

THE POWER OF WORDS: GROUNDED THEORY RESEARCH METHODS IN ARCHITECTURE & DESIGN

Christina Bollo¹, Tom Collins²

¹University of British Columbia, Vancouver, British Columbia

²Ball State University, Muncie, Indiana

ABSTRACT: Grounded Theory (GT) is a systematic methodology used to reveal patterns in qualitative data and to develop theoretical positions or frameworks from these patterns—the theory is “grounded” in the words. Since its inception in the late 1960s, GT has emerged as a preeminent qualitative research methodology and is widely used in diverse disciplines such as nursing, education, and the social sciences where researchers look to better understand the why and how questions related to human decision making and action—questions that frequently interest architects and designers.

Grounded Theory is a robust and intuitive approach and set of procedures suitable for a wide variety of architectural research objectives that should be considered and used more often. It can be used as a stand-alone qualitative method or in conjunction with quantitative methods as part of a mixed methods approach. This paper includes an elegant plan of action for researchers who are not content to let the richness of interviews and observations go to waste. The process for beginning a Grounded Theory analysis is laid out simply with key references highlighted. GT is equally powerful in analyzing existing data, resulting in new answers and unexpected questions.

KEYWORDS: Grounded Theory, qualitative methods, participant narratives, research methods, complexity

INTRODUCTION

Architectural researchers and practitioners often rely on various qualitative research methods. Grounded Theory (GT) is one of several qualitative methodological traditions. Other traditions include narrative psychology, phenomenology, ethnography, incident technique, intuitive inquiry, etc. (Wertz et al., 2011). While quantitative research is a “top-down” approach from theory, to hypothesis, to data, qualitative research is a “bottom-up” approach from participant views, to general themes, to theory. Qualitative research may appeal or be applicable for researchers interested in understanding phenomena exclusively through participant words and views (Creswell, 2007) or as part of a pragmatic approach common in architectural research.

Grounded Theory is a rigorous, robust, and intuitive approach, and a set of procedures suitable for a wide variety of architectural research objectives that should be considered and used more often. It offers researchers a way to strengthen, support, refute, or challenge other research data through the words of the myriad stakeholders in our built contexts. What distinguishes GT from other qualitative traditions is the complexity of its iterative process whereby researchers reveal potential linkages between ideas and concepts found in the data, and these connections eventually evolve into broader conceptual or theoretical discoveries. GT has the power to enhance architectural research outcomes by lending rigor and validity to subjective qualitative data often dismissed as “anecdotal evidence.” Design researchers familiar with complex and iterative design development processes are likely to find that GT procedures encourage and facilitate the same kinds of thinking and working in a qualitative research context.

In this paper we provide a brief overview of GT, describe benefits for architectural research, illustrate the application of GT methods through two research case studies, and conclude with recommendations for researchers interested in using GT methods in their inquiries.

1.0 GROUNDED THEORY

1.1. A brief history

Grounded Theory is the qualitative method through which theories and variables are “discovered” through the research process, not presumed beforehand (Creswell, 2012). Barney Glaser and Anselm Strauss introduced the idea of Grounded Theory (GT) in the late 1960s and outlined an approach to qualitative research whereby theory is “grounded” in the data (1967). GT emerged reactively to a preference in the social sciences for purely quantitative research, a view which held qualitative data as anecdotal, subjective, and impressionistic. Juliet Corbin, one of the key figures in the development of grounded theory notes: “Who will listen to you if you don’t present your findings in a credible scientific manner — not quantitative scientific but qualitative scientific?” (Cisneros-Puebla, 2004). In Grounded Theory, the intent is to move beyond description in order to generate, discover, or construct an overarching theory or understanding of a

phenomenon or condition. The theory does not come “off the shelf,” but from analysis of experiences expressed by the participants related to the processes under study (Strauss & Corbin, 1998). Glaser and Strauss endeavored to make qualitative research rigorous, methodologically systematic, and generalizable. In doing so, they opened-up qualitative methods to a new host of disciplines such as sociology, psychology, nursing, and others.

GT methods evolved over time, with a large shift occurring in the early 2000s when social science researcher Kathy Charmaz developed Constructivist Grounded Theory (CGT) to move Grounded Theory in a social constructivist direction. Charmaz adapted the work of Strauss and Corbin to create a more interpretive, reflexive, and flexible grounded theory process. She urges that the role of the researcher in the process should not be minimized as the researcher brings questions to the data, advances personal values and priorities, and makes decisions about the categories throughout the process (Creswell, 2008). CGT is predicated on multiple realities and positions the researcher as a participant in the process. Charmaz presumes that theories are constructed by the researcher (Charmaz, 2006).

The case studies presented later in this paper rely on the major schools of Ground Theory research design. A more detailed explanation of the specific analysis methods is presented in Section 4 with suggestions specific to architectural research and lessons learned from previous projects.

1.2. The process of Grounded Theory

Grounded Theory is one method of analyzing and understanding qualitative data. Its strength is its clear and rigorous method of coding qualitative data, categorizing these codes, reflecting/commenting on the codes and categories, and developing theoretical positions from the iterative analysis process. The methodological framework (Figure 1) is a simplified outline of the process whereby the researcher moves from raw data, or literal words, to an abstract theoretical understanding of the meaning embedded in the words. Sometimes described as a series of steps toward higher levels of abstraction, the process is also iterative and forces researchers to go back to previous steps to re-examine issues, collect more data, etc. This paper will specifically address each of these steps through case studies and suggestions for researchers.

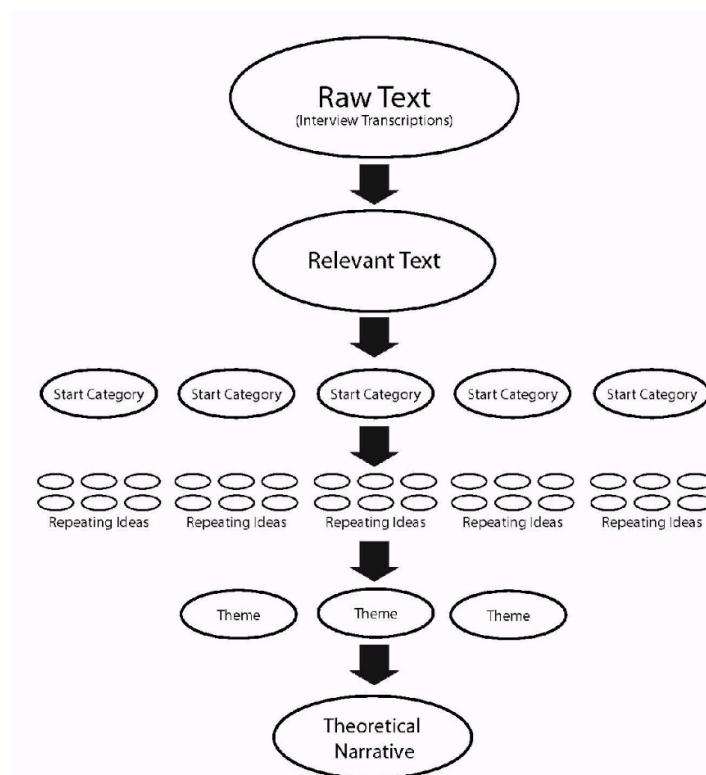


Figure 1: Outline of the GT analysis process

1.3. Grounded Theory in architectural research

Grounded Theory is appropriate for many architectural research projects for the following reasons. The first reason is that GT allows for a rigorous and structured approach to be taken in answering very open questions. The second reason

is the scarcity of design research relative to other fields. Third, observation methods common in architectural research look critically at the actions, interactions, and social processes of people as they relate to their designed environments. The following sections provide in-depth examinations of two recently conducted mixed methods architectural studies that illustrate applications of Grounded Theory. Because these studies were multi-year research projects, both employ what Pidgeon and Herwood (1997) call “hard” Grounded Theory because they utilize the full range of GT methods, including theoretical sampling. “Lighter” Grounded Theory utilizes a project-appropriate selection of the techniques of GT for the development of categories and concepts and an analysis of the relationship between concepts and categories.

2.0. CASE STUDY 1

The first study focused on occupancy in affordable housing and used Grounded Theory for variable generation during the qualitative phase of the work. Through interviews of key stakeholders, the researcher uncovered variables that were unexpected and that were subsequently statistically tested in the final quantitative phase of the project. Although this was a mixed method study, the case study will focus specifically on the GT qualitative analysis process.

2.1. Premise

The central claim of this study, “No Vacancy,” was that design decisions influence the economic and social sustainability of affordable housing. The goal of the study was to determine which design decisions, and to what degree. Vacancy, and the data it produces, was a lens through which to see the units. The research design for this study followed a sequential mixed methods process starting with a short quantitative phase for project selection, then a long qualitative process of variable generation and analysis, and finally a multiple regression analysis process.

2.2. Methods of data collection and analysis

Grounded Theory was chosen for this study because of the dearth of information on the topic of vacancy in multifamily housing and because of the potential for multiple, conflicting viewpoints from a wide range of stakeholders. Qualitative data collection for this study was primarily through interviews and focus groups. Multiple viewpoints were an essential component of the qualitative research design. For this study, interviews were not recorded. Instead, the researcher took notes and typed the notes immediately after the interviews to ensure accuracy of memory. The means of taking field notes by hand on site closely followed the methodology developed by Glaser, who upholds that transcriptions are not part of GT because relying on taped conversations discourages the delimiting of data during data collection (Glaser, 1978).

The qualitative research software used for this study was Atlas.ti which allowed coding and memo writing to exist in the same user interface. During the first stage of the analysis process, the researcher coded the notes using a set of pre-determined codes, emergent codes, and “in vivo” codes (codes that are drawn directly from the words the informant used). The analysis of each set of interviews increased the number of pre-determined codes as patterns emerged in the stories and descriptions of the stakeholders. The final list of codes numbered over 100 and included codes related to the built environment, such as “floor level,” “balcony,” “corridor,” “window,” “view,” “storage,” “stairs,” and codes related to the management, such as “voucher,” “kids,” and “large household.” As coding proceeded, a series of categories, or “code families”, were created to organize the codes. These included: “layout,” “unit scale,” “building scale,” “rent-ready,” “lease up,” and many more. A third layer of codes was created as the theory was being developed: “Crowding,” “Troublesome,” “Solvable,” and “Moderator.”

During the next stage of analysis, the researcher wrote dozens of memos: simple memos exploring a code and deeper memos that delineate the theories generated by the analysis. The complex memos included topics such as, “Delusions,” “Contagious Dissatisfaction,” and “Difficult Personality.” While many of these themes may have been uncovered using narrative inquiry or other qualitative methods, GT allowed an interconnectedness of themes and the ability to draw connections between memos by using the constant comparative methods which resulted in a greater number of ideas to pursue in developing the theory.

2.3. Results

The GT process generated several independent variables appropriate for testing during the quantitative phase. Through this combination of qualitative and quantitative methods, the following attributes had the most influence on occupancy overall: the type and size of the apartment, the floor level, the position within the building, and proximity to noise sources. The demographic variables that explain the highest percentage of the variance in tenancy duration are related to the tenant’s status as a Section 8 voucher holder, as elderly, as a single parent, and household size. In addition to providing testable independent variables, the GT process made other valuable contributions unrelated to the unit-by-unit analysis of the project. Project-scale attributes, such as playgrounds, parking, locations, and durability, were revealed as key indicators of a building’s success in terms of occupancy.

After the quantitative phase of the project, the researcher returned to Grounded Theory methods as a means to tie the project together and develop an overarching theory on the topic. Grounded Theory is well-suited for this return to

the data and for mixed method studies. Two emergent themes resulted from this return. One: architectural attributes, while rarely the sole and direct cause of a tenant moving, did contribute to the phenomena that were influencing the move. While the design itself is not causing people to move, it appeared to be exacerbating the social dynamic which could then influence whether people move. Two: Tenants may give a single reason for moving, but the true causes are multivariate. The focus on one reason has prevented an accurate assessment of the relationship between architectural attributes and demographic or site attributes. GT provided a structure to examine these two themes in combination, which generated a conceptual framework of multi-causality with unique interactions between factors. For these case study projects, the architectural attributes often have an indirect but demonstrated influence on occupancy; because it is indirect it is often unacknowledged by the stakeholders.

3.0. CASE STUDY 2

The second study focused on the influences of design, operations, and occupancy on plug load energy use in student residence halls. The mixed methods study used interviews with building occupants and GT methods as a follow-up to an extensive quantitative field study that measured energy usage in six existing buildings. Although the qualitative phase of the study could very well have been a stand-alone study, the mixed methods design allowed the qualitative data to inform the questions and discussions in the interviews and to give the researcher a deeper understanding of the influential processes under study.

3.1. Premise

Plug loads are electricity consumed by devices that are not hard-wired into buildings and where occupant behaviour plays a major role in usage. Physically measuring plug loads is useful, but it does not provide a full understanding of the various influences on occupant plug load usage behavior in buildings. Interviews provided a useful method for understanding plug loads from the perspectives of three groups of people associated with energy use in student housing: designers, building managers, and student occupants.

3.2. Methods data collection and analysis

Grounded Theory, and in particular Constructivist GT, methods were used for the interview data collection and analysis. Grounded Theorists recommend that researchers begin an inquiry with a general set of research interests or ideas, and that these ideas then become “sensitizing concepts” that act as points of departure for interview questions and discussions (Blumer, 1969 and Charmaz, 2006) and a number of “starting points” that allow them to articulate their experience with the topic. For example, the researcher had prior experience living and doing research in student housing, and these experiences informed the research.

Responsive interviewing techniques provided a framework of six main interview questions that allowed participants take the discussion in directions that revealed, in greater depth, how they felt about issues. This approach also provides a mechanism for the researcher to get the discussion back on track (Rubin & Rubin, 2011). The study had three different sets of questions for the three different stakeholders. An example of a question for students was: “How much do/did you think about electricity use while living in your residence hall?” Interviews were conducted primarily in-person but also via phone when necessary. The completed interviews were transcribed before all interviews were complete. Good representation among the stakeholder groups determined the final number of interviews given and saturation was reached at approximately 24 interviews. The interviews averaged about 40 minutes in length and required up to 6 hours of transcription using audio software with a slow playback speed setting.

The data analysis was iterative in nature, but gradually moves from the actual words of the participants to more abstract ideas that helped to illuminate connections and linkages in the data set — from transcripts, to codes, to salient themes, to analytic categories, to a single coherent process. In essence, the process used the participant narratives to construct an abstract conceptual or theoretical understanding of plug load energy usage in student housing (Figure 2). While other qualitative methods, such as phenomenology, require that the researcher bring a very strong and robust knowledge of phenomenology theory and precedent to their work, GT is rooted in the words themselves and what they mean at a higher level.



Figure 2: Qualitative data collection and analysis process.

3.3. Results

The data analysis process used emergent coding, whereby tags were assigned to words or lines of text in interview transcriptions that help to explain processes in the participant narratives. These tags emerged directly from the text itself, not from some pre-assigned list of codes or categories. For example, one emergent code was “modeling behavior,” and any word or line of text associated with this description was assigned this code. Some words or lines of text were assigned to multiple codes. This process generated 471 unique codes, sometimes called the codebook. Similar codes were later combined or merged. The codes came directly from the text and the memos resulted from the researcher beginning to understand meanings in the text. For example, a code related to “proximity of building amenities” resulted in this memo: “When students can’t have a certain device in their rooms, but there is one in a common area, then the proximity becomes very important.”

Emergent themes brought together ideas contained in several codes. For example: the theme “managing costs” captured ideas contained in codes such as: “Controlling Cost,” “Financing Limitations,” “Financing Opportunities,” “Misunderstanding Intent,” etc. The process resulted in 30 themes. From these themes, two analytic categories were raised that attempted to explain and clarify how the themes overlapped. The two analytic categories were: “doing more with less” and “supporting the student experience.”

One coherent process appeared to powerfully describe and explain the influences on plug load usage in student housing. The coherent process was called “balance of power,” and it suggested that students had the power to bring electronic devices and to use them as they chose; campus facilities managers and housing offices had the power to create, change, or impose policies that impact student energy use and were the final decision makers on how energy is managed within the buildings; and designers had the power to influence which energy efficiency strategies, technologies, and capabilities are considered as part of the design process. It was the negotiation between the stakeholder groups that appeared to give residence halls their unique character with respect to plug load energy usage (Figure 3). This understanding of coherent processes was aided by the iterative, analytical and process-oriented nature of Grounded Theory.

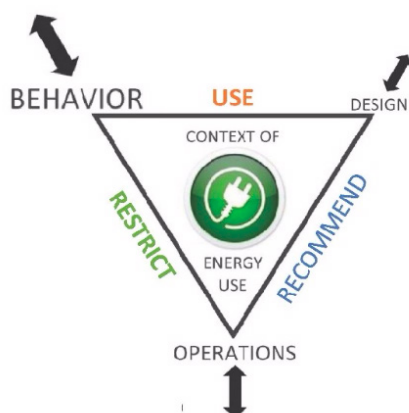


Figure 3: Results in relation to the initial research ideas or “sensitizing concepts.”

4.0. Suggestions

A unique flexibility of GT is illustrated by the case studies above. GT can either be a stand-alone method, or it can come at the beginning or end of an architectural research project. This section of the paper offers specific suggestions for architectural research, divided by phase of data collection, analysis, and theory generation.

4.1. Data Collection

Though Grounded Theory is an analysis method, not a data collection method, there are some types of data that are more appropriate than others. The richer, the more complex, and the more layered the data is, the more applicable they are for GT methods. Architectural research, because of the complexity of its contexts, provides a wealth of sources with multiple viewpoints on specific phenomena. Interviews and focus groups are obvious sources of data, but videos, photographs, drawings, and free-form answers to survey questions, etc. can also provide rich source material. Annotations written as notes during periods of observation can be used in the qualitative coding process as well. The data does not need to be newly collected: a researcher who has an existing word or image dataset can also apply GT methods.

The logistics of planning, scheduling, and conducting interviews is challenging. Traveling to conduct interviews is time consuming but allows researchers to interact directly with participants and to see their facial expressions that phone or internet interviews do not. In-person interviews allow the discussions to take place in building contexts, significant for architectural researchers. More interviews are not always better. Collecting and transcribing data from interviews, focus group discussions, ethnographic observations, etc. is incredibly time consuming. Starting the transcription process before completing the data collection allows the codes and memos that emerge from transcribed data to inform questions asked in future data collection. As noted in Sections 2 and 3, choosing whether or not to record and transcribe does not affect robustness; either is acceptable, lending flexibility to the researcher.

4.2. Coding

The first step of data analysis in GT is the coding of the data. Coding is like sifting through sand — an iterative process that reveals the patterns in the data. There are choices for the researcher in how to code the data: first, predetermined versus *in vivo* versus emergent coding; and second, whether or not to conduct selective coding. In predetermined coding, the researcher creates a set of codes in advance and searches for text that matches these codes. In *in vivo* coding, the code list is created from the actual words in the data as the coding is conducted. Emergent coding builds on the idea of *in vivo* coding, but with ideas and concepts, not literal words. Given the expansive data of qualitative architectural inquiries, emergent coding allows the researcher to analyze “on the fly.” Selective coding consists of coding every single line of text: essentially using a fine-toothed comb on the data.

Coding is an essential step in many rigorous, qualitative analysis methods. The initial coding in GT is distinguished by its systematic and thorough approach, and by the idea that initial coding does not assume that researcher has yet developed a theory. GT coding is also distinguished by a final, iterative step: the coding of the codes. Categorizing the codes into what Glaser calls, “coding families,” is a means to understand the emerging patterns. This process of sorting and diagramming the data provides a logic for organization that aids the theoretical development of analysis (Charmaz, 2006). Regardless of the method used, one essential code is “Great Quotes,” a tag that helps to find and employ the gems discovered but possibly forgotten in the interview transcripts or notes.

4.3. Memos

After the first round of coding, the researcher begins to write memos, the heart of the Grounded Theory process and, perhaps, the analytical step most valuable to qualitative researchers in architecture. Memos, or short written notes, address ideas or perspectives and allow researchers to reflect on what they are seeing in the data. Steve Borgatti notes: “Writing theoretical memos allows you to think theoretically without the pressure of working on ‘the’ paper” (Borgatti, 2005). Kathy Charmaz emphasizes that memos “explicate analytic notes, fill out categories, and allow the researcher to make comparisons between data and data, data and codes, and so on” (188 Brink, 2006). Early memos can direct the writing of “advanced memos” which can be used to describe how categories emerge, and in making comparisons. Ultimately, in Grounded Theory, the theory emerges through the process of memoing, during which the researcher creates ideas about the evolving theory throughout the process of open, axial, and selective coding.

From the case studies, some lessons learned for memoing are to: write memos about ideas and concepts, not about the people in the data; keep the memos separate from the data; write memos as often as possible; write a separate memo for each idea; and modify memos iteratively. For architecture researchers, who tend toward the intuitive, it is important to note that memos can be based on a hunch (if stated clearly as such), but for memos to be grounded, they need to emerge directly from the data and coding (Glaser, 1978). The memo-writing process is unique to Grounded Theory among qualitative methods. Memos are a productive and structured way to reflect on the data while sorting and categorizing it. Memo writing is also an efficient aspect of GT: many memos can simply be edited and included in the final report or paper.

4.4. Software programs

Although the traditional method of coding and analyzing qualitative data by hand is still a viable option, computer assisted qualitative data analysis software (CAQDAS) is now fairly common. There are several software options including Atlas.ti (Figure 4), Nvivo, and Dedoose. The primary advantage of these programs is to assist the researcher in streamlining and facilitating what can be a slow and laborious process. The software allows the researcher to select words, lines, or chunks of text; tag or code them; easily retrieve all similar codes; and compare coded material or themes. When working with a large dataset, CAQDAS can be an excellent organizational and sorting tool to the qualitative researcher. All of these programs can be learned fairly quickly by anyone with basic computer skills.

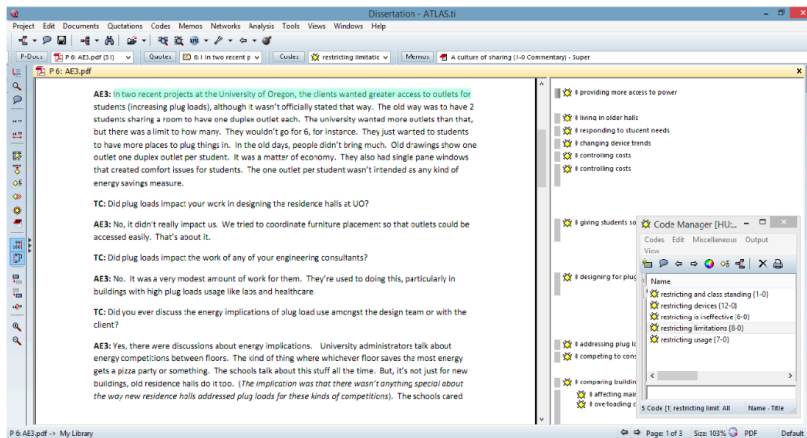


Figure 4: Example from the Atlas.ti qualitative analysis software used.

The software greatly assists the qualitative researcher in their task, but it does not actually perform the analysis for them (Basis, 2003; Bringer, 2006). There is still a manual process of using the software to code the data. The disadvantages of CAQDAS are primarily due to the cost associated with purchasing the software and the time necessary to develop proficiency learning the programs. The less expensive software programs have fewer capabilities, but this may not be a major issue for novice users.

4.5. Theoretical Sampling & Saturation

The idea of saturation is a key component of Grounded Theory, and it answers the difficult question that arises in qualitative research and GT analysis: when do I have enough data? There is no hard and fast rule for how many interviews one must collect, which confounds researchers new to GT who are familiar with quantitative techniques based on statistically significant samples. In GT, the idea of "saturation" suggests that a researcher will know when they have enough data at the point they begin to hear the same kinds of responses from different participants (Charmaz, 2000). Theoretical saturation of the collected data limits how much data collection takes place. Saturation is not the same as repetition of the same events or stories but rather "the conceptualization of comparisons of these incidents which yield different properties of the pattern, until no or new properties of the pattern emerge." (Glaser, 2001). Charmaz notes that "categories are 'saturated' when gathering fresh data no longer sparks new theoretical insights nor reveals new properties of these core theoretical categories" (113 Charmaz, 2006). Procedurally, the idea of saturation is more systematic and efficient, but it relies on the researcher's ability to stop and reflect during the data collection and analysis stages of the project.

CONCLUSION

Although it is fairly common for architecture researchers to include subjective perspectives from people (occupants, designers, clients, building managers, etc.), this qualitative data is rarely rigorously analysed or conceived as an integral piece of the research design. Open-ended questions that generate narrative responses are not a problem for architectural research; they are an opportunity that should be harnessed, embraced, and celebrated. The Grounded Theory methods, approach, and procedures described above provide a straightforward primer for researchers interested in leveraging rich and complex participant experiences to enhance research outcomes. GT is predicated on the idea that researchers can approach and work with qualitative data in a rigorous and systematic manner to reveal new meaning and answers to unexpected questions. A number of time-tested GT analysis procedures exist that can be employed and adapted by architectural researchers to suit specific research goals and objectives. These procedures take time to master and use, but are relatively simple to understand and accessible to researchers unaccustomed to qualitative research and analysis. With limited architectural research precedents using GT and a set of established analysis procedures, the time to begin using GT in inquiries of the built environment is now.

ACKNOWLEDGEMENTS

We would like to thank Alison Kwok, Howard Davis, G.Z Brown, Deborah Olson, Erin Cunningham, and Mark Gillem at the University of Oregon for their assistance and support of the two dissertation projects from which the GT case studies presented here were taken. We are also grateful to the anonymous reviewers of the early draft of this paper; their comments were very helpful.

REFERENCES

- Alsaadani, Sara, and C. De Souza. "The social component of building performance simulation: Understanding architects." In *Proceedings of the 2012 Building Simulation and Optimization Conference*, Loughborough University, Loughborough, UK, September, pp. 10-11. 2012.
- Basit, Tehmina. "Manual or electronic? The role of coding in qualitative data analysis." *Educational research* 45, no. 2 (2003): 143-154.
- Bollo, Christina. "Neither here nor there." *Architectural Research* (2015): 480.
- Borgatti, Steve. "Introduction to grounded theory." Retrieved May 15 (2005)
- Bringer, Joy D., Lynne Halley Johnston, and Celia H. Brackenridge. "Using computer-assisted qualitative data analysis software to develop a grounded theory project." *Field methods* 18, no. 3 (2006): 245-266.
- Brink, E., Dellve, L., Hallberg, U., Henning Abrahamsson, K., Klingberg, G., & Wentz, K. Book Review of *Constructing Grounded Theory*, *International Journal of Qualitative Studies on Health and Well-being* (2006):188-192.
- Blumer, Herbert. "The methodological position of symbolic interactionism." *Sociology. Thought and Action* 2.2 (1998): 147-156.
- Charmaz, Kathy. *Constructing grounded theory*. Sage, 2006.
- Charmaz, Kathy. "Grounded Theory: objectivist and constructivist methods in Norman K. Denzin and Yvonne S. Lincoln (eds.) *Handbook of Qualitative Research*." (2000).
- Cho, Ji Young, and Eun-Hee Lee. "Reducing confusion about grounded theory and qualitative content analysis: Similarities and differences." *The Qualitative Report* 19, no. 32 (2014): 1.
- Collins, Thomas, Nicholas B. Rajkovich, Alison G. Kwok, and Christina Bollo. "Using Case Studies to Navigate a Course to Zero Net Energy." In *Proceedings of ACEEE 2012 Summer Study on Energy Efficiency in Buildings*. 2013.
- Creswell, John W., and Vicki L. Plano Clark. "Designing and conducting mixed methods research." (2007): 53-106.
- Glaser, Barney, and Anselm Strauss. "The discovery of grounded theory. 1967." *Weidenfield & Nicolson, London* (1967): 1-19.
- Glaser, Barney G. *Theoretical sensitivity: Advances in the methodology of grounded theory*. Vol. 2. Mill Valley, CA: Sociology Press, 1978.
- Kelle, Udo. "Emergence vs. forcing of empirical data? A crucial problem of Grounded Theory reconsidered." *Historical Social Research/Historische Sozialforschung. Supplement* (2007): 133-156.
- N. Pidgeon, K. Henwood, Using grounded theory in psychological research, in: N. Hayes (Ed.), *Doing Qualitative Analysis in Psychology*, Psychology Press, Hove, UK, 1997, pp. 245-273.
- Rubin, Herbert J., and Irene S. Rubin. *Qualitative interviewing: The art of hearing data*. Sage, 2011.
- Strauss, Anselm, and Juliet Corbin. "Grounded theory methodology." *Handbook of qualitative research* 17 (1994): 273-85.
- Wertz, F., K. Charmaz, L. McMullen, R. Josselson, R. Anderson, and E. McSpadden. "Five ways of doing qualitative research." New York: Guilford Press (2011).