Ho Won Kim

Instructor Manuel Santana Palacios

CP 101

27 June 2020

Power of Volunteered Geographic Information and Its Limitation

As a city planner in Oakland, using volunteered geographic information (VGI) would give a helpful insight into social analytics in urban planning. VGI is geographic information created from crowdsourcing like social networks and blogs. Bin Jiang and Jean-Claude Thill, authors of “Volunteered Geographic Information: Towards the Establishment of a New Paradigm,” claim VGI established new socio-spatial analysis by continuously monitoring the urban object such as social interactions, change of landscape, and opinions (Jiang & Thill, 2015).

VGI is used in various fields of urban planning decisions. One of the examples is parklets. According to the National of City Transportation Officials, parklets are “public seating platforms that convert curbside parking spaces into vibrant community spaces.” To transform parking spaces into community spaces, planners need to take into consideration many factors such as traffic congestion, availability of parking areas, and community needs.

For planning parklets, it is a great idea to take advantage of VGI, and one service that the city planners of Oakland could use is Nextdoor. This is like Facebook, but more focused on creating neighborhood networks. Through Nextdoor, city planners can send a survey to Oakland residents to ask them to mark points on the map that they think are suitable for parklets to be installed. By using Nextdoor, city planners can get real-time data from users and more opinions from the people than traditional observational research. This helps to democratize the city planning process to hear more people’s voices in decision making. At the same time, city planners can’t simply rely on VGI. They also need to think about other factors like cost, space availability, and community support, and people from the survey are not experts to consider these factors. Therefore, it is essential that planners decide how much weight they should give to the opinions from the VGI.

VGI from social media is difficult to decipher. First, while traditional georeference is observational and objective, social media is more subjective because results can be affected by views, opinions, and feelings shared with others. Second, it is unstructured data unlike well-prepared questionnaires (Jiang & Thill, 2015). In other words, planners have little idea of how people’s opinions and emotions are developed during the survey process. For instance, high-school students in Oakland may want parklets near their school, or workers in the city may prefer parklets near the restaurants they visit often. Therefore, planners need to take into consideration the different groups of people who may favor specific areas over others so that they can analyze and remove those systematic biases into the result.

Besides the characteristics of social media surveys on Nextdoor, another drawback of VGI is that it can’t take the whole population equally into the survey. According to Fischer Florian from “A New but Delicate Geographic Data-Source: VGI as Big Data,” “VGI datasets rather reflect the characteristics of specific online communities of interest but do not necessarily fulfill the qualities of a random population sample” (Florian, 2012).  It means VGI is not distributed well over different variables such as age, gender, location, and socioeconomic status (Jiang & Thill, 2015). For instance, if the majority of Nextdoor users are white people, survey results can lean to the opinions of white people, and the development of community places can be taken more into their neighbor areas and can neglect minorities. To resolve this obstacle, city planners need to have a generalizable conclusion using data from various sources, not just big data such as VGI (Jiang & Thill, 2015). Therefore, planners need to not only take a look at VGI to get spatial popularity information from quantitative data but also take account of conventional sources such as census data or experts' opinions to make sure there’s no exclusive minority groups ethically.

Despite the limitation of VGI using Nextdoor, it can help enormously to democratize the planning process. Since Nextdoor allows its users to cluster into neighborhood areas, this e-communication helps people to participate in the local public policymaking process by an interactive and dynamic way (Chen & Ahn, 2017). The city can increase its residents' satisfaction toward policy making by listening to their opinions more, which can lead to more people's participation in the future. This is a positive effect of digital communication as it helps to develop the society in a more democratized way. Nonetheless, we should not also forget that minorities can have difficulty accessing technologies like older people or immigrants haven’t used social network before. In addition, city planners need to consider another way to take account of opinions from homeless people. Even though, they may not have physical residential address, but planners just can’t ignore them during the city planning process.

Technologies have been bringing people into a mutual, open space, but privacy issues have become important these days. Especially, since Nextdoor uses spatial information of users, protecting privacy is crucial. Therefore, city planners need to anonymize users' privacy information before it is published to the public. Besides privacy, there's another issue of technology in which people can easily manipulate the survey. For example, restaurant owners can get benefits if there are parklets in their area, so they can pin the location more than once and can bring quantitative analysis in the wrong way. Hence, city planners need to work closely with engineers to prevent the misuse of technology just for specific people's advantages.

In conclusion, volunteered geographic information is a beautiful tool to make people actively engage in the urban city planning process, but city planners can’t only rely on this information and need to be warned as to whether there is any exclusion or false information has been included. Also, they need to make another way to hear opinions from minorities in technologies and ethnically. Thus, they need to elaborate on small data and traditional research methods to get the accurate and qualitative results.

Works Cited

Fischer, Florian. (2012).  A New but Delicate Geographic Data-Source: VGI as Big Data”.  GEO Informatics.

Ganapati, S. (2017). Mobile Location-Based Service (LBS) Apps for the Public Sectors. In Routledge Handbook on Information Technology in Government (pp. 114-115). Florida: Taylor & Francis.

Jiang, Bin, and Jean-Claude Thill. 2015. “Volunteered Geographic Information: Towards the Establishment of a New Paradigm.” Computers, Environment and Urban Systems, Special Issue on Volunteered Geographic Information, 53 (September): 1–3