

Methodology

The following research methods will be applied within my thesis in order to achieve the objectives of having a) a thoroughly examined theoretical foundation of architectural diagrams and the narratives of the city; b) criteria for clear and experimental diagram design; c) explanation of the importance of ethnographic research in architectural diagrammatic research; d) case studies of architectural diagrams; e) experimental architectural diagrams that exhibit research done on the city of Buffalo, New York:

- 1) Literature study
- 2) Case studies
- 3) Experimental design
- 4) GIS research/Archival data compilation/traditional library research
- 5) Cognitive/Sense of place spatial data compilation or mapping

1) The literature study research will examine a range of theoretical perspectives of writers on the subject of the architectural diagram, as well as the philosophical foundation of these perspectives, and the theory that supports the necessity of people within the city and the importance of nurturing their cultural identity within it. The compilation of the chosen literature will form a base of knowledge for the criteria of a new diagram, which will be exhibited in the design of the diagrams that will convey the research for this thesis.

2) For the case studies, sets of diagrams from different particular architects will be analyzed using Edward Tufte's design parameters in order to illustrate or note the graphic, color, and text trends in each diagram. The parameters will be developed from a literature study of Edward Tufte's *Envisioning Information*. These parameters will help define the overall trends in design favored by each architect or firm, and will work as an organizing principle to sort through the characteristics. The case study portion of the thesis will prove the need for parameters in design that provides an objective guideline for designing a clear diagram, and will also produce an understanding of what architectural diagrams look like and what are used for.

3) Designing diagrams to convey the information gathered from the case studies will be approached in a conceptual framework, that tests the ability to convey information that escapes the boundaries of pre-conceived notions of how the layout of a diagram should be, or

how information should be conveyed (with the exception of the utilization of Tufte's parameters for clear design communication).

4) Archival data are materials originally collected for bureaucratic or administrative purposes that are transformed into data for research purposes. Secondary data are raw data other researchers collect for their own purposes, which ethnographers can access for other uses. Local archival data are available on general demographic and socioeconomic characteristics of the research community or area as well as specific aspect of the population of interest to researchers such as health status or educational achievement levels. The spatial view of data contributes information that cannot be obtained in any other way. "Cartographic representation and analysis of spatial data make it possible to go beyond tabular and statistical views of data," (Cromley, 117). Spatial analysis enables us to consider the possible importance of neighborhood or environmental or other spatial-contextual influences. Geographic information systems use computer software that supports three main functions: spatial database management, visualization and mapping, and spatial analysis. As a result, GIS software systems are more powerful than computer graphics or mapping software. GIS can provide multiple views of data – tabular, graphic, and statistical. GIS and archival data will be compiled on the city of Buffalo that will help to produce the cultural and ethnographic narratives of the city.

5) Cognitive maps are long-term stored information [stored in the heads of individuals] about the relative location of objects and phenomena in the everyday physical environment. The environments that are the basis for the individual's cognitive map may be known to exist or may be imagined, and they often represent a mix of information drawn from different periods of time. Both cognitive and developmental approaches have been applied to the study of spatial cognition. Sense of place refers to how people evaluate places and decide that they are distinctive based on their unique characteristics. Sense of place also develops as a deep attachment through experience and memory to the places where we have lived. Objective aspects of location are combined with subjective experience, direct or indirect. Attention has been focused on how sense of place is created by intention in contemporary architecture and planning. Geo-referenced data on the built environment that are available in cyberspace through applications like Google Maps are becoming part of people's experience of places in contemporary life. Perceptions of restaurants or neighborhoods for example are no longer

based simply on an individual's sensory experiences or cognitive map. They are also based on the geo-referenced information one chooses to look at.

Objective aspects of location combined with subjective experience will be achieved through compressing the GIS data acquired (objective) with the subjective experience of the city (the perceptions of the people who live there), found by geo-referenced data from the internet, as well as subjective maps used to narrate the city to outsiders (e.g., tourism maps).