

# Qualitative Data and Design: Understanding the Experiential Qualities of Place

Data come in many forms. They can be numbers, images, stories, sounds, and feelings; they can be biological tissue samples, colors on a digital screen, or blips on a radar. Each form of data can offer unique and important insights to help us understand the world around us. For those interested in the social dimensions of architectural design, or what I call the human experience of place, useful data can be found in place-based social science and design-based research. This research offers insights into how people respond to their physical surroundings, particularly in terms of how they behave and feel, as well as how people actively shape the environments around them to meet their needs.

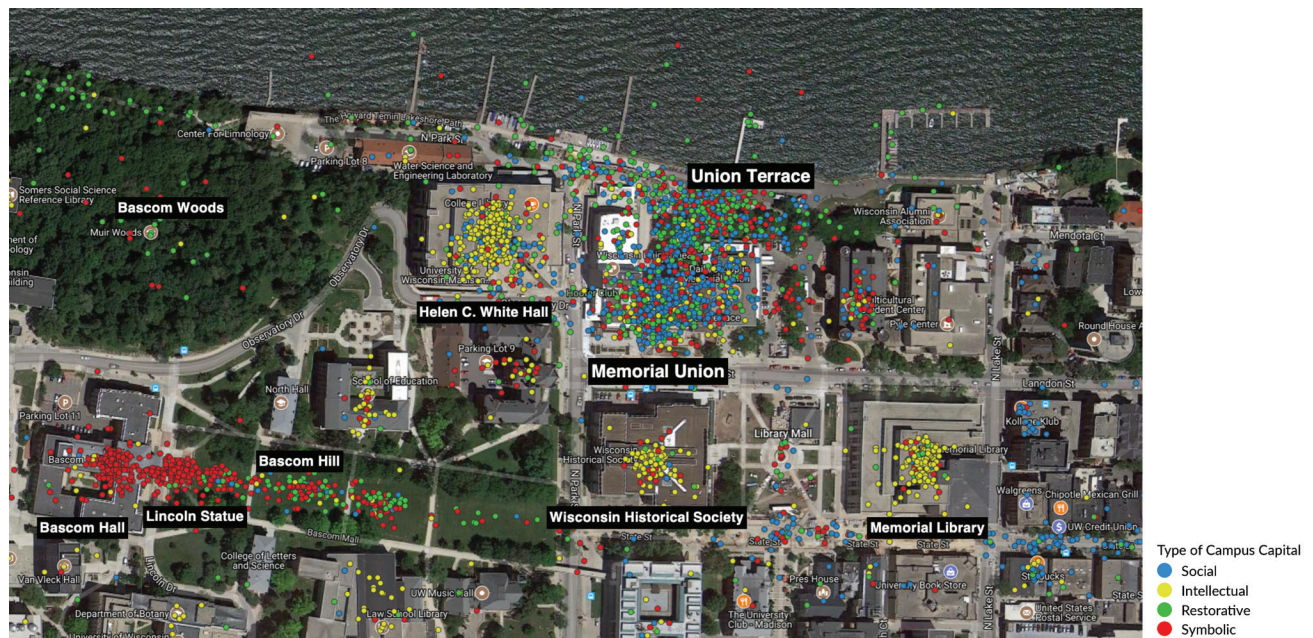
## A Tale of Two Paradigms

Within this body of place-based social research (and all social science research, for that matter), there are two broad paradigms—the quantitative and qualitative (Tuli 2010). These paradigms are distinguished by different beliefs about what constitutes valid knowledge, and what kind of data should be generated to produce that knowledge (Bryman 1984; Punch 2013). The quantitative paradigm, for example, grounds validity in objectivity, maintains rigor through random sampling and systematization, and seeks to measure phenomena so that they can be explained and predicted. Here, data typically take the form of numbers that are statistically analyzed. This kind of research often begins with a hypothesis that the researcher tests, with an expectation that the data will either prove or disprove the hypothesis. In this paradigm, people's experience of place, or their behavior in place, are outcomes (data) to be quantified and measured. For example, within a quantitative paradigm one can study the impacts of high-rise living on residents by measuring their social behavior (e.g., frequency of interactions with neighbors), or measuring other outcomes like physical health indicators or children's grades in school (Gifford 2007). Within the quantitative paradigm, even more ephemeral quality of life issues are measured and quantified (Cho and Lee 2011). For example, one can distribute questionnaires with rating scales to measure the degree of well-being or happiness of inhabitants.

By contrast, the qualitative paradigm seeks to understand events or experiences in their unique context through the lens of the research participants, i.e., without preconceived hypotheses or language to define it. Qualitative researchers tend to question positivism, which is a belief that there is a single, external truth that we can know through research, and that we can achieve and maintain objectivity in knowledge production. Instead, qualitative researchers recognize multiple realities and worldviews, accept subjectivity and analyze positionality, and use methods that are responsive to the particularities of the given context. In qualitative research related to architecture, the goal is not to measure or predict users' behavior or other outcomes, but to understand the nature and experiential qualities of a place *as they are experienced* without transforming those qualities into numbers. Qualitative research, therefore, produces data that are nonnumerical in nature. For example, a qualitative study of high-rise living would focus on residents' experience of their housing as they describe it (Brown 2016) and the researcher might ask residents to take photographs of different aspects of the building where they live to document these experiences.

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△ Figure 1. Environmental meaning revealed through participatory mapping. Using an online mapping tool, Brian Schermer, a University of Wisconsin-Milwaukee architecture professor and principal at Workshop Architects, asked students at the University of Wisconsin-Madison to identify the places on campus they deem most significant according to four categories of "campus capital"—social, intellectual, restorative, and symbolic. (Credit: Brian Schermer.)

### Unique Aspects of a Qualitative Approach

Because a qualitative approach accepts and embraces subjectivity, both in terms of other people's subjective experiences and in the researcher's positionality, it values reflexivity as a form of rigor (Finley 2002). Reflexivity means that the researcher must be self-aware and critically evaluate their assumptions and responses in all phases of the research (Finley 2008). Rigor is also exercised in the sampling and data analysis phases of research. Rather than seeking to generalize data and apply findings to a larger population, a qualitative approach is more concerned with understanding the nuances of phenomena in their own unique context. Consequently, the large random samples required for generalizability in quantitative research are not necessary in qualitative research. Instead, the adequacy of the sample size is related to "data saturation" (Ness 2015), a point in data collection when there is enough information to address the study question and when subsequent data collection stops yielding new themes and ideas, thus creating repetition in the data (Bernard, Wutich, and Ryan 2017). Saturation is also achieved when there is sufficient information to replicate the study and further data coding is no longer feasible (Ness 2015).

A qualitative approach to the study of the social dimensions of design, then, aims to understand essential content, patterns, and trends in people-place interactions in nonnumerical terms. This approach is particularly useful for understanding people's perceptions and experiences of place and the meanings that

places hold for people. Qualitative researchers approach the research with open-ended questions using methods that yield qualitative data. Researchers and designers can then use these data to help ground design work and inform the conceptual frameworks and theories behind their practice.

### Qualitative Methods

Qualitative research draws on a range of methods that yield nonnumerical data, such as observations, photo-based methods, mapping, in-depth interviews, and focus groups. The crucial rule of thumb when selecting which qualitative method to use is that the topic should drive the method. That is, the particular subject under study, and the questions that are posed about it, provide important clues about which method(s) would better answer the research questions. For example, if a researcher sought to understand people's attachments to their neighborhood and learn about what places are important to neighborhood residents that they wish to see protected in a redevelopment project, then the researcher might conduct in-depth interviews with people about what their neighborhood means to them and how they feel about the changes they see. A mapping exercise could supplement these interviews where interviewees mark special places on a neighborhood map. Over the course of the study, "heat maps"—composite maps that overlay all map markings to determine if there are any spatial concentrations of valued places—could be created (Figure 1).

Depending on the research questions, photo-documentation techniques could be used, whereby neighborhood residents are asked to take their own photographs of important places or to document what they perceive as evidence of place change. If the study were to focus on documenting place change over time, archival research could be conducted where historical photos are compared with contemporary images taken either by the researchers or study participants. Furthermore, if the





△ Figure 2. Photo documentation of everyday community environments.

researchers were interested in the particular viewpoints of specific stakeholders regarding local place changes, they could conduct focus groups—group interviews where distinct groups of people who share something in common are interviewed at once (Kreuger and Casey 2000). In the current example, this could take the form of focus groups of local business owners and other possible stakeholders like neighborhood youth. Despite the range of methods used in qualitative research, these methods all produce nonnumerical data.

### The Data that Qualitative Research Yields

The hallmark of qualitative research is its rich yield of nonnumerical data. Qualitative data can be image-based, as in the case of mapping techniques (Figure 1) and photographic methods (Figures 2 and 3), or they can be textual (for example, transcripts from in-depth interviews and focus groups), or archival, such as city records of public hearings or newspaper articles. Photographic techniques like photo documentation involve gathering images of a particular place or type of place so that they can be systematically analyzed to inform one's design research question. For example, Figure 2 is a sample from a collection of images that were gathered as part of a research project with a farmworker community in Washington State. Photographic data like these captured the people, places, and agrarian landscape that together create the unique socio-spatial qualities of that community. These images were then used to analyze social networks, housing typologies (left column), streetscapes (middle column), and the landscape conditions (right column).

Photo documentation can be conducted by researchers or by research participants and community members. The latter technique is often known as "photo-voice," whereby research participants use photography and stories about their photos to represent places and issues that are important to them (Nykiforuk et al. 2011). For example, Figure 3 depicts an image

taken by a teenager as part of a youth photo-voice project among migrant farmworker families as part of the same multiyear research project described earlier. In this phase of the research, local teens each took a series of photos to document the people and places that matter to them and noted why they were important to help inform a collaborative community revitalization effort that sought to be responsive to local place meanings (Walker and Manzo 2005).

Similarly, textual data are analyzed for the presence of certain keywords or themes relevant to the research question. To conduct such an analysis, interviews are typically transcribed and uploaded to a qualitative data analysis software program like NVivo or Atlas.ti to be coded. Codes are words or short phrases ascribed to segments of an interview transcript that characterize key phenomena under study. For example, interviews with residents being displaced from their housing can be analyzed for comments revealing place attachments or concern over an unknown future (Manzo 2014). In this process, interviewees' remarks are captured with codes like "place attachment" or "concern over unknown future," and direct quotes are extracted to illustrate how these phenomena are experienced by people (see Manzo et al. 2008 for an example of how such data are reported).

In the qualitative paradigm, the images and text produced by the research are irreducible data, valid in their own right, not intended for translation to numbers. As such, qualitative data can often be more digestible to a larger public. Image-based data and narratives of people's lived experience of place in their own words can be particularly powerful in conveying the values and meanings of places. This is the power of qualitative work—to understand the qualities of our lived experiences of place in their wholeness and complexity.



△ Figure 3. Sample image from photo-voice technique.

## References

- Brown, C. 2016. "The Power of Qualitative Data in Post-Occupancy Evaluations of Residential High-Rise Buildings." *Journal of Housing and the Built Environment* 31, no. 4: 605–620.
- Bryman, A. 1984. "The Debate About Quantitative and Qualitative Research: A Question of Method or Epistemology?" *British Journal of Sociology*: 75–92.
- Cho, S. H., and T. K. Lee. 2011. "A Study on Building Sustainable Communities in High-Rise and High-Density Apartments—Focused on Living Program." *Building and Environment* 46, no. 7: 1428–1435.
- Finlay, L. 2002. "Negotiating the Swamp: The Opportunity and Challenge of Reflexivity in Research Practice." *Qualitative Research* 2, no. 2: 209–230.
- Finlay, L. 2008. "Reflecting on 'Reflective Practice'." *Practice Based Professional Learning Paper* 52: 1–27. <http://www.open.ac.uk/opencetl/resources/pbpl-resources/finlay-l-2008-reflecting-reflective-practice-pbpl-paper-52>.
- Fusch, P., and L. R. Ness. 2015. "Are We There Yet? Data Saturation in Qualitative Research." *The Qualitative Report* 20, no. 9: 1408–1416. <http://nsuworks.nova.edu/tqr/vol20/iss9/3>.
- Gifford, R. 2007. "The Consequences of Living in High-Rise Buildings." *Architectural Science Review* 50, no. 1: 2–17.
- Goertz, G., and J. Mahoney. 2012. *A Tale of Two Cultures: Qualitative and Quantitative Research in the Social Sciences*. Princeton, NJ: Princeton University Press.
- Manzo, L. C., R. G. Kleit, and D. Couch. 2008. "'Moving Three Times is Like Having Your House on Fire Once': The Experience of Place and Impending Displacement among Public Housing Residents." *Urban Studies* 45, no. 9: 1855–1878.
- Manzo, L. C. 2014. "On Uncertain Ground: Being at Home in the Context of Public Housing Redevelopment." *International Journal of Housing Policy* 14, no. 4: 389–410.
- Nykiforuk, C. I., H. Vallianatos, and L. M. Nieuwendyk. 2011. "Photovoice as a Method for Revealing Community Perceptions of the Built and Social Environment." *International Journal of Qualitative Methods* 10, no. 2: 103–124.
- Punch, K. F. 2013. *Introduction to Social Research: Quantitative and Qualitative Approaches*. London: Sage.
- Tuli, F. 2010. "The Basis of Distinction between Qualitative and Quantitative Research in Social Science: Reflection on Ontological, Epistemological and Methodological Perspectives." *Ethiopian Journal of Education and Sciences* 6, no. 1: 97–108.
- Walker, D., and L. Manzo. 2005. *Creating Affordable Housing in the Yakima Valley: Activity Report Year I*. Report to the US Department of Housing and Urban Development on Project # COPC-WA-03-004.

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