasis on the collective aspect of social capital. Second, original and existing data as well as statistical indices used in the study are explained. The third and fourth sections examine the branch library use and social capital in three New York City neighborhoods from an ethnographic and survey approach. The fifth section discusses the structural and spatial dimensions of social capital before the final section concludes the study.

Social Capital Theory

Social capital refers to connections among individuals, such as social networks, norms of reciprocity and social trust that facilitate co-ordination and co-operation for mutual benefit (Putnam 1995, 2000). In Putnam's groundbreaking book *Bowling Alone* (2000), social capital was measured by numerous indicators including voting, signing petitions, attending church weekly, reading newspapers daily, being associated with nonprofit organizations, league bowling, etc. These indicators of social capital are grouped under dimensions such as political, civil and religious participations, workplace connections, informal social connections, volunteering and trust (Putnam 2000; *Social Capital Community Benchmark Survey* 2005).

The core idea of social capital theory is that these social connections have value. In addition to their value to individuals, as stressed by Coleman (1988, 1990) and Bourdieu (1986), Putnam highlights the collective benefits of social capital (Mohan & Mohan 2002; Kilpatrick *et al.* 2003). 'Social capital also can have "externalities" that affect the wider community, so that not all the costs and benefits of social connections accrue to the person making the contact'. (Putnam 2000, p. 20) 'Life is easier in a community blessed with a substantial stock of social capital (Putnam 1995, p. 66) because 'networks of civic engagement foster sturdy norms of generalized reciprocity and encourage the emergence of social trust. Such networks facilitate coordination and communication, amplify reputations, and thus allow dilemmas of collective action to be resolved. When economic and political negotiation is embedded in dense networks of social interaction, incentives for opportunism are reduced. At the same time, networks of civic

engagement embody past success at collaboration, which can serve as a cultural template for future collaboration' (Putnam 1995 p. 66).

The collective aspect of social capital renders it a very useful concept in neighborhood research (Butler & Robson 2001; Forrest & Kearns 2001, Johnson et al. 2005). Researchers have found that high levels of social capital in healthy neighborhoods brought about more successful outcomes in programs on education, urban regeneration, economic development, crime control and mortality rate (Gittell & Thompson 2001; Purdue 2001; Sampson 2001; Kilpatrick et al. 2003; Lochner et al. 2003). These programs and efforts to improve the neighborhoods in turn can help build even higher levels of social capital. In disadvantaged neighborhoods, however, social capital has declined in past decades as a result of structural changes in the economy and continued residential segregation as well as federal policies on urban renewal and highway construction that has destroyed neighborhoods (Cohen 2001). Instead of a virtuous circle, in which 'existing social capital facilitates the creation of more social capital', disadvantaged neighborhoods in inner cities are 'too often marked by a vicious circle, in which low levels of trust and cohesion lead to higher levels of crime, which lead to even lower levels of trust and cohesion'. (Putnam 2000, p. 317) To change these neighborhoods, intervention should not 'begin and end with the federal government' as in the past (Cohen 2001, p. 277). Rather, intervention should rely on local institutions and outside 'resources must be put under the democratic control of local residents' (Cohen 2001, p. 275). 'By opening up to local organizations and giving them responsibility, government created an incentive for local organization'. (Putnam & Feldstein 2003, p. 273)

Among the forms of social capital, Putnam (2000) distinguished bridging (or inclusive) social capital from bonding (or exclusive) social capital. Bridging social capital, such as the civil rights movement, is 'outward looking and encompass[es] people across diverse social cleavages' (p. 22). Bonding social capital, such as ethnic fraternal organizations, is 'inward looking and tend[s] to reinforce exclusive identities and homogeneous groups' (p. 22). Kearns & Parkinson (2001) applied these concepts to neighborhood research and argued that disadvantaged neighborhoods not only have lower levels of social capital than healthy neighborhoods, but also build social capital in different ways. Residents of disadvantaged neighborhoods often 'bond' social capital to get by, rather than 'bridge' social capital to get ahead. Orr (1999, p. 9) combined the social capital concept with race and argued that black social capital among African Americans, a form of bonding social capital, may enable their leaders to mobilize and co-operate to gain social ends, 'but it may be promoted at the expense of wider cooperation among other groups'. However, Mayer (2003) noticed how bonding social capital may develop into bridging social capital in social movements. During the initial phases of movements, small homogeneous groups bond and 'coalesce in order to highlight a social or political problem and to mobilize broader protest' (p. 118). In later phases, 'expanding connections with different support and mediating organizations will contribute to the generation of more open and inclusive networks', a form of bridging social capital.

Inside and outside of neighborhood research, the concept of social capital has become unusually popular in the past decade. It has attracted sociologists, economists, political scientists, and historians as well as policy-makers and practitioners (Kilpatrick et al. 2003; Mayer 2003; Middleton et al. 2005). However, Putnam's concept of social capital has also been challenged

from a variety of theoretical and methodological perspectives (Cohen 2001). It was criticized for divorcing social capital from economic capital (DeFilippis 2001), ignoring the down side of social capital (Mohan & Mohan 2002), and equating ‘the sources of social capital with its usefulness’ (Schnur 2005, p. 492), to name a few. While a comprehensive critique of the concept is certainly beyond the scope of this paper, the discussion here focuses on the measurement of social capital, an aspect most related to this study.

Researchers argue that whether social capital is high or low, and rising or declining, depends largely on how it is measured (Lin 2001). For example, Asian American communities tend to have very low levels of political participation (Fuchs et al. 2001) and may therefore be considered to have low levels of social capital if political participation is used as the measure. However, many ethnographic studies have found elaborate socio-economic networks in these communities (Fuchs et al. 2001; Li et al. 2002) that indicate high levels of social capital. Social capital as measured by Putnam's indicators, such as volunteerism, is often a middle- or upper-class virtue and may ignore many different ways in which poor and non-white communities build social capital. Contrary to a declining social capital in the United States as claimed by Putnam (2000), Lin (2001, p. 211) contended that ‘social capital has been on the ascent in the past decade – in the form of networks in cyberspace’. In terms of measuring the collective benefits of social capital, geographer Defilippis (2002, p. 792) is especially troubled by how Putnam ignored scale and reduced ‘social groups and all geographic scales to simply aggregations of individual attributes’. He used Putnam's own example of how job seekers network to get ahead of others to demonstrate that individual benefits of networking are realized at the expense of others. Therefore, aggregate individual gains are not synonymous with collective benefits at the level of communities, cities, or nations. To sum up the discussion, how social capital should be measured remains a keenly discussed topic (Saguaro Seminar 2005) and is central to the applicability of the social capital theory.

We adopt Hallman's definition of neighborhood as ‘a limited territory within a larger urban area, where people inhabit dwellings and interact socially’ (1984, p. 13) in this study.¹ Both individuals and their interactions are included in a neighborhood. In our discussions of neighborhood social capital, we use Putnam's concept of social capital to include both individual and collective benefits. We agree with Defilippis that aggregating individual benefits of social capital is not synonymous with collective benefits, and therefore use two measures at the neighborhood level – diversity and segregation indices – to represent the collective benefits of neighborhood social capital. These two indices, as explained in detail in the next section, measure connections among racial/ethnic groups and therefore are also indicators of bridging social capital in a neighborhood.

As public institutions for civic engagement and as places of social connections, public libraries are closely tied to social capital in neighborhoods that they serve. Putnam & Feldstein (2003) used public libraries in Chicago as an example of how to build social capital in American communities. The *Urban Libraries Council's report* (2005) on Chicago public libraries describes neighborhood libraries as engaged in the creation of communities through building social networks and making local libraries community centers. The relationship with communities is mutually beneficial to libraries as the libraries become thriving entities and more integrated into community life. Meanwhile, research by Japzon & Gong (2005) demonstrated that the number of

nonprofit organizations, a conventional indicator for social capital, has a positive influence on branch library use in the 200 neighborhoods in New York City. This influence is direct and statistically significant while human, economic, and cultural capitals are controlled. Social capital theory would not be the only framework, but certainly has the potential to become one of the frameworks to understand the geographical variation in the use of neighborhood branch libraries.

In this study, the contribution of social capital to geographical variation in public library use is more broadly examined for three New York City neighborhoods. We use existing data and a survey as well as an ethnographic approach to document the influence of social capital on public library use. In addition, this study explores the use of a structural and a spatial dimension, in the form of racial/ethnic diversity and segregation indices, into the measurement of social capital. We argue that in area studies such as neighborhood research, the level of social capital in an area depends not only on the conventional dimensions used in Putnam's *Bowling Alone*, but also on the structural and spatial composition of residents.

Data and Methodology

A survey was conducted for this study to gauge the levels of social capital and to understand the branch library use in the three neighborhoods. The questionnaire for the survey was translated into Spanish, Chinese and Russian to get more accurate information from many non-English speaking residents in these neighborhoods. Bilingual students were hired to conduct the survey on three separate Saturdays in March 2002. They stood in front of the three libraries for three continuous hours and approached people as they passed by or walked in or out of the libraries. Survey respondents filled in the questionnaire on the spot, sometimes with the help of the bilingual students. The sampling method was a non-probability sampling, which is often applied in case studies like this. At a sampling ratio of about one questionnaire per 675 neighborhood residents, 251 questionnaires in total were collected from the three neighborhoods, with 122 from the Upper West Side, 47 from the Hub, and 82 from Flushing. The gender of the survey respondents was quite compatible among three neighborhoods (Table 1). Reflecting the neighborhood characteristics, survey respondents in the Upper West Side were older and had much higher educational attainment and household incomes than those in the other two neighborhoods, while those from the Hub were younger and had lower education and income.

In addition to the survey data, this study uses existing data from branch libraries and the 2000 census. Library circulation (the number of materials lent to users) for fiscal year 1998–1999, available for all of the 200 branch libraries in New York City, provides a systematic measurement of library use and allows a comparison of branch library use in the three neighborhoods to other neighborhoods in New York City. Lists of special programs in the branch libraries in the three neighborhoods for June 2005 were obtained from the New York Public Library (2005) and the Queens Borough Public Library (2005a) web sites to provide additional library use information. The three neighborhoods and other neighborhoods in the New York City are defined as library service areas, since public library use is the primary interest of this study and our broader project. These 200 library service areas are delineated using the Thiessen tool in GIS.

The 2000 census (*US Census Bureau 2002*) presents the composition of racial and major ethnic groups of the neighborhood residents. Hispanics were listed as a separate group (Hispanic) in the racial/ethnic composition for this study. Non-Hispanic white, black and Asian of single race are three other groups (white, black and Asian) while other races or more than one race (others) are the fifth group in the composition. Obtained by census tracts, these census data were apportioned using GIS and aggregated into the units of neighborhoods for analyses.

To capture the racial/ethnic diversity of the three neighborhoods in a single number for comparison, a diversity index is calculated:

$$\text{Diversity} = 1 - (\text{Hispanic}\%^2 + \text{white}\%^2 + \text{black}\%^2 + \text{Asian}\%^2)$$

This index is modified from the *USA Today* diversity index (Meyer & Overberg 2001; Nasser & Overberg 2001). On a 0 to 1 scale, it represents the probability that two people chosen at random from a neighborhood would be of different racial/ethnic groups. Zero indicates no diversity, with 100 per cent of the residents in a neighborhood being Hispanic, white, black, or Asian only. One indicates perfect diversity, with all residents belonging to the others group and none in Hispanic, white, black or Asian group.

While the diversity index captures the composition of racial and major ethnic groups, it does not take into account the spatial distribution of these groups within a neighborhood. A segregation index (Wong 1998; Japzon & Gong 2005) is therefore used to measure the spatial interaction of these groups across census tracts within a neighborhood. This index indicates higher segregation when similar census tracts locate together rather than when different census tracts locate together because the latter allows more mixing of different racial/ethnic groups of people across census tract boundaries. Similar to the diversity index, the segregation index ranges from 0 to 1, where 0 indicates no segregation and 1 indicates perfect segregation.

The three neighborhoods included in this study are the Upper West Side in Manhattan, the Hub in South Bronx and Flushing in Queens. Their corresponding branch libraries are St. Agnes, Woodstock and Flushing (Fig. 1). Besides that these are the neighborhoods we are familiar with, more importantly, they are chosen for this study because they are very distinctive, allowing us to fulfill the goal of examining the effect of social capital on the geographic variation in public library use. Exactly for the same reason, their neighborhood characteristics cannot be fully revealed by standard comparisons using survey and existing statistical data. As a supplement to the quantitative approach, this study applies an ethnographic approach to document some aspects of the three neighborhoods that make them distinctive. This approach is especially useful since social capital, the main neighborhood characteristic being studied, is a new concept and the standard measurement of it is still being developed. Using such an ethnographic approach, the following section discusses some distinctive characteristics of the three neighborhoods and their branch libraries in relation to social capital.

Three neighborhoods and libraries

The Upper West Side/the St. Agnes Library

The Upper West Side in Manhattan is a solidly white, middle class and educated neighborhood, located in a historic district west of Central Park. It is a neighborhood with national awareness due to the ten-year-long television show ‘Seinfeld’ which is set there. To preserve the historical value of the neighborhood, residents organized themselves in the 1970s to battle against suggested federal urban renewal programs in the area, and they eventually wrestled the control of renewal away from the federal policymakers (Daniels 1981). Over the past few decades, they have also been successful in keeping ‘undesirable’ industries, retail centers, and facilities (such as group homes) away from the neighborhood (Ladd 1987; Garbarine 1999). During these processes, strong connections among residents were made and social capital cultivated, although more in the form of bonding social capital in early phases. Over time, bonding social capital may have developed into bridging social capital as the connections expanded to different support groups and became more inclusive (Mayer 2003). By keeping the Upper West Side in a good shape, these well-connected residents facilitated the creation of more social capital, a virtuous circle described by Putnam for a healthy neighborhood.

The St. Agnes Library in the Upper West Side was built almost 100 years ago with Carnegie funds. This century-old building perfectly fits into its historic neighborhood. The two floors and the basement of the building are in full use. The library has an especially large collection in the children's room on the top floor. In 1999, the library circulated 257,000 materials to the residents (Table 2), five times the amount of circulation in the Woodstock Library and 1.5 times the average circulation of all the 200 branch libraries in New York City. Besides books, films and magazines to be lent, the library provides special programs such as floral arrangements workshop, films, and children picture book time (Table 3). There are also numerous public service announcements, nonprofit organization announcements, and free publications for parents in the library. The distribution of local information and the special programs offered in the library help keep residents informed of what is going on in the neighborhood and provide the opportunities for residents to interact socially with each other, giving rise to potential production of social capital in the neighborhood.

There is a large renowned book sale twice a year as well as small daily book sales in the library. These book sales are entirely sponsored by neighborhood residents. This library has a large friends group, which supports the library in terms of both donating money and spending time helping. The books are donated, organized and sold by volunteers. The biannual book sales have grossed as much as \$80,000 in one weekend. These book sales not only benefit the library by bringing in more money and library users, but also foster social connections in the neighborhood. They are examples of how library use and social capital can build on each other.

The Hub/the Woodstock Library

The Hub is mainly a Hispanic and black neighborhood. It is the core of the South Bronx, currently the poorest congressional district in the nation. The burning down of the South Bronx in the 1970s created a lasting image of urban despair and decay. It was referred to as ‘New

York's municipal Appalachia' (Harrington 1978). The landscape of burnt out buildings and vacant lots has changed to a certain extent over the last 20 plus years but this area is by no means fully recovered from the devastation.

The Hub has had millions of dollars poured into it from the federal, state and city levels. In contrast to the Upper West Side residents who gained control of the urban renewal in their neighborhoods, the Hub residents did not have the political power and the social networks to control how the money was spent. More often than not, the residents and their needs were excluded from the redevelopment process and the way was made easier for exploitation by developers. Many housing projects are examples. The idea behind bringing in suburban-style government-subsidized housing was to revitalize the area by enticing lower middle class home ownership. Home ownership contributes to the stability of a neighborhood and is an indication of social capital, as home owners tend to stay longer in a neighborhood than renters, interact more with their neighbors, and have more interest in keeping crime rate down and property values up in the neighborhood (Putnam 2000). However, many of those housing projects were built quickly and according to very loosely and widely interpreted code. Homeowners 'struggle with leaky roofs, water-stained walls, unreliable boilers, unfinished fixtures, and doors that won't lock' (Grossman 1997, p. 44). The homes have 30-year mortgages but may only have a 10-year life. Homeowners have been filing complaints with the developers but most of their complaints have been met with disinterest. Some are considering abandoning their homes, which could lead another step in the direction of decay in the South Bronx. This negative relationship among social capital, homeownership and neighborhood wellbeing reminds us of the kind of vicious circles that Putnam described for inner-city disadvantaged neighborhoods.

The Woodstock Library reflects the poor condition of the neighborhood. Although it was built with Carnegie funds in the same year as the St. Agnes Library, the Woodstock Library building lacks maintenance and is falling apart. Graffiti can be seen on the walls immediately outside the library. The circulation in the Woodstock Library is one of the lowest among the 200 branch libraries in New York City (Table 2). This problem of underutilization is perpetuated because the funding for a branch library in New York City is determined, in part, by its circulation.

The Woodstock Library was conveniently sited when it was built. It is only a short two-block walk to the subway. There was an elementary school of significant size directly across the street from the library, providing a constant stream of young library users.² The building design indicates the turn of the twentieth century European architecture, as the influx of immigrants to New York City at that time was mainly European. However, the library did not keep up with the dynamic change in the increasingly Hispanic neighborhood. There are some books in Spanish but not as many shelves as one would expect given the Hispanic makeup of the neighborhood today. On the other hand, the residents were not active in keeping up the neighborhood and the library either. Numerous buildings within the library's immediate surroundings are condemned and boarded up. Vacant lots border the library on three sides. Fig. 2 shows the vacant lot on the right side of the library and a neglected building further on the right. When the elementary school across the street from the library moved out, a public group home moved in for individuals incapable of supporting themselves. This incompatible facility adversely changed the relative location of the library, as group home residents are found to have very low usage of community places such as public libraries (Stancliffe & Keane 2000). This change is in sharp

contrast to the effort of the Upper West Side residents in keeping away undesirable facilities and supporting the St. Agnes Library with book sales.

Flushing/the Flushing Library

Flushing is an ethnically diversified neighborhood with representation of many Asian as well as Latin American and Eastern European immigrants. The area was once the home of second and third generation European Americans who mostly left the city during the 1970s. A large influx of Taiwanese and Koreans filled a depleted and decaying Flushing area during the 1980s. Once these newcomers established a vital neighborhood, numerous others migrated there, especially from Asian countries. From 1990 to 1994, Flushing had the greatest numbers of new immigrants of all neighborhoods in New York City (Department of City Planning 1996). Standing in front of the Flushing Library (left side of Fig. 3), one can see store signs in various languages (see right side of Fig. 3 for examples). The presence of many ethnic groups is strongly apparent.

The immigrants in Flushing worked together to form businesses, banks, and nonprofit associations that have now reached international levels of significance. As an example, Flushing has been nicknamed 'America's Cradle of Religious Freedom' and is the home of the city's oldest church. The number and types of houses of worship in Flushing are greater than any other area of the city (Cooke 1993). This is in part due to the many different religions practiced in the neighborhood. But also, this is due to the apparent propensity of the immigrants to form and support organizations. Immigrants from similar backgrounds tend to live near each other out of necessity and thus form bonds of trust in many ways, formally and informally. These social networks and the creation of trust helped form the social capital that was very much a part of the success of this neighborhood's development.

The Flushing Library is the most heavily used branch library in New York City (Table 2). Its circulation in 1999 was the highest among the 200 branches. The library is in a new building that replaced an older one located at the same site. The new building was purposely designed for immigrant populations. One side of the building was constructed of see-through glass (Fig. 3) so that people from outside can see exactly what is going on inside the building. Because of the design of the building, immigrants from other countries can understand how an American public library functions without ever having used one before.

Unlike the Woodstock Library in the Hub, the Flushing Library has well-stocked collections in a variety of languages in addition to English. The Queens Borough Public Library (2005b) web site <<http://www.queenslibrary.org/>> reports that materials are made available in the following foreign languages: Russian, South Asian, Chinese, Spanish and Korean. The video collection is complete with popular movies and instructional nonfiction titles. At the time of the survey, an impressive photo and informational exhibit on Taiwan was on display at the library.

The programming available at the Flushing Library provides a wealth of social capital growth opportunities. Special programs include exercise classes for seniors, education in nutrition, career counseling, learning English and book discussion groups (Table 3). They appeal to a variety of ages, cultures and language skills. These programs may not be readily linked to the traditional functions of a library. However, they foster bridging social capitals in the

neighborhood by connecting residents with different cultural backgrounds (such as in the case of English learning programs) and provide them opportunities to share opinions and values with each other (such as in the case of book discussion groups). In turn, the growth of social capital encourages library use when residents come back to support more programs and check out library materials, which contributes to the many more programs and much higher circulation in Flushing than either the St. Agnes Library in the Upper West Side or the Woodstock Library in the Hub. To find the evidence of how library use and social capital growth mutually benefit each other in Flushing, one only needs to look at the new building and experiences the heavy human traffic in front of the library (Fig. 3).

Survey Results and Discussions

The survey allows a more in-depth analysis of branch library use and more importantly, some measures of social capital in the three neighborhoods. There are two main parts of the questionnaire for the survey. The first part queried the survey respondents regarding several aspects of library use. In terms of the types of library use, ³ recreational reading was rated the most popular form for all three neighborhoods, with about 55 per cent of the respondents using the library for this purpose (Table 4). The Flushing respondents used the library for multiple uses, more so (except for Internet use) than the ones from the other two neighborhoods, probably because of Flushing's diversified nature. The Hub respondents used the Internet access to a much greater extent (30%) than the other two groups (14% in the Upper West Side and 25% in Flushing), a result of limited access to computers and the Internet at the homes of many residents in this disadvantaged neighborhood. This finding is consistent with the 'digital divide' report by the US Department of Commerce (2000) which emphasizes that public libraries and other public institutions remain a principal access point for disadvantaged groups who have been digital 'have nots'.

Most survey respondents used the libraries weekly or monthly. Besides using the library in a multitude of ways, Flushing respondents used their library regularly. More than half (57%) of the respondents used their library weekly, a percentage much higher than those in the other two neighborhoods (Fig. 4). These two factors likely contributed to the high circulation at the Flushing Library. One finding of note is the highest percentage of daily library users in the Hub. Since the typical loan period for library materials is for days or even for weeks, the high percentage of daily library use in the Woodstock Library could only be explained by on-site use of library resources such as computers, Internet access, newspapers, or even just a study space. These resources are less affordable at homes in a poor neighborhood like the Hub. This demonstrates the need for the public library by residents in this disadvantaged neighborhood. However, only a small amount of the residents are consciously and frequently making use of their library. The great majority is disconnected from the library, leading to the underutilization of the library. Fig. 4 shows that the percentage of the respondents as non-users in the Hub was also the highest among the three neighborhoods. The challenge of improving public library use in a disadvantaged neighborhood such as the Hub is to attract a higher percentage of residents to the library.

The questionnaire also gauges the convenience of the libraries in relation to the residence, workplace and school of the survey respondents. Most of the survey respondents in all three neighborhoods considered their libraries conveniently located (Table 5). The libraries were considered convenient mostly because they were close to home. Related to this, the most common form of transportation to the library was by foot (Fig. 5). Among the three neighborhoods, Flushing had the highest percentage (98%) of survey respondents feeling the convenience of their library, which may partly explain the high circulation in the Flushing Library. Flushing respondents cited convenience not just in relation to home. The percentages of respondents feeling the library close to work (11%) and school (9%) are the highest among the three neighborhoods (Table 5). In contrast, the Hub had the lowest percentage of respondents (85%) feeling their library conveniently located. While the percentage of respondents feeling the library close to home in the Hub was about the same as that in Flushing (77% in the Hub and 78% in Flushing), the percentage of respondents feeling the library close to school was much less in the Hub (2% compared to 9% in Flushing). Had the elementary school directly across the street from the Woodstock Library not been converted to a public group home, the percentage of respondents feeling the library close to school would have been higher and so would the use of the Woodstock Library. This provides an example of how the lack of social capital in a disadvantaged neighborhood could allow an adverse change in the relative location of the library, decrease the convenience of the library, and eventually lower the use of the library.

The second part of the questionnaire addresses the levels of social capital in the three neighborhoods. In accordance with the studies conducted by Putnam (1995, 2000), questions were asked in the survey regarding political, civic, religious, and cultural participation as well as workplace connections and volunteering of the survey respondents (Table 6). Cultural participation such as going to movies was part of informal social connections in Putnam's work, but is given separate attention in our study because of its similar nature to visiting a library. In total, there are 14 indicators grouped into six dimensions of social capital in the survey. Some of these indicators, such as belonging to a community organization and belonging to a house of worship, measure the level of social capital directly. Some other indicators, such as reading newspaper daily, measure the potential of building social capital in a neighborhood.

For almost all indicators (except for reading newspaper daily and belonging to a house of worship), the Upper West Side showed the best results among the three neighborhoods and the highest level of social capital. This is not surprising as the majority of Upper West Siders are sufficiently well-off socially and economically to have a vested interest in what is happening locally and nationally. In addition to much higher engagement in political participation, workplace connections, and volunteering, the Upper West Side residents especially partook of cultural events, such as going to a theatre and visiting a museum, much more than did the other two groups. These cultural events facilitate informal social connections, according to Putnam (2000), and help build social capital in the neighborhood.

Flushing was in the middle of the three neighborhoods in nine of the 14 indicators, indicating a medium level of social capital. Two significant exceptions are worth noting. One is that the percentage of survey respondents reading a newspaper daily was the highest in Flushing (72%). A great majority of the Flushing respondents paid close attention to news and current events, which as a result brought some of them to use the Flushing library. As shown in Table 4, 18 per

cent of the survey respondents in Flushing came to the library to read a newspaper, also the highest percentage among three neighborhoods. This provides an example of how social capital, as measured here by daily newspaper readership, facilitates public library use.

Another exception is that Flushing had the lowest percentage of survey respondents voting in the last presidential election (49%) and signing a petition (18%) in the past year. It is likely, a number of the Flushing respondents were not eligible to vote as they were not citizens. Language barriers and cultural differences may have contributed to the low involvement of Flushing immigrants, especially Asian immigrants, in political activities such as petitioning. The low political participation in Flushing is consistent with the findings from previous studies on Asian American communities as discussed earlier.

For nine of the 14 indicators of social capital, the Hub respondents had the lowest percentage of involvement, especially in the dimensions of workplace connections, volunteering, and civic and cultural participations. This indicates the lack of variety of social connections in the Hub and the lowest level of social capital among the three neighborhoods. Of these social connections, the workplace connection is especially an important one (Saguaro Seminar Report 2000) as it can be invaluable for obtaining better social and economic advantages. However, finding work, especially full-time work, is a challenge to residents in disadvantaged neighborhoods such as the Hub because of the skill mismatch between their educational attainments and the high-skilled jobs in the city and the spatial mismatch between where they live and the low-skilled suburban jobs. Among the three neighborhoods, the Hub had the highest percentage of survey respondents not working and the lowest percentage working more than 30 hours per week.

Despite of the lowest level overall among the three neighborhoods, social capital in the Hub is not deficient in all dimensions. The percentage of survey respondents belonging to a house of worship, such as a church or temple, was the highest in the Hub (Table 6), indicating the highest religious participation of Hub respondents among the three groups. This is a rich source of social capital in the Hub as religious institutions often support a wide range of social activities well beyond conventional worship (Putnam 2000). In addition, the Hub respondents had higher percentages in both presidential voting and petitioning than the Flushing respondents, showing higher political participation than the Flushing group. Particularly, the percentage of Hub respondents in petitioning (36%) was twice of that of the Flushing respondents (18%) and not far from that of the Upper West Side respondents (43%). These sources of social capital from religious and political participations demonstrate that there are ways, through local institutions such as churches and political parties, to build social capital in disadvantaged neighborhoods such as the Hub.

These indigenous institutions, as discussed in the literature (Cohen 2001; Putnam & Feldstein 2003), can play a more significant role than federal agencies in making use of outside resources to improve disadvantaged neighborhoods. So can neighborhood libraries. By means of inside connections with library users and local institutions in the neighborhood and outside connections with other branch libraries in the library systems, branch libraries have the potential to build social capital and become an agent for change in disadvantaged neighborhoods. Many Chicago branch libraries are good examples. Funded by property tax revenues, these branch libraries have an explicit aim to improve neighborhoods. Speaking at an Urban Libraries Council conference,

the Chicago Mayor Daley clearly stated, ‘Unless you are out there changing neighborhoods, you are not completing the work you are to do.’ (Putnam & Feldstein 2003, p. 42)

Structural and Spatial Dimensions of Social Capital

While the lowest level of social capital in the Hub matches its lowest public library use among the three neighborhoods, this is not the case in the other two neighborhoods. The highest level of social capital in the Upper West Side corresponds to only a medium public library usage. The medium level of social capital in Flushing, as shown in the survey, is especially out of place compared to its highest public library use among the three neighborhoods, and in fact, among all 200 branches in New York City. There is a discrepancy between the level of social capital, as measured in the survey, and public library use in the Upper West Side and Flushing. Other neighborhood characteristics such as human, economic and cultural capitals influence public library use, but could not explain this discrepancy because there are certainly more white, middle class, and well educated residents, the so-called typical public library users, in the Upper West Side than in Flushing. This discrepancy leads to the questioning of the conventional measurement of social capital. The indicators for individuals may not represent well the collective benefits of social capital, as argued by DeFilippis and discussed earlier in the paper, and may miss important structural and spatial dimensions of social capital – the racial/ethnic diversity and segregation of the neighborhood residents.

Among the three neighborhoods, the diversity index is the lowest (0.35) in the Upper West Side and the highest (0.61) in Flushing (Table 7). The hub has a medium diversity index (0.44) that is still much lower than that in Flushing. The Flushing neighborhood is much more diverse than the Upper West Side as well as the Hub. The chance of finding two residents with different racial/ethnic backgrounds in Flushing is almost twice that in the Upper West Side. Furthermore, the Upper West Side is higher in the racial/ethnic segregation index (0.16) than Flushing (0.10) and is more segregated. Given the racial/ethnic compositions of these two neighborhoods, residents with different racial/ethnic backgrounds have much more chance to interact in Flushing than in the Upper West Side because of the spatial distribution of these residents within the neighborhoods.

To further illustrate the different diversity and segregation in the three neighborhoods, the racial/ethnic compositions of the census tracts completely or partially within the three neighborhoods are mapped (Fig. 6 to 8). In the Upper West Side, the population in census tracts is predominantly white (Fig. 6), with only small percentages as Asian, Hispanic and black. The Hispanic and black percentages of population increase slightly towards the West Harlem (northeast) direction, but the white percentage is more than all the other groups combined in every census tract. In the Hub, the racial/ethnic groups are only Hispanic and black, with no noticeable presence of white or Asian. Segregation is obvious (Fig. 7). Compared to these two neighborhoods, the census tracts in Flushing are much more diverse in population and less segregated (Fig. 8). They mostly have an obvious presence of the four major racial/ethnic groups. Some (such as census tracts 0383 and 0845) have close to even distribution of the four groups. There is a strong presence of Asians in Flushing, but the extent is much less than that of

the whites in the Upper West Side. In fact, there is more white than Asian in a few census tracts in Flushing, such as census tracts 0889.01, 0907, and 0383.

We believe that the extents of racial/ethnic diversity and segregation reflect the level of social capital in these neighborhoods. The high diversity and the low segregation indices in Flushing are results of coexistence and mixing of different racial/ethnic groups within the neighborhood and are indications of high level of bridging social capital. It is likely that without a high level of bridging social capital, the diverse Flushing residents would not have coexisted peacefully and successfully in the neighborhood. The bridging social capital was established in the long process of Flushing residents interacting, understanding and adjusting to each other, in which the diversity in Flushing created demands for social interaction and connections and the low segregation facilitated them by minimizing the spatial friction. To some extent, the diversity and segregation indices function like Ullman's complementarity and transferability principles in spatial interaction (Wheeler & Mitchelson 1989). While these two principles convey the need and ease of trade between two places, the diversity and segregation indices in this study measure the need and ease of social interaction and connections among racial/ethnic groups. The high diversity and low segregation indices in Flushing indicate a neighborhood environment that cultivates social interaction and connections and helps build social capital. The diversity and segregation indices represent the structural and spatial dimensions of social capital that are collective in nature and may not be measured by conventional indicators, as those used in the survey, that stress the individual benefits of social capital.

The diversity and bridging social capital in Flushing contribute to the high volume of branch library use. Residents with different racial/ethnic backgrounds not only use the library to understand each other and reduce tensions, but more importantly assimilate into American society through participating in language programs and business workshops, reading newspapers and using reference books and Internet, to name a few. Meanwhile, the use of the Flushing Library helps build more social capital in the neighborhood. Table 3 clearly shows that there were many more special programs in Flushing Library than in St. Agnes and Woodstock Libraries. In contrast to two in Woodstock and 16 in St. Agnes, there were 50 special programs in Flushing Library in a typical month. These special programs and other uses of the Flushing Library facilitate more and stronger social connections. Using Flushing Library and building social capital have been intertwined and reinforced with each other in the process of developing a diverse Flushing neighborhood.

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Conclusions

Through a case study of three New York City neighborhoods, this study explores the use of social capital in understanding the geographical variation in public library use. There is evidence that social capital affected branch library use in the three neighborhoods and could provide a framework, among many existing ones, to understand the geographical variation in public library use. The Upper West Side provides a good example of how social capital in a neighborhood promotes public library use, while in a disadvantaged neighborhood such as the Hub with a low level of social capital, the branch library is underutilized. Meanwhile, the survey result that Flushing has a medium level of social capital among the three neighborhoods points to other social capital indicators, such as racial/ethnic diversity and segregation indices, in contributing to the most intense public library use in the Flushing Library. These two indices are especially useful in capturing the social interaction and connections among different racial/ethnic groups in Flushing and linking bridging social capital to the intense use of the Flushing Library.

This study contributes to geographic research by describing how social capital can enhance understanding of geographic variation in public library use and by highlighting important structural and spatial dimensions of social capital. In addition, the analysis of the relationship between public libraries and social capital brings a new perspective to library science by going beyond the human, economic, and cultural capitals traditionally considered. Furthermore, the study contributes to the social capital literature by suggesting two new dimensions, the structural and spatial dimensions, to the measurement of social capital. In Putnam's work (1995, 2000) and the Social Capital Community Benchmark Survey (Saguaro Seminar 2005) as well as our own survey, almost all indicators used to measure the level of social capital were based on individual responses. These individual responses may be excellent in measuring the individual benefits of social capital, but not enough to measure the collective benefits of social capital that are much more important to this neighborhood study. This finding is consistent with DeFilippis' (2002) argument in the social capital literature that aggregate individual gains are not synonymous with collective benefits of social capital. Our structural and spatial dimensions of social capital measurement, in the forms of racial/ethnic diversity and segregation indices, are collective in nature and measure the composition and spatial relationship of racial/ethnic groups in a neighborhood. They complement our survey indicators in gauging the levels of social capital in the three New York City neighborhoods and are especially useful in aligning the level of social capital to branch library use in Flushing.

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Tables and Figures

Table 1

Table 1. Descriptive statistics of survey respondents in three neighbourhoods.

| | The Upper West Side (%) | The Hub (%) | Flushing (%) |
|-------------------|-------------------------|-------------|--------------|
| Gender: | | | |
| Male | 43.44 | 44.68 | 43.90 |
| Female | 55.74 | 55.32 | 54.88 |
| Age: | | | |
| 18–30 | 18.03 | 27.66 | 20.73 |
| 31–50 | 46.72 | 51.06 | 48.78 |
| > 50 | 35.25 | 19.15 | 29.27 |
| Education: | | | |
| < 12th grade | 0.82 | 19.15 | 4.88 |
| High school | 4.92 | 21.28 | 17.07 |
| Some college | 15.57 | 36.17 | 23.17 |
| Bachelor | 39.34 | 12.77 | 36.59 |
| Graduate | 36.89 | 8.51 | 17.07 |
| Household Income: | | | |
| < 25,000 | 10.66 | 48.94 | 45.12 |
| 25,000–49,999 | 20.49 | 25.53 | 28.05 |
| 50,000–74,999 | 13.93 | 12.77 | 9.76 |
| > 75,000 | 41.80 | 0 | 9.76 |

Note: Percentages for each variable do not sum up to 100% because 'No answer' is not listed.

Table 2

Table 2. Circulation in three neighbourhood branch libraries.

| | Circulation | Circulation per capita |
|---|-------------|------------------------|
| St. Agnes/The Upper West Side | 256,904 | 4 |
| Woodstock/The Hub | 49,648 | 1 |
| Flushing/Flushing | 1,556,932 | 29 |
| Average for 200 Branches in New York City | 172,073 | 4 |

Table 3

Table 3. *Special programmes in three branch libraries for June 2005.*

| Special programmes | St. Agnes | Woodstock | Flushing |
|------------------------------------|---------------------|-----------|---------------------------|
| | The Upper West Side | The Hub | Flushing |
| Children: | 10 | 2 | 19 |
| Story & reading | 4 | 1 | 13 |
| Film | 5 | 0 | 4 |
| Arts & crafts | 1 | 1 | 2 |
| Adults: | 6 | 0 | 31 |
| Workshop | 1 | 0 | 12 (8 health, 4 business) |
| Film | 5 | 0 | 1 |
| Book discussion group | 0 | 0 | 3 |
| Learning library online catalogue | 0 | 0 | 9 |
| Tour of Flushing Library | 0 | 0 | 2 |
| Friends of library meeting | 0 | 0 | 1 |
| Tour of Flushing Chinese Community | 0 | 0 | 1 |
| Others | 0 | 0 | 2 |
| Total | 16 | 2 | 50 |

Sources: [New York Public Library \(2005\)](#); [Queens Borough Public Library \(2005a\)](#).

Table 4

Table 4. *The number and percentage of survey respondents for types of library use in the three branch libraries.*

| Types of library use | St. Agnes | | Woodstock | | Flushing | |
|----------------------------|---------------------|-----|-----------|-----|----------|-----|
| | The Upper West Side | | The Hub | | Flushing | |
| | Persons | (%) | Persons | (%) | Persons | (%) |
| Recreational reading | 66 | 54 | 26 | 55 | 46 | 56 |
| Specific information need | 43 | 35 | 15 | 32 | 38 | 46 |
| Internet | 17 | 14 | 14 | 30 | 22 | 27 |
| Newspaper | 8 | 7 | 8 | 17 | 15 | 18 |
| Get books for children | 17 | 14 | 10 | 21 | 22 | 27 |
| Videos | 25 | 20 | 7 | 15 | 26 | 32 |
| Computer software programs | 3 | 2 | 4 | 9 | 5 | 6 |
| Volunteering | 1 | 1 | 1 | 2 | 1 | 1 |
| Others | 12 | 10 | 1 | 2 | 4 | 5 |
| Do not use | 13 | 11 | 6 | 13 | 2 | 2 |
| Number of respondents | 122 | | 47 | | 82 | |

Source: Authors' own survey, 2002.

Table 5

Table 5. *The convenience of the three branch libraries.*

| | St. Agnes | | Woodstock | | Flushing | |
|-----------------|---------------------|-----|-----------|-----|----------|-----|
| | The Upper West Side | | The Hub | | Flushing | |
| | Persons | (%) | Persons | (%) | Persons | (%) |
| Convenient | 114 | 94 | 40 | 85 | 80 | 98 |
| Close to home | 100 | 82 | 36 | 77 | 64 | 78 |
| Close to work | 11 | 9 | 4 | 9 | 9 | 11 |
| Close to school | 4 | 3 | 1 | 2 | 7 | 9 |
| Not convenient | 4 | 3 | 6 | 13 | 2 | 2 |
| No answer | 4 | 3 | 1 | 2 | 0 | 0 |
| Total | 122 | 100 | 47 | 100 | 82 | 100 |

Source: Authors' own survey, 2002.

Table 6

Table 6. *Social capital in the three neighbourhoods.*

| | The Upper West Side | | The Hub | | Flushing | |
|---|---------------------|-----|---------|-----|----------|-----|
| | Persons | (%) | Persons | (%) | Persons | (%) |
| Political participation: | | | | | | |
| Voted in the last presidential election | 93 | 76 | 27 | 57 | 40 | 49 |
| Signed a petition in the past year | 53 | 43 | 17 | 36 | 15 | 18 |
| Civic participation: | | | | | | |
| Belong to a club | 28 | 23 | 2 | 4 | 13 | 16 |
| Belong to a community organisation | 28 | 23 | 8 | 17 | 14 | 17 |
| Belong to a sports league | 13 | 11 | 2 | 4 | 2 | 2 |
| Read a newspaper daily | 85 | 70 | 30 | 64 | 59 | 72 |
| Belong to a house of worship | 23 | 19 | 17 | 36 | 28 | 34 |
| Cultural participation: | | | | | | |
| Attended a movie in the past year | 100 | 82 | 28 | 60 | 59 | 72 |
| Attended a museum in the past year | 105 | 86 | 19 | 40 | 45 | 55 |
| Attended a musical performance in the past year | 82 | 67 | 9 | 19 | 36 | 44 |
| Attended a theatre in the past year | 88 | 72 | 16 | 34 | 27 | 33 |
| Workplace connections: | | | | | | |
| Working more than 30 hours/week | 86 | 70 | 18 | 38 | 43 | 52 |
| Not working | 21 | 17 | 13 | 28 | 19 | 23 |
| Volunteering: | 47 | 39 | 10 | 21 | 24 | 29 |
| Number of survey respondents | 122 | | 47 | | 82 | |

Source: Authors' own survey (2002).

Table 7

Table 7. Diversity and segregation indices in the three neighbourhoods.

| | Diversity index | Segregation index |
|---------------------|-----------------|-------------------|
| The Upper West Side | 0.35 | 0.16 |
| The Hub | 0.44 | 0.17 |
| Flushing | 0.61 | 0.10 |

Source: Calculated from [US Census Bureau \(2002\)](#).

Figures

Fig. 1

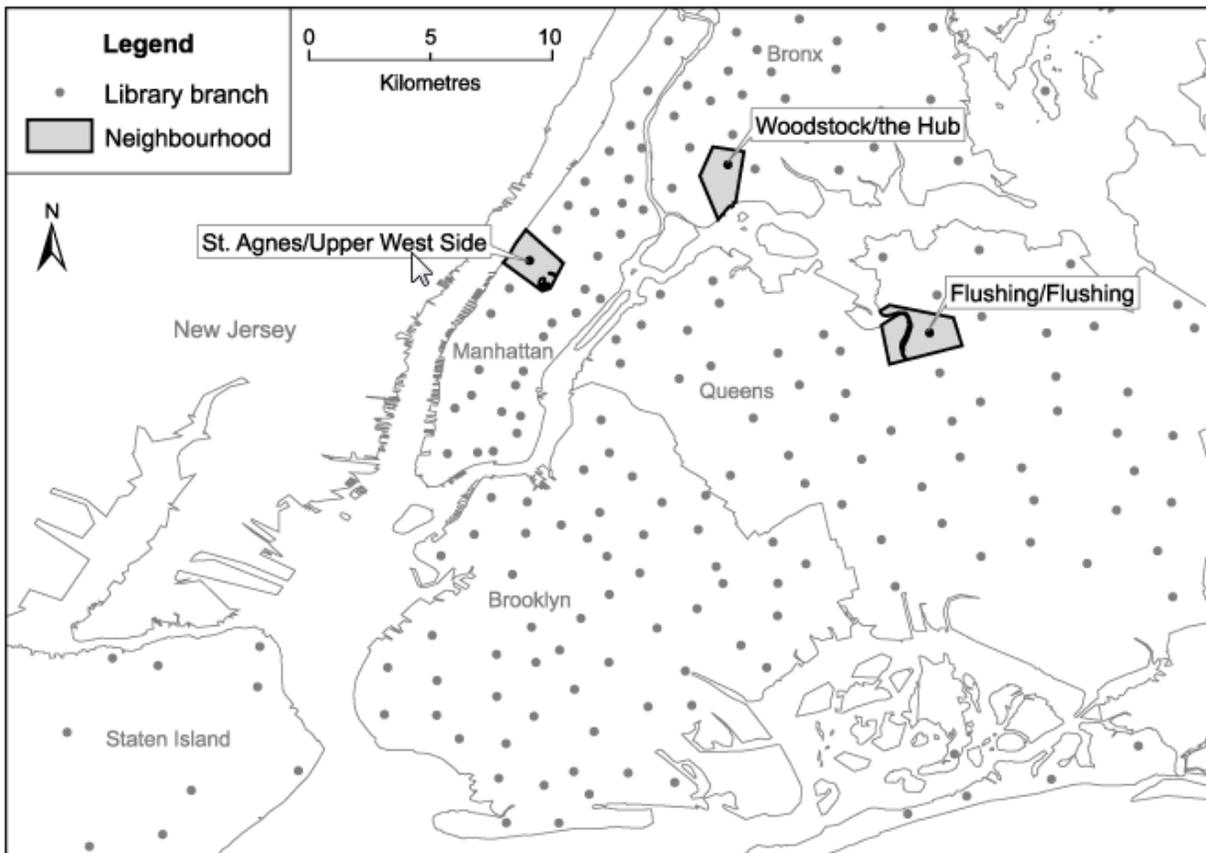


Figure 1. Public branch libraries in New York City.

Fig. 2



Figure 2. Woodstock Library and its vicinity.

Fig. 3



Figure 3. Flushing Library and its vicinity.

Fig. 4

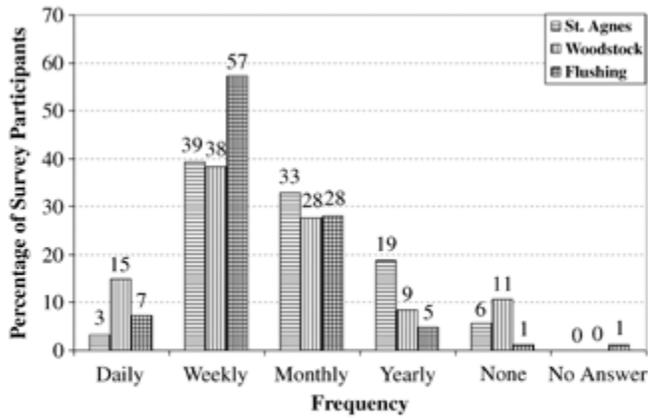


Figure 4. Frequency of public library use in three New York City neighbourhoods.

Fig. 5

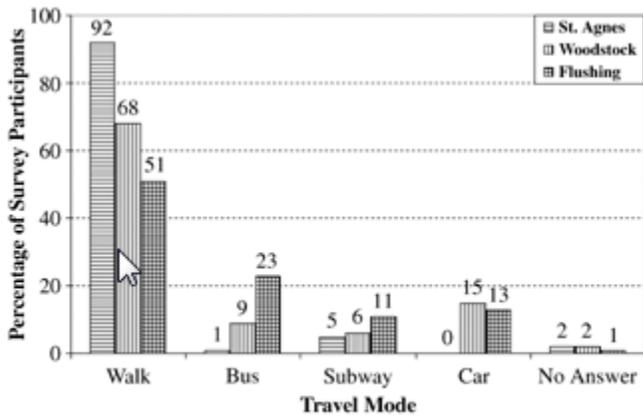


Figure 5. Modal share of visiting the three branch libraries.

Fig. 6

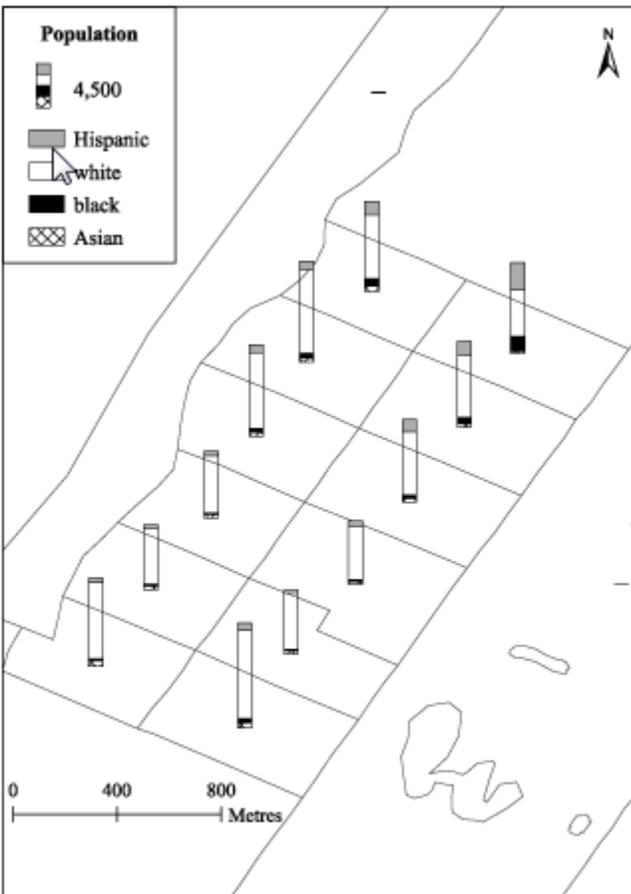


Figure 6. Racial/ethnic composition of the population in census tracts in the Upper West Side.

Fig. 7

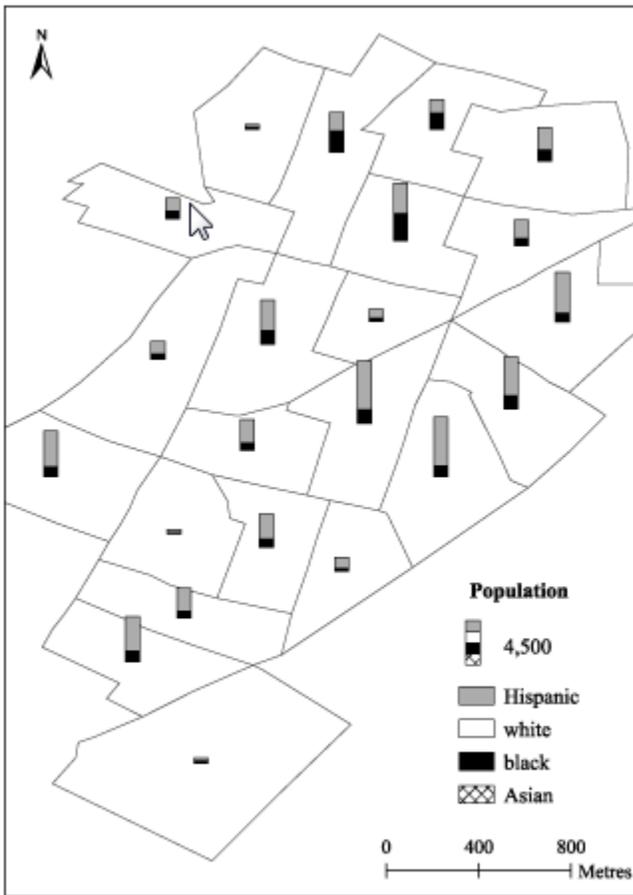


Figure 7. Racial/ethnic composition of the population in census tracts in the Hub.

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Fig. 8

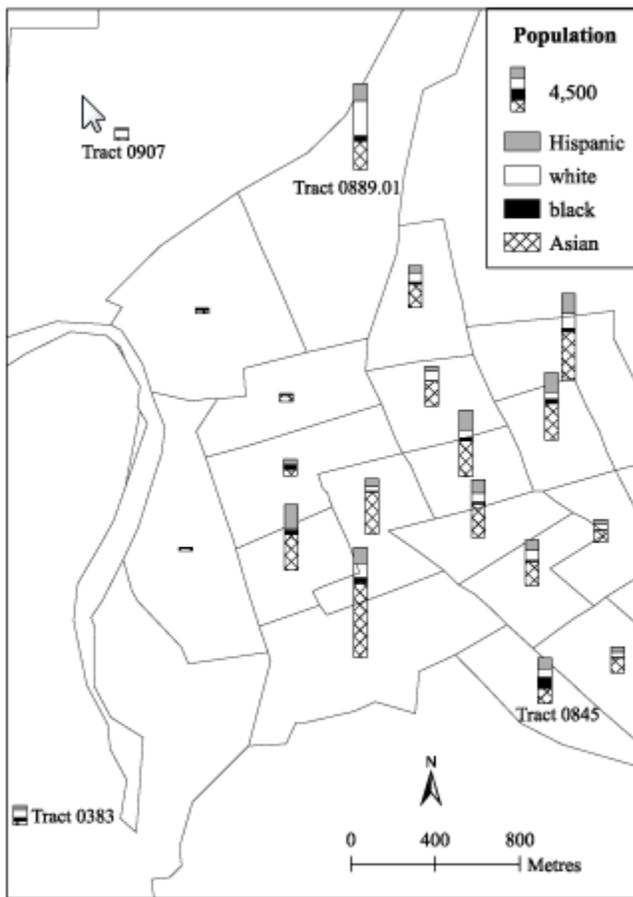


Figure 8. Racial/ethnic composition of the population in census tracts in Flushing.

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Notes

1. For a more detailed explanation of how neighborhoods are defined, why circulation is used to measure public library use, and how census tract data are apportioned and aggregated into neighborhoods, see Japzon & Gong (2005). As part of a broader library project, this study uses many concepts and data in ways consistent to the broader project.

2. According to the 1991 National Household Education Survey (Scheppke 1994), 76 per cent of the children between the age of five and eight (83% between seven and eight) went to the public library in the previous year, much higher than those of other age groups (for example, about one third of adults over 65 and two thirds of 18- to 24-year-olds).

3. These aspects of library use were derived from the federal-state cooperative system for public library data survey (US National Commission on Libraries and Information Science 2003) and a Clarion University survey (Vavrek 2000).

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