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Collaborative Property Condition Assessment for Neighborhood Change: An Example of "Community Geography" in Buffalo, New York

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Abstract

Community organizations and stakeholders engaged in neighborhood stabilization through housing and real property acquisition, development, and management are served well by accurate, reliable property data. However, these needs present organizations and stakeholders with at least three key challenges: (1) data access and acquisition; (2) technical expertise; and (3) financial costs. At the same time, institutions of higher education with embedded expertise in geographic information systems (GIS) offer a potential partner to help community organizations and stakeholders overcome these three challenges. In the West Side neighborhood of Buffalo, NY, housing organizations that once found relatively affordable and quality housing are finding it financially challenging to compete for properties as demand and prices increase. The authors collected and analyzed property data to assist a community-based organization in understanding the housing market in its neighborhood to support their need for better data-driven decision-making. The authors developed and utilized a simple, effective, and cost-efficient method to collect property conditions in the field; conducted analyses of the data; and created an easy-to-use web-based mapping tool.

Keywords

community development; affordable housing; community geography; geographic information systems; data collection

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Introduction

Community-based organizations (CBOs) that focus on local housing issues require accurate and reliable real property data for many of their essential functions, including community planning, programming, and applying for grant funding. Many such organizations aim to stabilize and improve their neighborhoods through housing redevelopment, property acquisition, and affordable housing provision. Access to property data and information thus empowers these organizations by supporting their strategic planning and decision-making activities (Sawicki & Craig, 1996).

As it stands, the largest repositories of high-quality real property data in the U.S. are often local governments. Municipal and county agencies, especially tax assessors, maintain micro-level databases. These databases track individual real property tax parcels, which are linked to precise geographic boundaries, ownership records, taxable values, zoning classes, and other fundamental attributes that enable community practitioners to describe and analyze local real property conditions. Moreover, these databases tend to be updated on rolling bases, so that changes in conditions can be evaluated over time (e.g., Weaver, 2014). Somewhat problematically, however, no uniform national standards exist to govern the ways in which local governments store and make available these data. Thus, although there appears to be a trend toward "open data" portals in many large U.S. cities, real property data inaccessibility is still a major challenge for housing-oriented CBOs and other community researchers and practitioners (e.g., Kingsley, Coulton, & Pettit, 2014).

Furthermore, even when real property data are readily available from local governments, the data are generally created for agency-specific purposes. In this way, the data may not provide detailed (or any) information on issues important to housing CBOs, such as vacancy, blight, or community perception (e.g., Kingsley et al., 2014). For that reason, several well-funded community partnerships have performed large-scale property inventories to identify these and related conditions. Two examples are the Trenton, NJ Vacant Property Inventory (TVPI) (http://www.restoringtrenton.org/) and the Motor City Mapping (MCM) project in Detroit, MI (https://www.motorcitymapping.org). TVPI is a comprehensive, parcel-level survey of vacant properties in Trenton, the data from which are mapped, published, and regularly updated on an interactive mapping website. TVPI resulted from an intentional collaboration between local agencies, activists, and policy advocates that were working on vacant and abandoned properties. MCM is also an online data-mapping portal featuring multiple (specialized) property variables that resulted from a complete survey by 150 Detroit stakeholders and included property information and photographs.

While the TPVI and MCM offer models for housing-oriented CBOs to follow, it is important to note that replicating such efforts is costly. Comprehensive property surveys and the creation of online data portals clearly require financial capital; but they presumably also require inputs of more intangible forms of capital, such as social (with respect to community participation in surveys) and human (in terms of knowledge required to, among other things, collect and publish data). As such, not all CBOs have the internal capacity and expertise to facilitate these projects. Accordingly, it is useful to explore ways of creating and democratizing specialized neighborhood property data with fewer inputs. In the remainder of this paper, we describe one such exploration—a community geography exercise—from a distressed, but gentrifying, neighborhood in Buffalo, NY. More precisely, the authors collaborated with the Buffalo Neighborhood Stabilization Corporation (BNSC) to create geospatial data and databases to support organizational efforts to strengthen and stabilize Buffalo's West Side.

Three Major Data-Related Challenges Facing Housing CBOs

To summarize the preceding section, at least three key data-related challenges face CBOs that work on housing issues:

1. Data availability.
Open data and data sharing is growing in many cities, but there are still places where local organizations have limited or restricted access to important data. And in some domains, important data are unavailable.

2. Technical expertise and organizational capacity.
Many CBOs do not have the internal technical expertise and/or capacity to collect, manage, and analyze large neighborhood datasets.

3. Cost.
A universal truth in community development practice is that funding is limited; hence, funds are not always available for data collection and analysis. The cost of obtaining commercial Geographic Information System (GIS) software for such projects is particularly burdensome, with a single use license for ArcGIS Desktop software costing $1,500.

Notwithstanding that [housing] CBOs are pivotal players in the landscape of community development (Green & Haines, 2015), when they are unable to adequately overcome the above challenges, the voices of such institutions can be softened or distorted in local political and decision-making processes and deliberations. One promising means for avoiding such outcomes and breaking down barriers is for CBOs and their constituencies to collaborate with local colleges/universities that can augment a CBO's existing capacities and human capital.

While university-community collaborations have a long history, the growing subfield of community geography shows movement in this line of work. In short, community geography is:

> [A]n emerging subfield of geography that...[seeks] to enhance long-term community planning and decision-making by engaging residents, governments, and organizations...in geospatial problem-identification and problem-solving (Hawthorne, Atchison, & LanBruttig, 2014: 221; emphasis added).

More specifically, community geography is "a field of inquiry in which research topics and questions are proposed by community members, groups, and organizations" (Robinson, 2010, p. 6). The overarching goal of this variety of citizen science is to:

> [C]reate spatial knowledge that [can be used] to affect positive community change, in a variety of ways, whether it is to visualize challenges and assets, improve service delivery, or more accurately identify geographic disparities (Robinson, 2010: 6; emphasis added).

Thus, community geography brings the science and technologies of geography to bear on collaborative community-based research partnerships. Above all, such partnerships adhere to the core community development principles of: representative, inclusive, and democratic processes; public education; self-help; leadership development; action research; and building sustained capacity (TX CGC, n.d.). At least one community-based partner institution must be engaged in a community geography collaboration; this partner institution shares a commitment to these principles.

For the present article, a partner was found in a housing-oriented CBO rooted in the West Side of Buffalo, NY. Explicitly, the Buffalo Neighborhood Stabilization Company (BNSC) is a "non-profit housing corporation dedicated to creating affordable housing units on...Buffalo's West Side" (PUSH, n.d.-a). Among the activities central to BNSC's mission are: (1) increasing access to quality, affordable housing; (2) making localized investments into infrastructure and rehabilitating vacant lots; (3) preventing gentrification and displacement of longtime residents; (4) promoting public education of local housing issues; and (5) strategically acquiring vacant housing and vacant lots for coordinated redevelopment purposes (PUSH, n.d.-a).

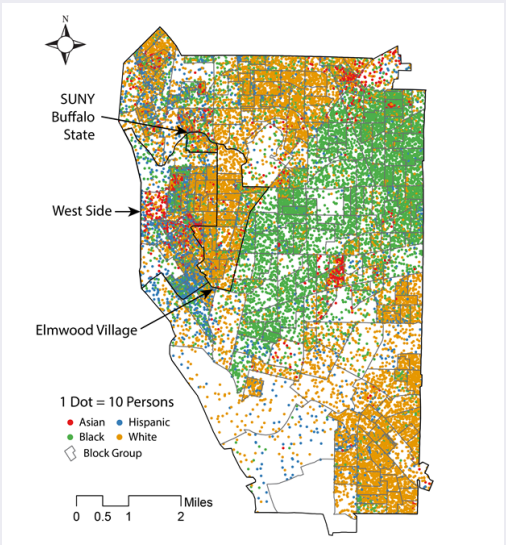
Recognizing that timely and reliable property data are thus essential to the BNSC's mission, researchers affiliated with the Geography and Planning Department at the State University of New York (SUNY) Buffalo State—an anchor institution rooted in close proximity to Buffalo's West Side—opened discussions with BNSC about opportunities for a community geography collaboration. The resulting project, many details of which are explicated below, involved field-based spatial data collection, geodatabase development, geovisualization, and spatial analysis.

Project Context: Buffalo and its West Side

Buffalo, NY is a classic case of urban decline, racked by decades of depopulation, disinvestment, and physical deterioration. Since 1950, the city has shed more than 50.0 percent of its population, and, as a result, demolished thousands of abandoned structures in hollowed out neighborhoods. It is one of the most impoverished large cities in America, with an overall poverty rate of 33.0 percent and a 53.9 percent poverty rate for children 17 and under (Rey, 2016; U.S. Census Bureau, 2015b). Buffalo remains one of the most racially and ethnically segregated cities in the United States (Frey, 2015), perhaps with the exception of the relatively diverse West Side neighborhood (Figure 1; see below).

Figure 1

Race and ethnicity by census block group in the City of Buffalo. Data sources: City of Buffalo Office of Strategic Planning (2002), U.S. Census Bureau (2015b).



That said, in spite of its overall decline, many of Buffalo's neighborhoods are currently experiencing comebacks led by: demand for amenity-rich, walkable urban living (DiNatale, 2014; Sommer, 2016); significant influxes of public dollars supporting downtown housing (Sommer, 2016); and job growth on a highly-subsidized downtown medical campus (Watson, 2015). Arguably, though, the greatest neighborhood success story is the Elmwood Village (Figure 1). Elmwood consists of large, architecturally unique homes that straddle a vibrant commercial corridor filled with bars, restaurants, and shops. In 2007, it was named a Top 10 Neighborhood by the American Planning Association (APA, 2007). Real estate prices in Elmwood have increased rapidly in recent years, with bidding wars and cash purchases commonplace and access for many now out of reach (Epstein, 2014).

The West Side and the BNSC

The effects of upward residential prices and rising demand in Elmwood appears to be spilling over its western border and into the adjacent West Side neighborhood (Figure 1). Indeed, the West Side is now squarely in the crosshairs of buyers interested in urban living but unable to afford homes in nearby Elmwood and other high demand neighborhoods (WBFO, n.d.). In the last few years, for instance, the West Side has become one of the hotter housing markets in the city for millennials and young professionals seeking to purchase low cost (but often costly-to-rehabilitate) homes that offer the promise of amenity-rich urban living (Epstein, 2016).

As such patterns of reinvestment, which are largely driven by outsiders, continue to explode, long-term residents and neighborhood stakeholders are being forced to engage issues of gentrification and related challenges (WBFO, n.d.). Historically, Buffalo's West Side has been a distressed neighborhood—home to lower income individuals of multiple ethnicities, as well as thousands of refugees (PUSH, n.d.-b). With respect to the latter, since 2003, more than 10,000 refugees have settled in Buffalo, mainly on the West Side (Ali, 2016). As rents and sale prices increase, these ethnic enclaves that function as support systems could potentially be broken apart. For these and related reasons—both of gentrification and of property stabilization and redevelopment—organizations like the Buffalo Neighborhood Stabilization Corporation (BNSC) have established themselves as key community-based development entities on the West Side.

Among the many, diverse CBOs on Buffalo's West Side, arguably the most prominent is the BNSC. Founded in 2009, BNSC's core mission is to develop and provide affordable housing units, while working in other capacities to stabilize the West Side's property stock and make the neighborhood a high quality living environment for all of its existing residents (PUSH, n.d.-a). Toward those ends, in its signature community plan, BNSC declares a commitment to utilize "all available public and private sources to continue property acquisition to ensure a constant pipeline of available properties for new projects" (PUSH & BNSC, n.d.)

BNSC's extant property acquisition strategy has relied heavily on the City of Buffalo's tax foreclosure auction, as well as properties in the City's inventory and to a lesser extent the private market. In the meantime, demand for property in the neighborhood continues to escalate, rendering the supply of properties, especially at the once cost-friendly City tax foreclosure auction, very low. At its inception, which coincides with the collapse of the housing market and subsequent recession, BNSC was able to acquire properties relatively cheaply as demand for the neighborhood and these distressed auction properties was low. This allowed BNSC to have numerous options to bid on at auction, being selective in acquiring properties with lower acquisition and redevelopment costs.

Since BNSC's founding in 2009, however, City tax auctions have seen an evident drop in the supply and increase in the costs of West Side properties. In 2009, 102 of 191 (53.4%) of properties in BNSC's neighborhood (Figure 1) were sold. The highest sale was $80,000 but 90 of the 102 (88.2%) properties sold for less than $10,000. BNSC acquired 14 properties for a total of $33,200, an average of $2,371. By the 2015 tax auction, the number of properties at auction dropped to 60. Unlike just six years early when 47% of the property went unsold, only four (6.6%) went unsold. As it turned out, BNSC struck out at the auction in 2015, getting outbid on each property it sought to acquire. In 2016, BNSC was only able to acquire two properties from the auction.

On that backdrop, BNSC realized that it needed to update its property acquisition strategy to reflect existing market conditions in a once unsung neighborhood. The financial formula for BNSC had relied on leveraged low acquisition costs to offset high redevelopment costs. With limited funding, increases in acquisition costs—and reduced success of acquiring auction properties—inevitably undermine BNSC's goal of providing a continuous stream of affordable housing units. Consequently, BNSC wished to explore possibilities linked to purchasing properties directly from the City, and/or competing in the private market. If the organization was to be effective in these markets, however, it needed access to high-quality and timely property data, beyond that available from City agencies. As such, BNSC saw value in collaborating with SUNY Buffalo State to acquire, map, and analyze on-the-ground property data as a means to inform their decision-making processes.

Community Geography in Action

Prior to the kickoff of the community geography project, BNSC discovered that access to real property data from the City of Buffalo is limited to a rudimentary parcel-viewer that offers simple data on ownership, land use, assessed value, and other characteristics. It and other publicly accessible data are not particularly useful for CBOs that would like to analyze collections of parcels, such as their neighborhoods (Gee, 2015), as they do not offer the ability to download batch data. More so, the City's platform does not keep data on vacancy, property conditions, or tax foreclosure auction results, all of which would allow users like BNSC to improve their geospatial problem-identification and problem-solving abilities.

On a related note, Buffalo is somewhat notorious for guarding its data, often only releasing data in response to lawsuits (Keith, 2015). The Empire Center for Public Policy, an Albany, NY-based government accountability organization, issued Buffalo an F grade for its open data efforts (Keith, 2014)[1]. New York's other large upstate cities also fared poorly, with Albany and Syracuse earning Fs as well and Rochester earning a D. Together, these factors conspire to ensure that the BNSC faces the first of the key data-related issues identified above: data availability. The remaining two challenges—concerning technical expertise and cost, respectively—further limited BNSC's ability to unilaterally seek data options apart from the City's rudimentary parcel viewer. As such, a mutually beneficial community geography collaboration was born. SUNY Buffalo State researchers partnered with the BNSC to overcome fundamental data challenges in the following ways:

- Data availability. The community geography team identified priority variables that would help inform BNSC strategy.
- Technical expertise and organizational capacity. SUNY Buffalo State provided student labor, as well as computer hardware and software, to collect and organize the desired data in the field. The primary data were collected specifically to support BNSC's self-identified goals and objectives.
- Cost. SUNY Buffalo State researchers used in-house and grant support to provide the aforementioned expertise and technological resources. In total, the financial cost to Buffalo State was $5,300: $4,800 in an undergraduate research grant to fund a student data collector, and $500 in field data collection equipment. The upshot is that effective community geography collaborations can be funded on relatively small budgets.

In order to choose the variables on which it needed the community geography team to collect data, the BNSC identified five key questions:

1. Where and how many vacant structures are in West Side?
2. What are the property conditions like in the West Side?
3. Where are the properties that have sold since 2009 at the City tax foreclosure auction?
4. Where are the properties the City has demolished in the West Side?
5. Where are all City-owned properties?

To date, the student data collectors have gathered data with respect to these questions; however, the deliverables and analyses completed thus far relate exclusively to questions 1 and 2. Accordingly, the remainder of the paper sketches out the key data products that were delivered to BNSC with respect to these two questions.

Field Data Collection

To build the data collection tool, the collaborators discussed the BNSC's specific needs, and also surveyed "best practices" from similar property mapping projects conducted in cities experiencing similar problems as the West Side (Drake, Ravit, & Lawson, 2016; Forrest, 2015; Western Reserve Land Conservancy, 2015; Western Reserve Land Conservancy & Loveland Technologies, 2015). Subsequent to these proceedings, the project came to life as follows.

First, the team agreed that a mobile GIS application called Collector for ArcGIS was well-suited to its data collection needs. Specifically, mobile "apps" such as Collector allow project participants to collect data in the field quickly and in a consistent fashion. The goal was to record property characteristics in the field by editing an interactive map, within the Collector app, that displays the boundary and street address of each parcel (Fig. 2). The team wished for surveyors to be capable of touching a given parcel on an iPad to call up a data entry box for that parcel. From there, observations made from the public right-of-way (i.e., sidewalk or street) would be entered for a set of specific questions using drop-down menus, comments would be entered into a text box, and a picture would be taken for the parcel. Additionally, a mobile Wi-Fi device was desired to allow for live data synchronizing in ArcGIS Online. This specification would enable surveyors to track their progress on the street and view real-time progress both in the field and online through a web-based map.

[1]As this paper was being finalized, the Buffalo Mayor called for an open data law, although specifics on that proposal have yet to emerge (Schulman, 2017).

With the mobile app's architecture decided, the team next had to think through the precise property characteristics to be collected. To this the collaborators determined that a useful starting point would be classifying each parcel as either containing a structure or not containing a structure (Fig. 3). Following that straightforward classification, surveyors would be asked to impute one of several perceived property uses (e.g., residential, commercial, industrial for "structure" type properties; vacant lot, park, parking lot for "no structure" type properties) for each parcel. At least one photograph was to be taken of the front of each property to support these (and any other) imputations.

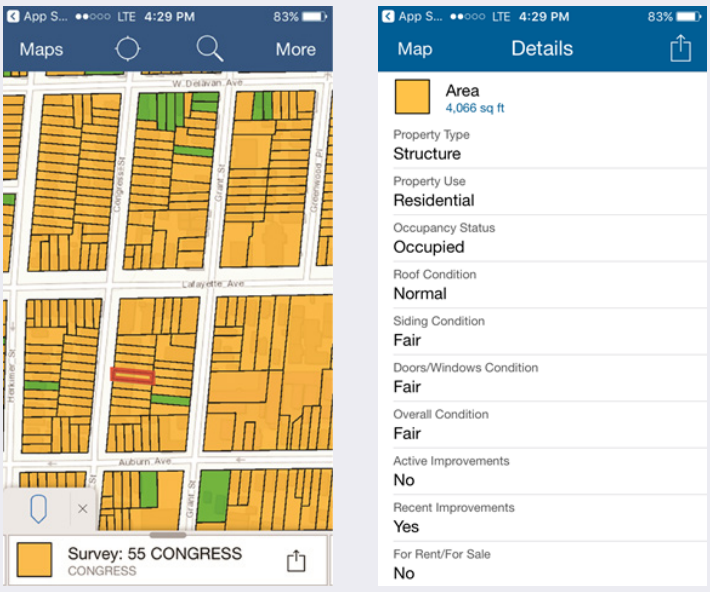
For lots containing structures, occupancy status and structure condition were desired data points. Properties with obvious signs of vacancy, such as boarded windows and doors, overgrown weeds, fire damage, foreclosure notices posted to the door, or structures that were open to the elements, were to be marked as unoccupied. Unoccupied structures that had their doors and windows securely boarded and locked were to be classified as "unoccupied and secured," while those with doors and windows un-boarded and open to potential vandalism or deterioration from exposure to the elements were to be classified as "unoccupied and unsecured" (Crump, 2003). Properties were to be marked occupied if any part of the structure had signs of occupation.

The community geography team felt that a well-established structure condition grading scale was needed to ensure that the property condition data would be reliable and valid, and so that the survey could be easily replicated to track changes in the neighborhood across time and space. The collaborators decided to adopt a property grading scheme used by the New York State Office of Real Property Services Assessor's Manual (NYSORPS, 2002), which is used by property tax assessors throughout the state to evaluate the exterior condition of structures[2]. Structure conditions were to be evaluated on a scale of one ("poor") to five ("excellent").

Following best practices, a structure's roof, siding, and doors and windows were to be assessed as individual components, and then an overall structure condition was assigned. Obvious evidence of recent or active major improvements to the structure (e.g., presence of building permits or new siding, paint, windows, or structural work) (Crump, 2003) was also to be recorded. For both "structure" and "no structure" properties, the presence of "for sale" or "for rent" signs, the number of street trees, and the presence of solar panels were requested, and other observations and information obtained from speaking with residents and neighbors were to be documented in a "notes" field in the mobile app.

A geodatabase was built in ArcGIS Desktop as a repository for field data. The 2015 tax assessment parcel polygon shapefile containing parcel addresses for the City was obtained from the Erie County Department of Environment and Planning's GIS Division. New fields were added to the feature class to record the field-collected parcel characteristics. Two parcel subtypes ("structure" and "no structure") and attribute domains for each of the fields were added to the feature class to generate the parcel classification scheme. Subtypes and domains help maintain data integrity by defining the allowable attribute values for different types of parcels, and they simplify data entry because these allowable values appear in drop-down menus for parcel characteristics in the collection application. The feature class was then shared as an editable feature layer in ArcGIS Online and a web map was configured to allow surveyors to view and edit the parcels on mobile devices

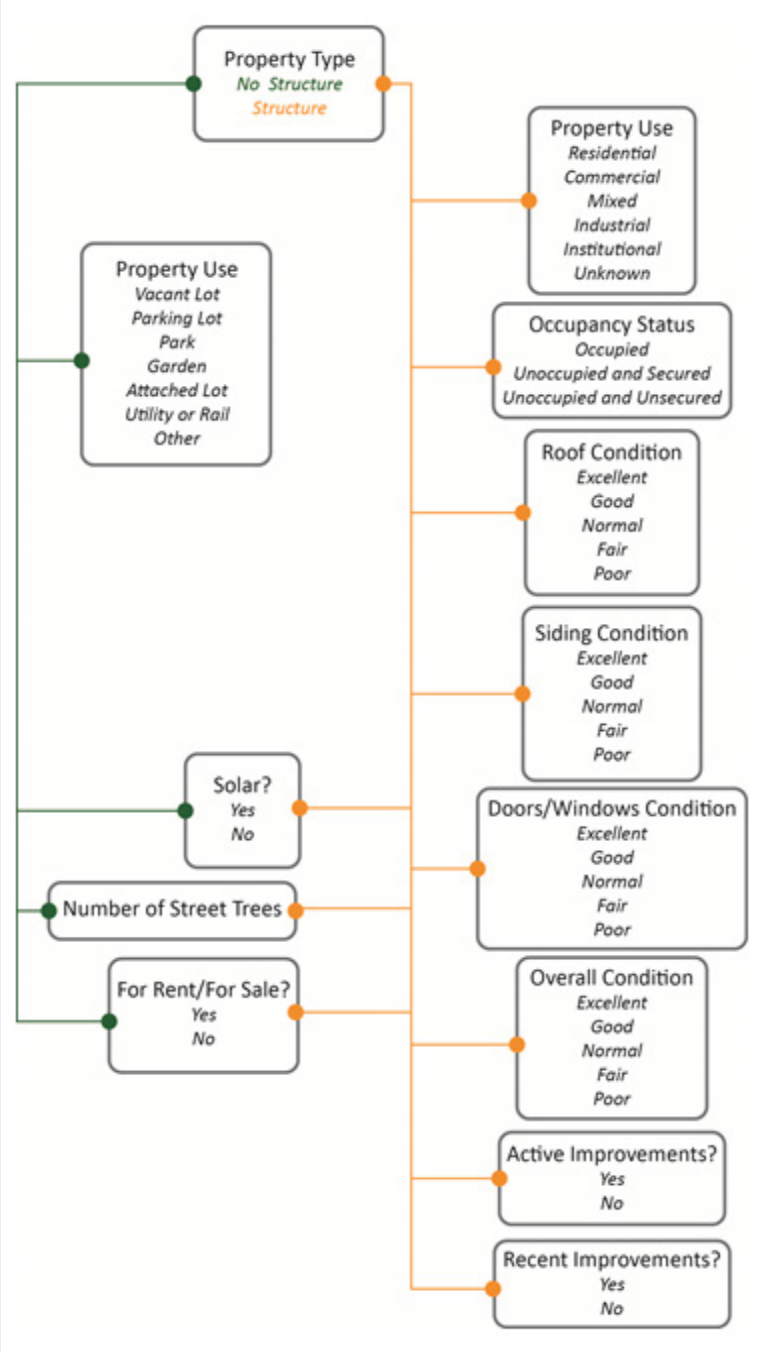
Figure 2
The Collector for ArcGIS map interface (left) and data input window (right).



through the free Collector for ArcGIS mobile app.

After survey criteria and characteristics were determined, data collection proceeded. Four surveyors from Buffalo State's Geography and Planning Department were involved in data collection. Some characteristics were directly observable, such as the number of street trees and the presence or absence of solar panels, "for sale" signs, and "for rent" signs. Other characteristics required the surveyor to make an informed judgment based on observations. To maintain objectivity and consistency among surveyors, a survey guide containing descriptions of each characteristic was developed for surveyors to reference in the field (see Appendix). A short classroom training session was also held whereby surveyors were shown pictures of representative structures for each structure condition, and new surveyors shadowed experienced surveyors prior to independent data collection to ensure that all surveyors were adhering to the same procedures and grading schemes and ensure properties were being evaluated accurately and consistently. Although neighborhood organizations and community members were not directly involved with data collection during this pilot study, the simple hardware (iPads or personal smartphones), software (free Collector app), and methods used allows for the survey to be replicated by organizations or stakeholders with minimal training required.

Figure 3
Property typology and characteristics collected in the field



[2]See the Appendix for the full property condition grading criteria adapted from the New York State Assessor's Manual.ipation. Journal of the American Institute of Planners

Data Collected to Date

In all, 5,143 parcels were surveyed between May and November 2015 out of 5,539 in the study area (Table 1). Of these, 4,563 parcels (82.4%) contained a structure. Of the 580 parcels with no structure present, 311 (5.6%) were "vacant lots". Figure 4 shows the geographic distribution of all structures by overall exterior condition. Structure conditions vary across the study area, with the best overall property conditions occurring along Richmond Avenue and adjacent streets, particularly in the northeast corner of the study area. These streets contain mostly "normal" and "good" condition properties. Property conditions generally deteriorate west of Richmond Avenue. There is also a cluster of "good" and newly-constructed "excellent" properties in the southeast portion of the study area between Massachusetts Avenue and West Ferry Street. This area is in transition and has very mixed structural conditions, with many "fair" and several "poor" structures alongside properties that have recently been rehabilitated or are actively being improved. Crucially, the area is part of the West Side's "Green Development Zone" (GDZ), where BNSC concentrates its affordable housing efforts and is widely recognized for its work. Many of the newly rehabilitated "good" and brand new "excellent" homes and apartments are properties that BNSC acquired and redeveloped.

Figure 4
Overall exterior condition for properties with a structure. Data source: Erie County Department of Real Property Tax Services (2015).

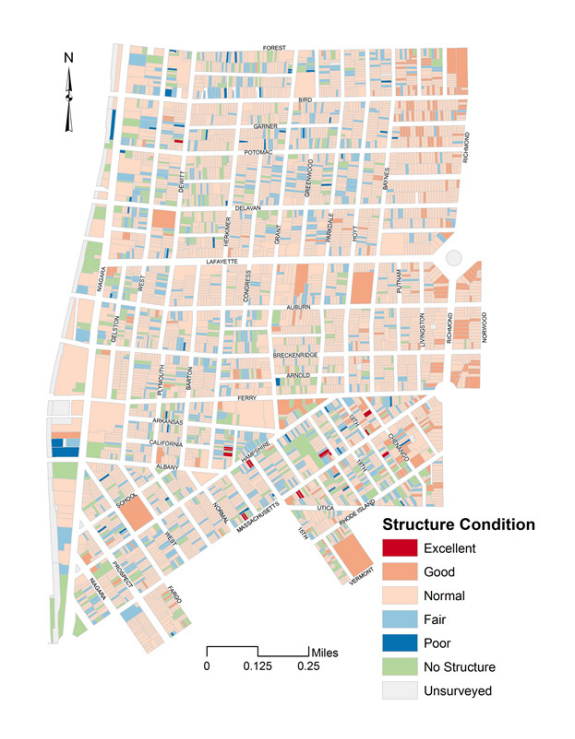


Table 1
Summarized survey results by parcel type

Parcel Type	Number of Parcels	Percent
PARCELS WITH A STRUCTURE	**4,563**	**82.4%**
Excellent condition	*15*	*0.3%*
Good condition	*268*	*5.9%*
Normal condition	*3,445*	*75.4%*
Fair condition	*777*	*17.0%*
Poor condition	*58*	*1.3%*
PARCELS WITHOUT A STRUCTURE	**580**	**10.5%**
Vacant lots	*311*	*5.6%*
Other lots (e.g. parks, parking lots, gardens):	*269*	*4.9%*
UNSURVEYED PARCELS	**396**	**7.1%**
TOTAL	**5,539**	**100%**

Developing an Accessible Web App

Following data collection, a web mapping application was developed to allow users to view the full property inventory data overlaid corresponding socioeconomic and housing information from US Census data. Presently, the web map is still in a pilot phase, and conversations continue with BNSC and other organizations to improve the user interface and identify additional secondary source data to be integrated. The end goal is for the application to become a robust community data repository and community engagement resource accessible to CBOs, activists, residents, and decision-makers.

The web app is on pace to be a useful tool for neighborhood groups to practice geospatial problem identification in the real property inventory, track property ownership (spatially), and visualize physical changes in the neighborhood over time. Further, it will allow organizations like BNSC to geographically target and, ultimately, evaluate the impacts of their community development efforts.

Challenges and Limitations

The data collection effort got off to a slow start due to unexpected challenges implementing the ArcGIS Online mapping application and using the iPads in the field. Transitioning between the desktop ArcGIS software, the ArcGIS Online platform, and the mobile app on the iPads was not as seamless as was originally expected, and several weeks of troubleshooting and testing the application in the field was required before the iPads were able to reliably display the survey and synchronize data.

The mobile app also had a tendency to freeze up in the field, which may have been caused in part by spotty Wi-Fi from the mobile Wi-Fi device used and the large size of the parcel feature layer which had to load on the iPads. With a larger project budget, more reliable mobile data plans could have been purchased for the iPads or surveyors could have used their smartphones connected to mobile data. The Collector app allows for pre-downloading part of a map and surveying while offline, storing edits on the device and uploading to ArcGIS Online after the device has been reconnected to the Internet, but data synchronization problems persisted even when this strategy was used. Progress was also hindered by poor weather in the early stages of the project and many field days were lost due to heavy rain, so efforts had to be redoubled in the last few weeks of the project.

Due to these delays and a tight schedule and budget for data collection and project completion, only around 81% of the parcels in the intended study area were surveyed. While some of these problems may be mitigated by finding the survey strategy which works best for an individual project and allocating ample time to test the app in the field, delays due to technical difficulties and other uncontrollable factors should be expected and factored into a project's timeline.

On a more substantive point, occupancy status was often difficult to gauge in the field based on visual cues alone as boarded doors and windows or utility shutoff notices that would indicate vacancy are not evident on every potentially vacant property. Therefore, only 130 structures, or less than 3% of all properties with a structure, were determined to be unoccupied. The occupancy rate for the study area's 21 constituent block groups was 20.0% in the 2011-2015 American Community Survey (U.S. Census Bureau, 2015a), so there may be reason to view the field-collected occupancy variable with some skepticism.

Conclusions and Next Steps

Given the rapid increase in property prices and decreasing supply of tax auction parcels, the Buffalo Neighborhood Stabilization Corporation (BNSC) wishes to develop an effective spatial strategy with which to make decisions about its future activities and affordable housing projects. Within a community geography framework, researchers and students at SUNY Buffalo State collaborated with BNCS to collect novel, primary field data on real property occupancy and quality in a targeted neighborhood. The data were then turned over to BNSC as a spatial database, and published to a web mapping application for free and democratic use by the BNSC and other local residents, institutions, and decision-makers. Even though some of the objectives of the community geography collaboration have yet to be realized (see above), BNSC expressed gratitude for the data products delivered thus far, noting that mapping real property data offers them a better understanding of neighborhood market dynamics and can support decision-making in the future.

As the partnership moves forward, the community geography team members are focused on bringing the web application out of beta testing and make it readily available to the public. Team members have also expressed a desire to spatially analyze the data that were collected, to identify areas most affected by gentrification, as well as by poor property conditions. Supplementing the field data with additional secondary data is also a near-term objective, so that existing property conditions can be better understood in their demographic and socioeconomic spatial contexts.

In the longer term, BNSC recently indicated—after purchasing its first property outside of its targeted redevelopment area—that it would benefit from more data on the preferences of potential tenants. In the past, with supplies higher and with a limited geographic focus, BNSC property selection was simpler and often made without much data. However, given the large geographic area of the West Side and the varying neighborhood conditions uncovered in our property survey, BNSC sees value in matching tenant preferences to on-the-ground conditions. Thus, the team is working to incorporate additional data on crime and other known spatially-based disadvantages into its geographic information system and web application.

In sum, the ongoing collaboration between the BNSC and SUNY Buffalo State—as captured in the

outputs already realized and the remaining tasks that are under way—offers an example of a workable, mutually beneficial exercise in community geography. By design, the efforts described hereinbefore and planned for the future are creating spatial knowledge to affect positive community change (see Robinson, 2010), and enhancing long-term community planning and decision-making (Hawthorne et al., 2014)—all on a relatively negligible budget and carried out by partners from anchor institutions that are geographically rooted in the community targeted for positive change.

Appendix

Property condition grading criteria.

Exterior Condition

This item is used to record the extent in which exterior physical condition of the residence is used as an additional value determinant. Careful consideration should be given to exterior foundation, chimneys, porches, siding, windows and roofing.

Exterior Condition Codes

1 - Poor 2 - Fair 3 - Normal 4 - Good 5 - Excellent

Exterior Condition Code Definitions

1 - Poor - This indicates that the outer surfaces are severely dilapidated and are badly in need of repair. The roof may be missing shingles or have “homemade” repairs. The siding may be rotten, have pieces missing, or be in dire need of paint. The windows may be in poor condition, have glass panes missing, or have some boarded-up openings. The foundation may be missing pieces or be sinking noticeably, and daylight may be visible from inside. This home may be "barely habitable" (depending on the interior condition) and is often found abandoned. Uncleanliness does not always indicate actual deterioration of exterior building components.

2 - Fair - This indicates that the exterior shows definite signs of deferred maintenance. The functional utility of the exterior components are somewhat diminished but the house is usable as is. Shingles may be curled, but in place. Siding may be warped and need painting, but is firmly in place. Foundation may be in need of pointing-up. It could be characterized as "needing work" i.e. new paint, siding, roof, upgraded windows, etc. Clutter or uncleanliness does not always indicate actual deterioration of exterior building components.

3 - Normal - This indicates that the exterior shows only minor signs of deterioration caused by normal "wear and tear". The residence is usable and reflects an ordinary standard of maintenance. Exterior needs only “patch and paint” to look like new.

4 – Good - This indicates that the residence exterior is in "like-new" condition. It shows no signs of deferred maintenance and reflects above normal upkeep. Older homes may have undergone major exterior remodeling, such as new roof, new siding, replacement windows, etc.

5 - Excellent - This indicates that the residence exterior does not require any work at all and appears to be in "new" condition. Usually this condition is found in expensively constructed residences that show professional care and constant maintenance.

Adapted from New York State Office of Real Property Services Assessor’s Manual, Residential Building Section 8.00, pp. 48.00-49.00.

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