Spatial Distribution Factors in the Evaluation of Community Assets

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Introduction

In the Metro Phoenix area in Arizona, the current trend is one of massive growth. Every day there are many new towns, master planned communities and subdivisions taking shape. Existing communities often possess distinct relationships and character that are cultivated over the years. It is in the interest of these communities and their community based organizations as well as local government agencies to revitalize these existing communities. The community revitalization efforts involve multiple stakeholders such as community residents, community based organizations, government agencies, commercial and industrial stakeholders in the community, and developers involved in the revitalization.

In any community revitalization effort, it is important to build consensus among the various stakeholders as to the assets of the community. This will help in guiding and prioritizing revitalization efforts. Kretzmann and McKnight (1993) introduce the concept of asset mapping and emphasize that development must start from within the community. The development efforts are based upon an understanding or map of the community’s assets, capacities and capabilities. Even the poorest neighborhood is a place where individuals and organizations represent resources upon which to rebuild. The key to neighborhood regeneration according to Kretzmann and McKnight is to locate all of the available local assets, to begin connecting them with one another in ways that multiply their power and effectiveness, and to begin harnessing these local institutions that are not yet available for local development purposes.

I believe it is also important to identify and define assets to achieve neighborhood regeneration. Many socio-economic conditions, development opportunities, cultural heritage assets that are spatial in nature are distributed throughout the neighborhood. Therefore, paying special attention to spatial factors such as location, proximity, adjacency, overlap, etc. is important in evaluating the potential of an asset for community revitalization and improvement. It is also important to identify what role spatial factors play in influencing the perception of stakeholders of spatial entities and their relationships with respect to identifying them as assets or liabilities. These perceptions then can be analyzed to identify differences and commonalities, in order to build consensus and guiding and prioritizing revitalization efforts. The spatial distribution of these can influence the value that can be gained from an asset.

This research presents a pilot study which is part of an ongoing PhD dissertation. The study was undertaken by Arizona State University’s (ASU) College of Design and funded by ASU’s Stardust Center for Affordable homes and the Family, under the guidance of Sherry Ahrentzen, Associate Director of Research for Stardust Center for Affordable Homes and the Family, and Research Professor, College of
Design and Filiz Ozel, Professor of Architecture, College of Design.

**Significance**

This research can be especially significant to community based organizations or government agencies involved in community revitalization. The research can help these organizations

- inventory and create a database of assets,
- understand how spatial factors can be modeled in evaluating the assets of a community,
- Model and visualize the potential spatial interaction of assets as well as their spatial overlap from multi-stakeholder point of view.

The resulting analysis can be used by the community based organizations and government agencies to encourage public participation and obtain external grants by presenting the data in the form of thematic maps, photographs, sketches and spreadsheets. Kretzmann and McKnight (1993) indicate that the external resources will be more effectively utilized in the local community if it is itself fully mobilized and invested, and if the community can define the agendas for which additional resources must be obtained.

**The problem**

This research explores spatial distribution, interaction and overlap as a factor in the evaluation of a community’s assets in a multi-stakeholder environment. This research intends to build a model to analyze the perceptions of different stakeholders with regards to identifying community assets with reference to their spatial attributes and relationships.

Community revitalization in this case involves the continuing efforts undertaken by a community organization in order to bring about and sustain positive change in the community by involving the various stakeholders.

A community is defined as a predominantly residential neighborhood having specified geographical boundaries. However, the social ties of the community stakeholders extend beyond the physical boundaries. Sometimes the different stakeholders of a community specify the geographic boundaries of a community differently. Some stakeholders may not even express the boundaries geographically, but may only be able to come up with an area name, ethnic identity or proximity to landmark physical feature (Cochrun, 1994). The geographical extents of the community should encompass the perceptions of all the different community stakeholders.

Community organizations are any formal or informal organizations which represent the entire physical community and its residents. Community organizations include but are not limited to community based organizations, community development corporations, business coalitions, homeowners’ associations, and neighborhood associations.

Community stakeholders are those individuals or groups identified by the community organization and community residents and businesses as being vital to the process of community revitalization. Community stakeholders include but are not limited to community residents, local businesses, formal and informal local organizations, schools, religious organizations and hospitals located within the community or patronized by community residents.

An asset for a community is something that is of potential value or use to the community. The community can achieve economic or social
gain from this asset. Community assets can be classified into five types:

- **Human assets** - These are the skills and capabilities of individuals that are part of the community.

- **Physical assets** - Physical features of the community which are viewed as asset by stakeholders. These can include buildings, public spaces and streets.

- **Social assets** - These are the beneficial social ties that exist between individuals that are part of the community as well as the social ties of these individuals outside of the community, which can be of help to the community. Social assets also include social organizations like block watches and hospitals that are located in and work within the community.

- **Economic assets** - These include property values, businesses revenues and financial institutions or businesses that work within the community.

- **Environmental assets** - These are the natural resources, the quality of air and noise levels within the community.

Among these, physical, social and economic assets were considered for this study as they might have significant spatial attributes. There is no significant spatial component in human assets as they focus on skills and capabilities of individuals. Environmental assets such as the quality of air, noise levels and natural levels may not vary significantly for a residential community and community stakeholders may not have much control over the enhancement of these assets.

### Case study

In order to understand the types of spatial impacts and overlaps that need to be modeled, the diversified community of Sunnyslope in the Phoenix metropolitan area in Arizona was selected. Sunnyslope extends from 19th Avenue on the west side to Cave Creek Road or mountains on the east side. It extends from Peoria Avenue or the mountains in the north to the Arizona Canal in the South. More specifically, Hatcher Road Committee which focuses on the area along Hatcher Road in Sunnyslope was involved with the project.

### Asset Mapping Project

The asset mapping project was conducted by Arizona State University’s College of Design and Stardust Center for Affordable Homes and the Family, in collaboration with the community organization Desert Mission Neighborhood Renewal to get the stakeholders’ perceptions of assets. The purpose of the asset mapping survey was to

- Identify and inventory assets
- Focus on the spatial aspects in terms of location within Sunnyslope, and with reference to other assets- as in interaction, distribution and overlap of assets.
- Spatial aspects can be identified and visualized through creation of maps
- Maps were created to help the decision making process of the Hatcher Road Committee.

### Survey

A survey was conducted online where participants could vote anonymously. The participants were asked to choose what they considered 2-3 of what they considered the most important assets that needed to be
mapped, among a list of assets classified as physical assets, social assets and economic assets. Presentation and information regarding the survey were given in the meetings of community organizations namely Hatcher Road Committee and Sunnyslope Historical Society. Multiple stakeholders such as community residents, organizations, and city officials who were also members of these community organizations responded to the survey regarding the community’s most significant assets. In all 22 people responded to the survey. Figure 1 shows final survey counts for economic assets. Properties: By value, Businesses: By function and Businesses: By revenue were picked as the most important economic assets. Figure 2 shows final survey counts for social asset features. Hospitals, Block watch organizations, and Informal interaction between residents in public spaces and schools were picked as the most important social assets. Figure 3 shows final survey counts for physical asset features. Districts with common or complimentary functions, Bicycle paths, Walking paths and Residential buildings were picked as the most important physical assets.

From these significant assets 5 asset types were chosen as the ones with the most counts. These were:

- Hospitals
- Businesses: By function
- Property: By value
- Block Watch Organizations
- Businesses: By revenue generation

It was not surprising that hospitals as a social asset was a top pick in the survey. John C Lincoln Hospital is located at the heart of the Sunnyslope community and is actively involved in the activities and funding of the community organizations. Business owners along Hatcher Road are actively involved in the Hatcher Road committee and development of Hatcher Road. This can explain the selection of Businesses: By function as significant assets.

<table>
<thead>
<tr>
<th>Economic Asset Feature</th>
<th>Response Percent 2/15/07</th>
<th>Response Total 2/15/07</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property: By Value</td>
<td>61.10%</td>
<td>11</td>
</tr>
<tr>
<td>Property: By level of maintenance</td>
<td>28%</td>
<td>5</td>
</tr>
<tr>
<td>Property: By square footage of lot</td>
<td>5.60%</td>
<td>1</td>
</tr>
<tr>
<td>Property: By square footage of building</td>
<td>22%</td>
<td>4</td>
</tr>
<tr>
<td>Rental properties: By rent properties</td>
<td>28%</td>
<td>5</td>
</tr>
<tr>
<td>Rental properties: By numbers</td>
<td>11.10%</td>
<td>2</td>
</tr>
<tr>
<td>Rental properties: By values</td>
<td>22%</td>
<td>4</td>
</tr>
<tr>
<td>Rental properties: By level of maintenance</td>
<td>27.80%</td>
<td>5</td>
</tr>
<tr>
<td>Presence of Home Owners Associations</td>
<td>11.10%</td>
<td>2</td>
</tr>
<tr>
<td>Home Owners Associations level of property maintenance</td>
<td>11.10%</td>
<td>2</td>
</tr>
<tr>
<td>Businesses: By function</td>
<td>72.20%</td>
<td>13</td>
</tr>
<tr>
<td>Businesses: By number of employees</td>
<td>38.90%</td>
<td>7</td>
</tr>
<tr>
<td>Businesses: By physical lot size</td>
<td>11.10%</td>
<td>2</td>
</tr>
<tr>
<td>Businesses: By physical building size</td>
<td>5.60%</td>
<td>1</td>
</tr>
<tr>
<td>Businesses: By size of inventory</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>Businesses: By revenue generation</td>
<td>56%</td>
<td>10</td>
</tr>
<tr>
<td>Total Respondents</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>(skipped this question)</td>
<td></td>
<td>4</td>
</tr>
</tbody>
</table>

Fig. 1. Survey votes for economic asset features. The top picks are in bold font.
Defining community assets

While significant assets such as block watches, businesses and bicycle routes had available data for map representation other assets such as districts: common or complementary functions, walking paths and Informal interaction between residents: public spaces needed to be defined for the purpose of finding data in order to create maps.

Districts: common or complementary functions

Districts with common or complementary functions were selected as one of the significant physical assets in the survey. However during discussion with the Hatcher Road Committee, it was not clear how the stakeholders really perceived the districts. While listing them in the survey this is how I had envisioned the districts. Districts would be determined based on the proximity of assets to each other, which give the geographical area a collective identity which in turn enhances the value of the individual assets. An example of districts based on a common function would be a district with businesses of the same type concentrated in the same geographical area. An example of a district with complementary functions can be a healthcare district anchored by a major hospital and physically surrounded by complementary businesses such as doctors’ offices, ultrasound centers and testing laboratories. Another example of a district with complementary functions would be a recreation district with bike paths, trails, parks and preserve, which are all connected to each other. These spaces can also interact with each other by bike paths and trails providing access to parks and preserves and connecting with one another.

Walking paths

Walking paths are categorized into various types. These are pedestrian tunnels, curbs within subdivisions, trails within parks and preserves, designated safe routes to schools, and walking tour routes. In the case of Sunnyslope, the City of Phoenix does not at present specify any particular routes as safe or walkable. However, there are plans to designate such routes in the future. Currently the city works with schools if they wish to identify and designate such routes for their students.

Informal interaction between residents: Public spaces

These indicate chance meetings with neighbors or fellow business owners which can help create interpersonal relations to those in small towns or tight knit communities, which can then result in a passion for improvements to the community’s physical appearance, security and livability. Since informal interactions were picked as a significant asset, the locations where these interactions take place are important. The outdoor spaces for informal interaction that were indicated in survey comments were parks and mountain preserves. The indoor spaces for informal interaction that were indicated in survey comments were clubs, restaurants, fast food locations and bars.
### Social Asset Feature   Response Percent 2/15/07 | Response Total 2/15/07
--- | ---
Block Watch Organizations | 47.60% | 10
Historical Society | 38.10% | 8
**Hospitals** | **61.90%** | **13**
Community Center Activities | 23.80% | 5
Recreation Centers | 19% | 4
Business Organizations | 28.60% | 6
Schools | 28.60% | 6
Health Service Agencies | 4.80% | 1
Employment Service Agencies | 4.80% | 1
Senior Service Agencies | 9.50% | 2
Refugee Service Agencies | 4.80% | 1
Substance Abuse Service Agencies | 4.80% | 1
HIV / AIDS Service Agencies | 4.80% | 1
Wellness Promotion Service Agencies | 0% | 0
Religious Buildings | 19% | 4
Arizona Humane Society | 19% | 4
Informal interactions between residents : Private Spaces | 0% | 0
**Informal interaction between residents: Public Spaces** | **42.90%** | **9**
Periodic Events e.g. Fall Festival | 19% | 4
Food pantries | 9.50% | 2
Schools | 14.30% | 3
Emergency Shelters | 14.30% | 3
Social Clubs | 19% | 4
**Total Respondents** | **21**
*(skipped this question)* | *1*

Fig. 2. Survey votes for social asset features. The top picks are in bold font.

**Use of maps**

Based on the survey findings, community maps of some of the significant assets were developed using ESRI’s ArcGIS software to help guide the discussion and decisions of the Hatcher Road Committee. The purpose of these maps was not to test the effectiveness of GIS but rather to use GIS as a tool to guide discussions and reach consensus among stakeholders. The GIS data was obtained from the City of Phoenix GIS database. This data is compiled from various sources by the City of Phoenix.

**Recreation map**

From discussions with key stakeholders a need for a recreation district map was discussed. Figure 4 shows the recreation district map. The recreation map represents the bike paths which were selected as important physical assets in the survey. The recreation district map involved mapping the bike routes, and parks in Sunnyslope. The available GIS data classified the bike routes as bike lanes, bike paths-paved and bikeable streets. Pedestrian tunnels are created along the Arizona Canal so that pedestrians and bicyclists crossing major streets do not have to interact with traffic and can pass through underneath. The pedestrian tunnels can be traveled two ways, with two lanes. Bike lanes are bike lanes along the sides of major streets. Bike paths-paved are along the Arizona canal and pedestrian tunnels are part of these paths. Portions of West Butler Drive and North Seventh Avenue are designated as bikeable streets. The different types of parks shown in the map are community parks, district parks, mini parks, neighborhood parks and mountain parks.
Walking paths were also selected as an important asset in the survey. However, the City of Phoenix does not currently assign any particular paths as walkable. If schools in the city of Phoenix wish to designate safe routes to school the city works with them for this purpose. If any routes are designated as walkable by the city in the future, or if the schools in the Sunnyslope area designate safe routes then these routes can be represented on this map.

Some observations as to the spatial connectivity of the different recreation elements of bike routes and parks can be made from this map-

- If the section of East Hatcher Road can be provided bike lanes from North Cave Creek Road to North 12th Street, this section can connect the bike lanes from East Hatcher Road and North Cave Creek Road to the one on North 12th Street.
- If West Butler Road can be extended as a bikeable street from North Central Avenue to the bike path along the Arizona Canal then these two bike routes can connect.
- Parks such as Stoney Mountain Patk and Sunnyslope Neighborhood Park are not accessible by any bike routes. If such access was provided then people could bike to these parks.
Fig. 4. Map showing the recreation assets such as bike routes and parks in Sunnyslope.

Walking map of Hatcher Road businesses

One of the important economic asset types selected in the survey was businesses by function. From further discussion with the Hatcher Road Committee regarding this asset, the need for a walking map of Hatcher Road businesses was apparent. The walking map displays all the businesses along a section of Hatcher Road. A key is provided giving the names of the businesses.

Map of Block Watch organizations

Figure 5 shows a map of Block Watch organizations in Sunnyslope. There are approximately 28 block watch organizations in Sunnyslope. When a map was created depicting the boundaries of the block watch organizations, it was apparent that some of these areas spatially overlapped and some areas were serviced by more than one block watch. However, this was considered to be a positive during discussions with the Hatcher Road Committee, since more than one organizations was contributing to making some portions of Sunnyslope safer.
Conclusions and future research

Physical, social and economic assets were identified by stakeholders in the survey. The selection of hospitals as an asset was unique to the Sunnyslope community, since the John C. Lincoln hospital is located in this community and is involved in and finances many community activities. Businesses: By Revenue and Businesses: By function were selected as an asset due to the involvement of the Hatcher Road Committee. From further discussions with this community organization that there was a need to create a walking map of Hatcher businesses in order to promote these businesses by creating brochures, etc. Block watch organizations were identified as an asset and by creating a map representing boundaries of these block watches it was apparent that Sunnyslope had a large number of active block watches and certain parts of Sunnyslope were represented by more than one block watch. Property: By Value was also chosen as an important asset, and a map of these asset features is to be created in future.

The need for a recreation district map also came up from discussions with key representatives of Desert Mission Neighborhood Renewal and through discussions with Hatcher Road Committee. Walking and bicycle paths which had been chosen as important physical assets and parks and preserves which had been mentioned in the comments box of the survey were represented on this map.
Some assets such as Districts: Common or Complementary Functions were chosen as important physical assets and Informal interaction among residents: Public spaces were chosen as important social assets but during discussions, the perception of the stakeholders as to these was not completely clear. The perceptions regarding these assets and methods to clarify these perceptions require further investigation.

Some directions for future research are:

- This research dealt primarily with the community organizations- Desert Mission Neighborhood Renewal, Hatcher Road Committee and Sunnyslope Historical Society. There were also some common members among these organizations. It is important to identify other community organizations or stakeholders who also represent Sunnyslope, and find out their views regarding the assets of Sunnyslope and how these views differ or concur with those found in the survey.

- Based on the top picks in the survey as to the important assets, future maps to be created include the property data map which classifies businesses by revenue.

- Creation of maps regarding various demographic analyses related to age, gender, distance from Hatcher Road business district, and how this might affect the Hatcher Road businesses.

- A map classifying the functions of businesses in the Hatcher Road area in an attempt to identify districts of businesses with similar or complementary functions which are close to each other.

- A map of locations of neighborhoods with relation to schools and hospitals, to look at the walkability or bikeability to these locations.

- Along with stakeholders’ perceptions of assets, it is also important to consider news articles and videos regarding Sunnyslope and get their perception of Sunnyslope assets. When stakeholders wish to promote the image of a community to outsiders as a destination for cultural activities or shopping, it is important to know what people outside the community think of the community and how this compares to the perception of the stakeholders.

- The Survey also had a comments box at the end of the survey. Some of these comments indicated that participants were also interested in pointing out some of the liabilities of Sunnyslope as well as the assets. Maps of significant liabilities can also be created to help the discussions and decision making process of community organizations.

Acknowledgement

The author would like to thank the PhD program in Environmental Design and Planning, Arizona State University for their support.
Notes


3 Kretzmann, J. P., & McKnight, J. L. Building communities from the inside out: A path toward finding and mobilizing a community’s assets. Evanston, IL: Institute for Policy Research. 1993.