Considering the Ethical Implications of Using VGI for Community-based Planning

Laxmi Ramasubramanian, PhD, AICP
Hunter College, Urban Affairs and Planning
Presented at the 2013 Annual Meeting of the Association of American Geographers, Los Angeles, California,
Urban Activity Spaces

- Defined as “graphical representation of the space within which a group of activities are carried out for an individual or a household (Newsome, Walcott, & Smith, 1998; 361)

- Time constraints are imposed by or on the traveler

- Observed activity space may or may not represent the maximal area over which a traveler could engage in activities but rather the area over which they are likely to engage in those activities (based on observed behavior)
  - Perceptual factors (e.g., mental maps, perceived sense of safety)
  - Personal factors (e.g., health)
  - Physical environment factors (e.g., presence or absence of sidewalks)
  - Institutional factors (e.g., administrative/law enforcement rules)
Activity Spaces are constrained by perceptions.
and practical limitations like travel time...
Expanding Activity Space

- Project funded by the Federal Transit Administration
- Goals
  - Develop a replicable approach and method for engaging low-income communities in identifying, analyzing, and visualizing their own travel behavior and mobility barriers
    - Qualitative Methods
    - Small Samples
    - Participatory/Interactive
  - Use the experience to design a web-based tool that can be used by community organizations and planning agencies
  - Original project design did not consider ethics or VGI specifically
- Status
  - Project completed, under final review
- Emerging questions and concerns
Conceptualizing Activity Spaces

Individual Activity Spaces Showing Missed Opportunities,

Source: Author
Study Area and Community Partners

- Unified Vailsburg Services Organization
- Greater Newark Conservancy
Data Collection Strategy Discussion

- April 15\textsuperscript{th} to November 15\textsuperscript{th}, 2012

- 10 focus groups with a diversity of participants
  - 50 intercept surveys
  - 70 individual spatio-temporal narratives
  - 10 travel diaries, describing a week’s worth of trips
  - 5 individuals agreed to be shadowed

- The complexity of the Institutional Review Board process

- Incentives were provided for participation

- Challenges in engaging vulnerable populations
Focus Groups supported by participatory mapping

Individuals discussed their typical day…
Data Analysis/ Outcomes

- Data was used to create
- 15 composite fictional narratives, masking in particular home address locations and other personal information
- Limits of design of systems / services in transportation-poor areas
- Amazing complexities that govern poor people’s lives
  - Work schedules
  - Caregiving obligations
  - Safety / Security
  - Service (of providers)
  - Physical Environment Barriers
- New short survey instrument designed
  - Describe your typical day…
  - Survey and mapping activity embedded in website
  - Unique login/password for individuals
  - Unique login/password for community organizations/agencies
Findings and Results:
http://ExpandingActivitySpace.org
Outcomes – 1
Web-based Data Collection Tool
Outcomes – 2
Community Advocacy Opportunities

Activity Space Report

Trip Report

Newark Penn Station
"Afternoon rush hour. Gets a seat although train is extremely crowded."

Use the report builder navigation on top of the map to filter the results by demographic information provided by the participants from your zip code. Explore and compare the travel behavior of different groups in your community.

Average Travel Time 0 hrs 27 mins
Missed Opportunities

Source: Author
Next Steps

Data was used to create 15 composite fictional narratives, masking in particular home address locations and other personal information.

New short survey instrument designed:
- Describe your typical day.
- Survey and mapping activity embedded in website.
- Unique login/password for individuals.
- Unique login/password for community organizations/agencies.

Individual Activity Space following actual routes

Source: Author
Ethical Dilemmas

- Institutional Review Board process
- Raising Expectations of vulnerable populations
- The shock of learning about relatively intimate private information
- Managing access to information
- Individual empowerment versus/and community advocacy
- Critical Education of participants’ rights and responsibilities
For further information:

Laxmi Ramasubramanian
laxmi@hunter.cuny.edu