

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) GIS research/Archival data compilation/traditional library research
- 4) Experimental Design
- 5) Cognitive/Sense of place spatial data compilation or mapping

1) Literature study

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.

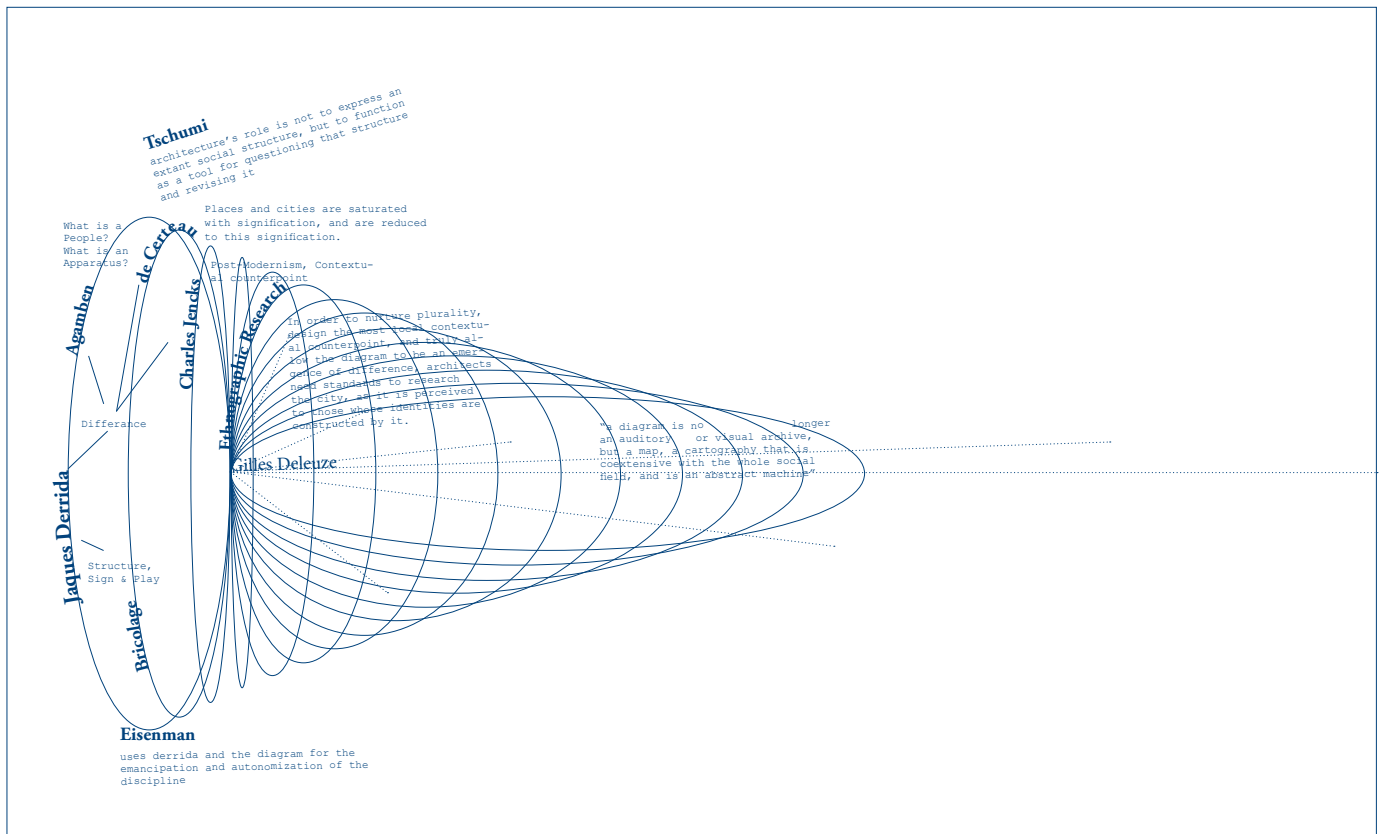


Diagram of the prevalent authors and ideas in the literature study.

2) Case Studies

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.

The diagrams chosen for this case study were decided after looking at many diagrams from different architects, and were decided upon based on their theoretical use. From that, the styles of each diagram was analyzed using a set of criteria to differentiate from each characteristic.

The diagrams examined in the case studies will be those involved in pre-design work, where the invisible forces that underlie architecture can be visualized and revealed. These diagrams work as intermediate spaces that lie between space and time, and are placeholders that work as abstract machines. The diagrams are abstract means of thinking about organization, and are the architect's best means to engage the complexity of the real. The place of these diagrams is in the operational, inter-subjective field, where meanings are formed.

Thus, these diagrams should be easily understood. The diagrams that reveal, and represent the context and narratives of the city should be just as clearly represented graphically. Edward Tufte outlines the characteristics needed for clearly communicated information design and diagrams in his book, *Envisioning Information*. The criteria used to analyze each of the architect's diagrams were created from the same criteria Tufte explains throughout his book.

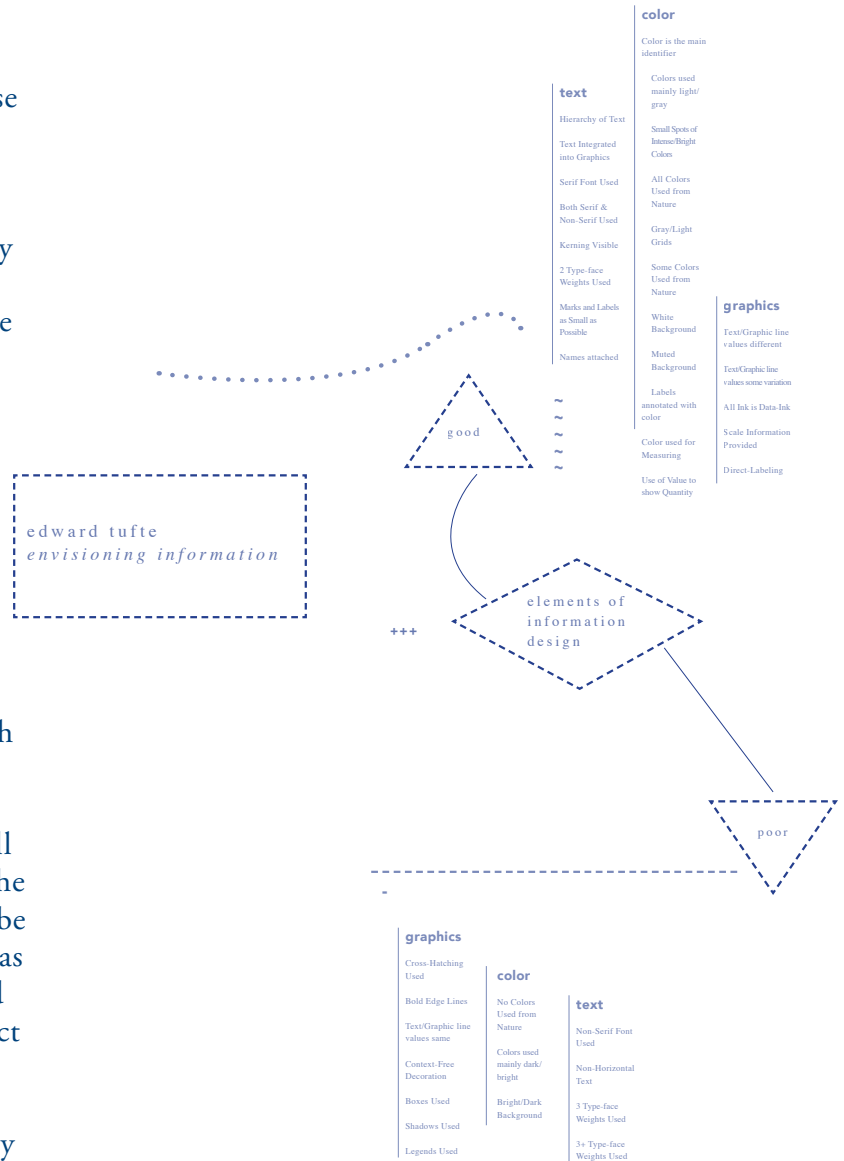


Diagram of the guidelines conveyed by Tufte in *Envisioning Information*

	UNStudio								Koolhaas/OMA								Morphosis								Archizoom								Tschumi								Lateral Office							
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Text Integrated into Graphics	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
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Color

Text

	UNStudio								Koolhaas/OMA								Morphosis								Archizoom								Tschumi								Lateral Office															
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Scale Information Provided				●																																																				

UNSTUDIO

1. European Research program (FP7: 2008-2012): H2SusBuild. 2. Active and Passive Circle. 3. Form Follows Energy. 4. Attainability. 5. Mobility. 6. Hanwa Headquarters Responsive Facade. 7. Osirys Update. 8. Void Analysis.

AMO

1. Harvard Commissioned Study. 2. Carrefour Commissioned Study. 3. Exposition Universelle Design Development. 4. Hollocore Ruhrgebiet Commissioned Study. 5. Groupe Galeries Lafayette Competition. 6. Amo Atlas Research Study. 7. History of Europe and the European Union. 8. AMO Atlas.

MORPHOSIS

1. The Now Institute: Haiti Now. 2. The Now Institute: Culture Now. 3. The Now Institute: New Orleans Now. 4. The Now Institute: Madrid Now. 5. The Now Institute: L.A. Now Volumes 3 and 4. 6. The Now Institute: L.A. Now Volume 2. 7. The Now Institute: L.A. Now Volume 1. 8. The Now Institute: Culture Now.

ARCHIZOOM

1-8. No-Stop City.

TSCHUMI

1. Screenplays, 1976. 2. The Manhattan Transcripts, 1976-1981. 3. Parc de la Villette Paris, 1982-1998. 4. Atmosphere Park Santiago, 2010. 5. Atmosphere Park Santiago, 2010. 6. Centre Georges Pompidou Retrospective Paris, 2014-2014. 7. Atmosphere Park Santiago, 2010. 8. Joyce's Garden London, 1976

LATERAL OFFICE

1. Caribou Pivot Stations, Research Station Hybrids Nunavut, Canada 2010. 2. Health Hangars, Airport and Hospital Hybrids Nunavut, Canada, 2010. 3. Ice Road Truck Stops, Contwoyto Winter Road NWT, Canada, 2010. 4. Caribou Pivot Stations, Research Station Hybrids Nunavut, Canada 2010. 5. Hydroborders, South America Project: Harvard GSD Andean region, South America, 2011-2012. 6. Hydroborders, South America Project: Harvard GSD Andean region, South America, 2011-2012. 7. Weatherfield, Land Art Generator Initiative, Public park and energy-generating source Abu Dhabi, UAE, 2010. 8. Health Hangars, Airport and Hospital Hybrids Nunavut, Canada, 2010.

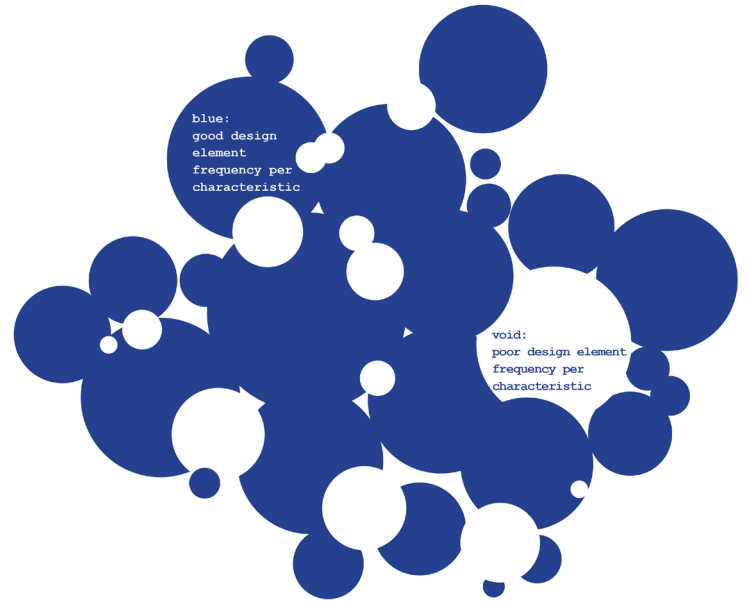
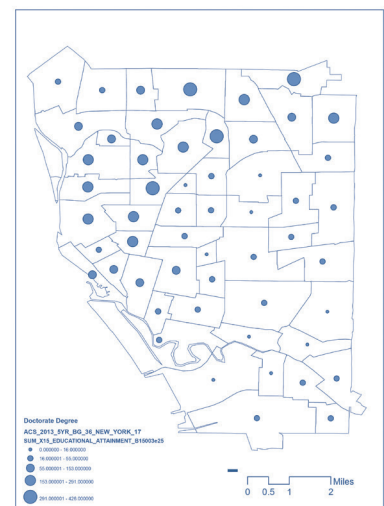
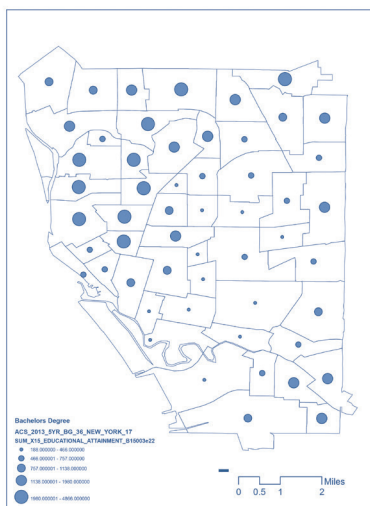
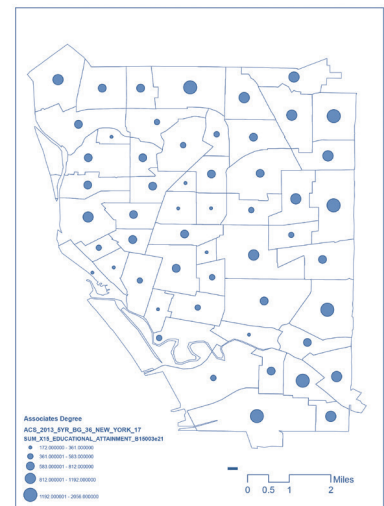
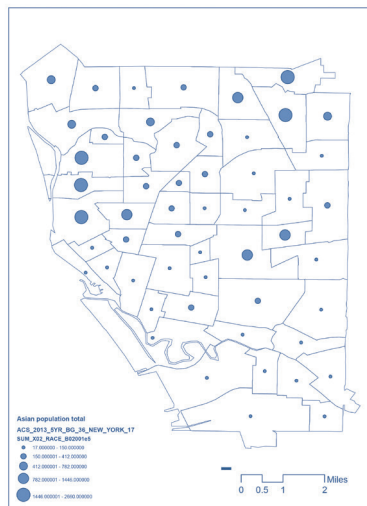
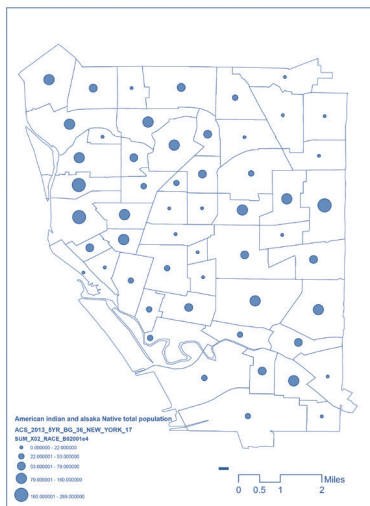


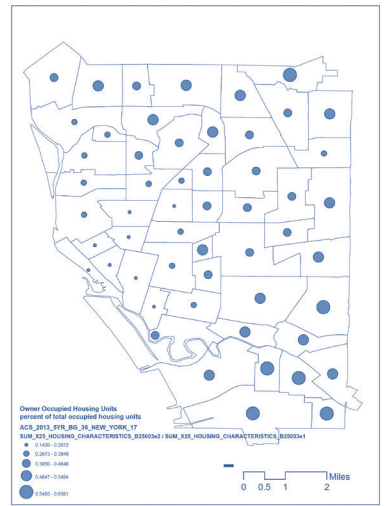
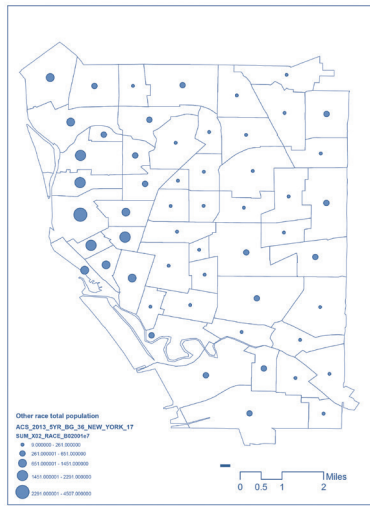
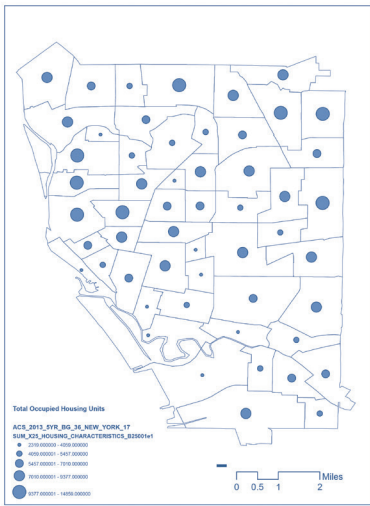
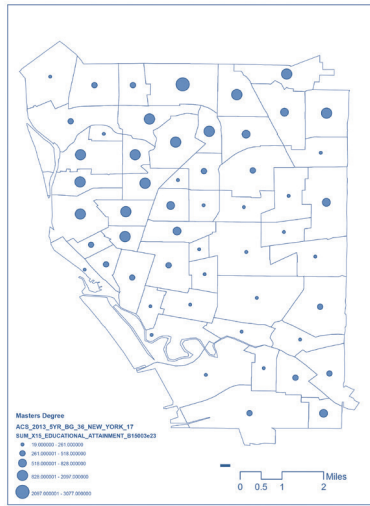
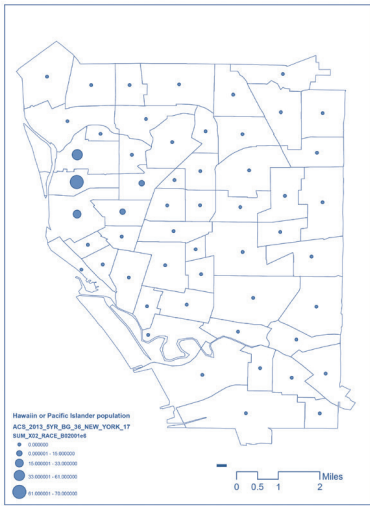
Diagram of the findings from the architectural diagram case studies

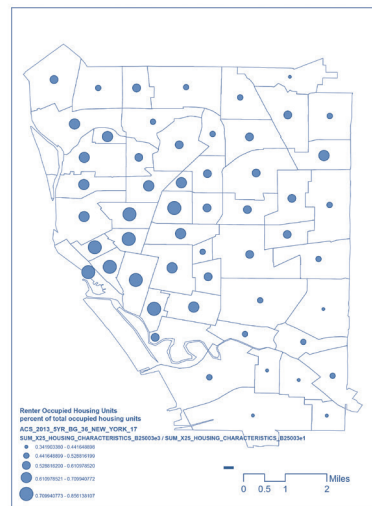
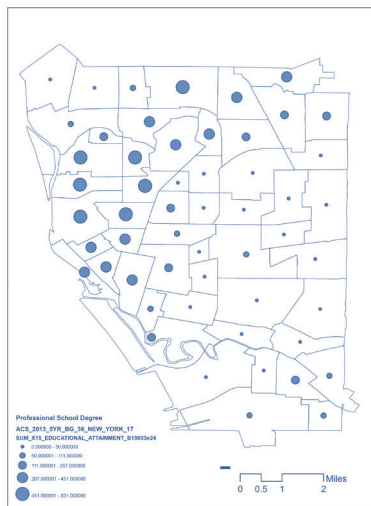
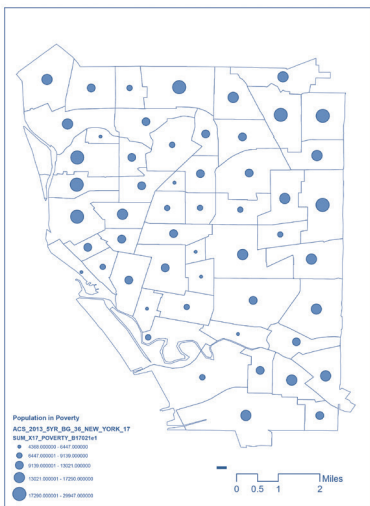
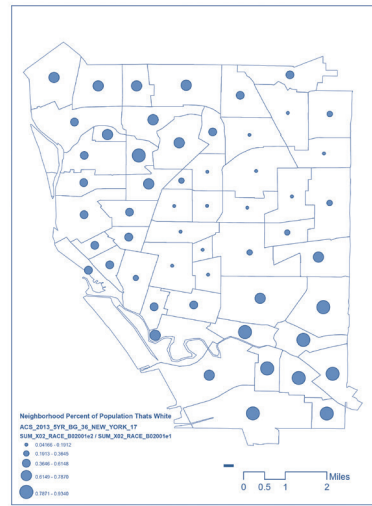
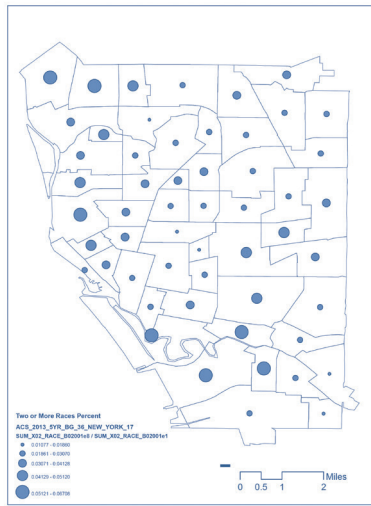
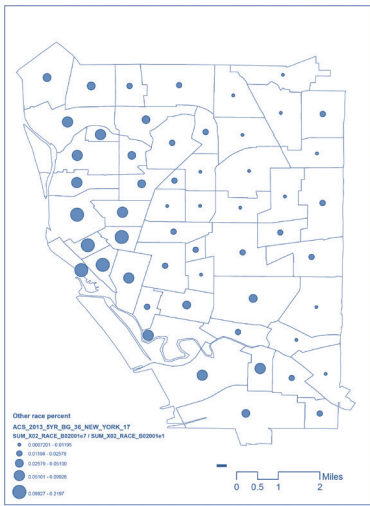
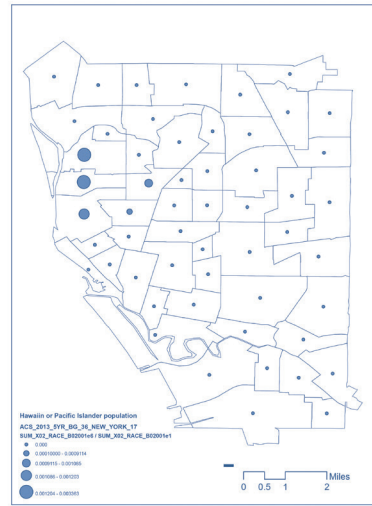
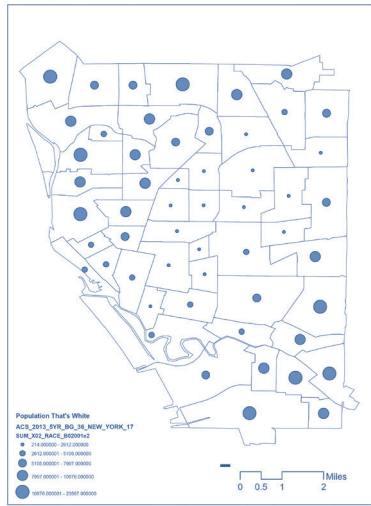
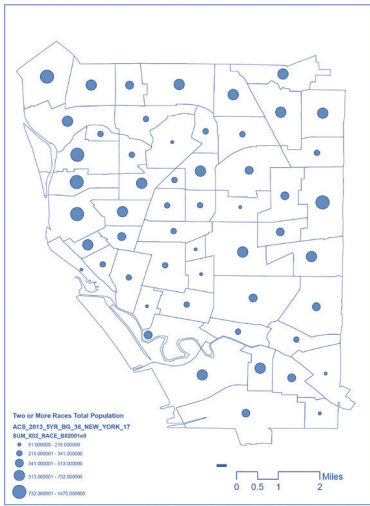
3. GIS research/Archival data compilation/traditional library research

Data on the city of Buffalo, New York as a test site for this thesis was compiled with the theme of presenting a city to represent information needed to be available for an architect to design the most local contextual counterpoint as defined by Charles Jencks. For this, ethnographic information was gathered from Arc GIS, as well as from the internet, archival data, and traditional library research.

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.

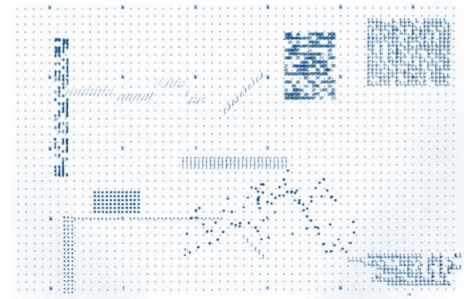
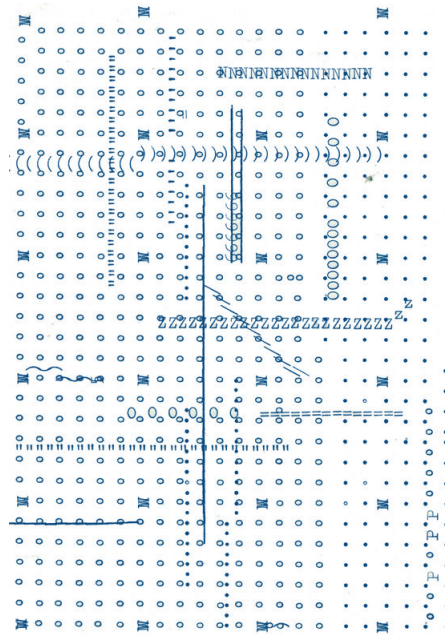
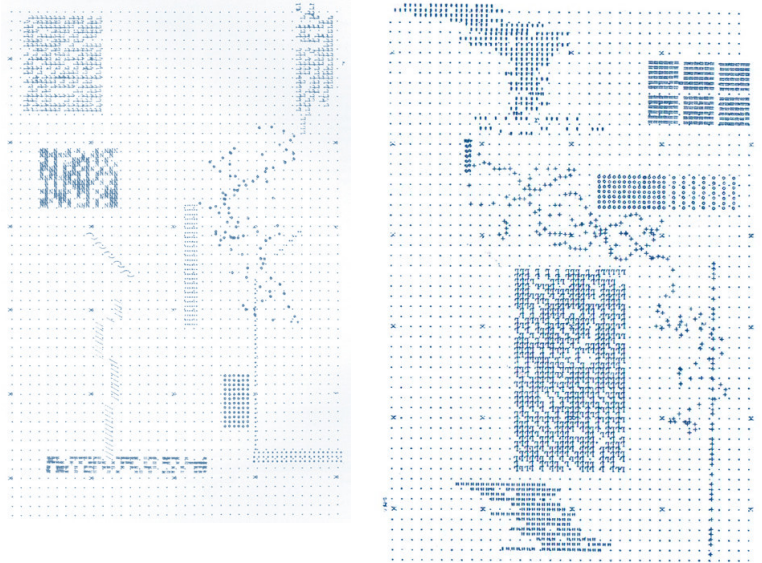






4) Case Study of Archizoom, Experimental Design

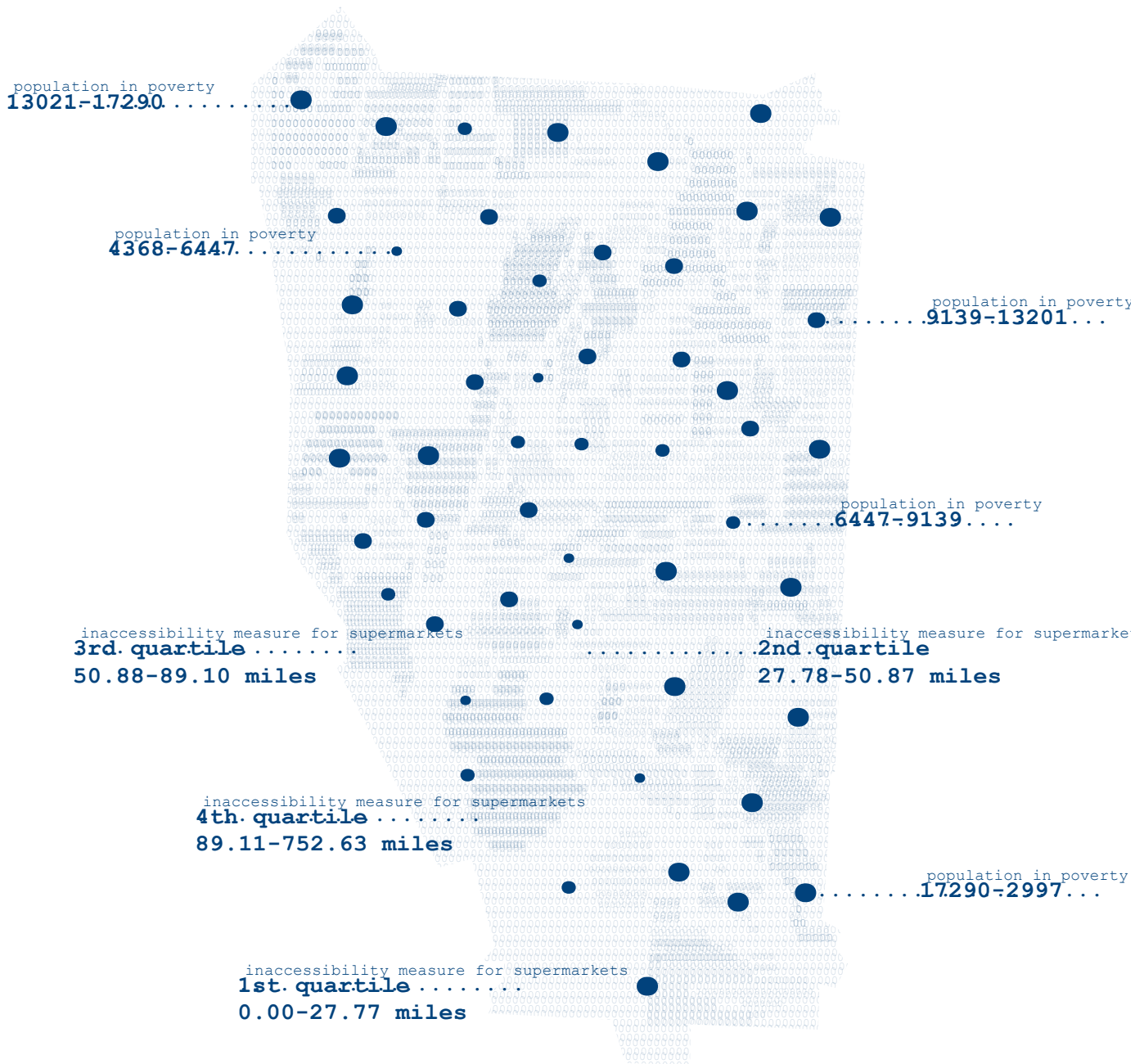
Archizoom, or Studio Archizoom Associati was a group of Florentine architects, founded in 1966, devoted to anti-Functionalism, and employing elements from popular ‘culture’ and even from Kitsch. It was associated with Supersensualism, anti-design, and so-called ‘banal’ design. Archizoom attempted a radical representation of the architectural plan as an abstraction of form in relationship to labor. The drawings of No Stop City depicts a city plan in the form of an abstract field of dots and Xs. The geometry that orders the disposition of the dots and Xs represent the architecture of a city. Read in this way, Xs are columns occurring every 50 meters. The remaining infrastructure fits within the grid of plug-ins occurring every 5 meters, etc. The overall layout illustrated an urban condition governed by the minimum welfare necessary to guarantee the reproduction of those living and working in this urban field. Archizoom sarcastically defined this type of city as, “a bathroom every 50 square meters.” These drawings force us to reconsider the idea of abstraction as something different from the stylish modernist or minimalist architecture with which it has often been associated.



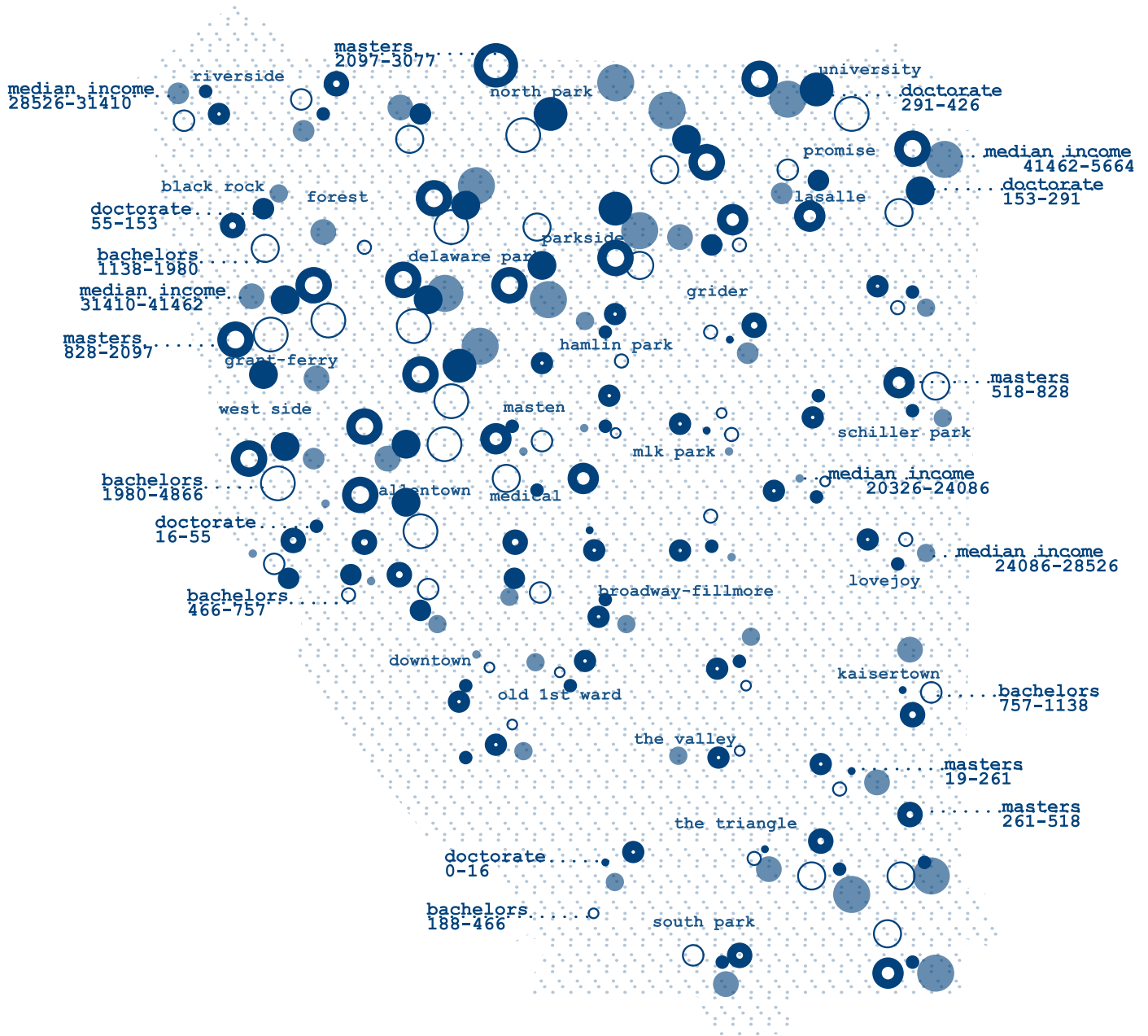
Archizoom No Stop City Typewriter Diagrams

Data on the city of Buffalo, New York as a test site for this thesis was compiled with the theme of presenting a city in an abstract field of typeface letters and symbols in order to represent the basic conditions of an existing city, and the urban condition currently needed to preserve the reproduction of those living and working in the urban field. The designed diagrams attempted to strip all of the infrastructure of any architectural attribute, and will render it in infrastructural and biopolitical objectivity, in the same way Archizoom's diagrams aimed to do so.

The diagram below shows the population of Buffalo in poverty in the typeface's period marks, and the accessibility to supermarkets in each neighborhood in the quantity of the typeface's 0's.



The diagram below represents the median income of each neighborhood in Buffalo, as well as the prevalence of particular educational degrees. This used the same parameters as aforementioned of the typeface limits. From the Archizoom case study and design experiments, it has been determined that this method may not be the best solution for conveying information in rendered objectivity since each diagram has information that is layered and is thus, comparative. The next set of diagrams will both isolate information and layer everything all at once, and will allow users to choose which data layers are shown in a diagram at a time. Also, the use of a typeface's parameters has proven to be irrelevant to objectivity in this case, and will not be pursued further.



5) Cognitive/Sense of place spatial data compilation or mapping

Cognitive mapping is crucial for navigating the cultural logic of late capitalism, and its close-up processes of social observation and rich ethnographic description can complement the synoptic GIS maps of an area. “Diagrams are used by both scientists and designers throughout such integrated work to help uncover the relationship between the various disciplines, to communicate complex scientific concepts to lay audiences, and to assist people in making design decisions based on performance rather than aesthetics,” (McGrath, 159). In order to nurture plurality, design the most local contextual counterpoint, and truly allow the diagram to be an emergence of difference, architects need standards to research the city, as it is perceived to those whose identities are constructed by it. Defining, collecting, cataloging, and analyzing artifacts, using archival and secondary data in ethnographic research, and mapping spatial data, can gather information. “Artifacts become cultural when they acquire meaning or significance because of how they relate to history, behavior, practices, and the values and beliefs of the groups that produce and use them,” (LeCompte, 1). Artifacts evoke the identities, concepts, and values to which individuals and members of a culture adhere. Additionally, the purposeful set-up of a map from a community, in this example a tourist map in particular, can “reveal how the map might promote commodification of the local environment and history through critical analysis,” (LaCompte, 18). Below is some of the cognitive mapping and artifact gathering of geo-referenced data that was conducted.

The following diagram consists of geo-referenced data compiled from user’s discussions about Buffalo on the internet, layered with GIS information, and follows the same design parameters outlined in the Archizoom case study and design experiment. As noted before, the data in this diagram will also be revised with the findings from the conclusions of this research in mind.

Works cited

Schensul, Jean J., and Margaret Diane LeCompte. *Specialized Ethnographic Methods: A Mixed Methods Approach*. Lanham: AltaMira, 2013. Print.

Deamer, Peggy. *The Architect as Worker: Immaterial Labor, the Creative Class, and the Politics of Design*. London: Bloomsbury Academic, 2015. Print.