CONNECT-THE-DOTS

Connecting the Dots:

MAPPING AS A TECHNIQUE TO SYNTHESIZE, ANALYZE, AND UNDERSTAND COMMUNITY AND HISTORY.

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Connecting the Dots: Mapping as a Technique to Synthesize, Analyze, and Understand Community and History.

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MAPPING HAS EMERGED IN THE INFORMATION AGE AS A MEANS TO MAKE THE COMPLEX ACCESSIBLE, THE HIDDEN VISIBLE, THE UN-MAPPABLE MAPPABLE.

Peter Hall and Janet Abrams, *Elsewhere Mapping*

PREFACE

The projects highlighted in this book are the product of a 5-week graduate research seminar taught at North Carolina State University's College of Design over the summer of 2012 by Tania Allen, Assistant Professor in Art and Design, and Sara Queen, Assistant Professor in Architecture. The course, ***Connecting the Dots: Mapping as a Technique to Synthesize, Analyze, and Understand the Community and its Histories***, was a collaborative effort between Tania, trained as a graphic designer, and Sara, trained as an architect, to facilitate cross-disciplinary design research through mapping methodologies and visualization strategies as means to study the complexities of space, place and culture.

The subject of this course's research–5 distinct communities in Southwest Raleigh–contributed to the larger Uncovering Southwest Raleigh initiative, and aimed to understand the current and future forces affecting change within the study area. This initiative was also tasked with developing strategies that enabled the residents of Southwest Raleigh and the City to enhance and promote a healthy, creative and economically sustainable future for the district. This initiative was an ongoing collaboration between the City of Raleigh and NC State's College of Design, Poole College of Management and the College of Humanities and Social Sciences.

Through this cross-disciplinary graduate level seminar at the College of Design at North Carolina State University, we explored and applied diverse community engagement and research methodologies borrowed from landscape architecture, architecture, graphic design, and the social sciences. Mapping techniques were used to introduce students to research methods as cumulative, analytical and formative investigations. Students began researching local neighborhoods through the traditional methods of historical archives and GIS based data to uncover patterns in the built and social environment. From these insights, students were prompted to investigate and derive measurements of cultural, economic, political, and ecological forces precipitating those patterns. After extensive data-based research, students were then challenged to engage the community's perception and understanding of those systems through the design and implementation of a culture probe. Pedagogically each method of information gathering was linked to different cartographic techniques which in turn generated a variety of geo-spatial, cognitive, and phenomenological visualizations of place. Through this course structure, we found an increased investment on the part of the students to uncover and understand the complexities of place. By challenging the definitions of place to include the "thick" descriptors of dynamic social, environmental, economic, and political forces acting on a physical landscape, the course offered a foundation from which to forge new processes for discovering design intervention opportunities–a necessary evolution for students, educators and practitioners alike.

SYNTHESIS.
ANALYSIS.
FORMATION.

If we identify ourselves as designers working in the public sphere and for the public interest, we must operate simultaneously as insiders and outsiders, as speculators and social scientists. Our research methods must expand to include a diversity of perspectives and a multiplicity of lenses to understand the intricate systems comprising place. In response, designers must look to methods outside of the current design toolbox to expand research approaches. We believe that mapping as an analytical, synthetic and formative process is a method essential in the translation of research and data into critical visualization and propositional tools.

In his introduction to Design Research, Peter Lunenfeld wrote, "Design Research regularly participates in the redefinition of the design process away from the stand-alone object and into the integrated system." (Lunenfeld 2003, 11) "At the very least, design research saves us from reinventing the wheel. At its best, a lively research methodology can reinvigorate the passion that so often fades after designers "join the profession." (Laurel 2003, 12) Beyond applying to the transition from education to the profession, design research can inspire an increased ownership in the design process as well as be transformative to design practices for students, educators, and practitioners alike.

By re-positioning research ideologies as fundamental to the design process, research can ensure investment on the part of designers, increase empathy, and illuminate the complex context surrounding design decisions. In fact, critical research methodologies are essential for designers to define and understand the scope of any given project in order to carve out the appropriate territory and response– one that is, to use Herb Simon's term, 'satisficing.'

As visual, propositional and formative thinkers, we cannot simply pick up our research methodologies from the sciences and humanities. Acknowledging the unique position, process, and purpose that designers engage in necessitates a retooling of the ways in which we engage in research and make meaning of the data. In response to these challenges, it is no surprise that approaches to research within design are necessarily expanding to include mapping as a critical and analytical, synthetic and formative tool for understanding the multidimensional context of a project. Visual mapping strategies offer methods in understanding and translating community and identity-based attributes as key components of the contemporary site. This is particularly important for isolating and carving out new territories for design intervention and simultaneously understanding the larger scope of the problem and systems in place.

With the rapidly expanding archive of place-based information and data, now is the time to expand our understanding of site to include a diversity of perspectives and a multiplicity of lenses. The idea and term *site* no longer belongs solely to the geo-spatial. Territories and geographies are physical, virtual, tangible and conceptual. They cross cultural boundaries, continuums of time and scale, and modes of communication. A site can exist in the mind or on the ground. Necessarily, how we intervene in that site demands first a definition of it, and secondly an expanded criticality of how design might augment or change it.

Thirty years ago, Fredric Jameson foresaw the potential for mapping to resolve "the incapacity of our minds, at least at present, to map the great global multinational and de-centered communicational network in which we find ourselves" (Jameson 1991, 44) In his call for the "aesthetics of cognitive mapping", borrowed from Kevin Lynch's 1960 Image of the City, he identified the need to layer social, economic, and political measures of space onto our accepted physical definitions through an emergent visual language that correlates "the abstract knowledge of global realities with ...our daily experiences" (Holmes 2006, 21). Through this call, he was a forefather in establishing many contemporary mapping tenants where data and information become a primary subject of cartography often superseding geography.

Since Jameson's call, mapping has emerged as a tool utilized by diverse disciplines to transcend the increasing division between our nonphysical and physical understanding of–and participation within–our contemporary context. James Corner, as a Landscape Architect and designer of physical space, admits that "the experience of spatial life today is as much immaterial as it is physical, as much bound into time and relational connections as it is to traditional notions of enclosure and place." (Corner 2011, 17) Today our worlds are increasingly defined not only by the spatial extents or physical obstacles that have historically defined these territories, but simultaneously by the non-tactile sOtocks and flows of larger urban processes.

Rather than continuing to position the physical world hierarchically over the abstract systems that occupy it, mapping has the potential to link and even transform spatial measures of context to more intangible aspects including social, political, and economic based dimensions. In his book Visual Explanations, Edward Tufte states that "to depict relations between any measured quantities,... requires replacing the maps natural spatial scales with abstract scales of measurement not based on the geographic analogy." (Tufte 1997, 15) Through alternative perspectives and projections, cartography can tackle measures beyond traditional geo-spatial relationships. These

abstract measures are defined by different data based relationships and therefore orient the user within that context according to a specific set of reference points. As a generative and critical tool, mapping is often used to remove us from our typical reference points and inaugurate new insights and uncover potential future connections. Mapping is therefore a process of discovering common terms, measures, and relationships which enable us to position ourselves as individuals within our collective dynamic networks by revealing and realizing hidden potential. "The function of mapping is less to mirror reality than to engender the reshaping of the world in which people live." (Corner 2011, 1)

Corner's idea, however, provokes further dialogue concerning the cognitive outcomes of mapping. In other words, we must actively consider how the reduction or simplification inherent to the mapping process shifts our understanding of site based data. "Visual Language serves many of the same rhetorical functions as verbal language–for example, to organize information or to project tone or emphasize." (Kostelnick and Hassett 2003, 1) Alongside the use of mapping as a measuring and translatory tool, we must acknowledge the rhetorical process embedded in the visual communication of data. By using mapping as a strategy for research, the rhetorical nature of the information is evidenced not only by what is learned and gained, but also by what is being removed from the research equation. Perhaps the very nature of design precludes the ability and drive for impartiality, yet that notion is embedded in the research methodologies we employ. This false sense of neutrality allows us to feel confident in the concepts and projections rendered in our mappings, often leading students and practitioners to use visualized data as "truth" or rationale for elevating one concept over others. This trend does not diminish the need for research. In fact, quite the opposite, it emphasizes the power of visualization as core to the research process. In doing so, research and the evaluation of that research can be illuminated so that designers are aware of mapping as both a synthetic and formative process.

DESIGN RESEARCH REGULARLY PARTICIPATES IN THE REDEFINITION OF THE DESIGN PROCESS AWAY FROM THE STAND-ALONE OBJECT AND INTO THE INTEGRATED SYSTEM.

—PETER LUNENFELD, *DESIGN RESEARCH*

MAPPING AS A PEDAGOGICAL TOOL

In their book Learning How to Learn, Joseph Novak and Bob Gowin identified the critical nature of concept maps as a formative tool in creating propositional knowledge for students. Specifically, "A map can…provide a kind of visual roadmap showing some of the pathways we might take to make meanings of concepts in propositions." (Novak & Gowin 1984, 15) In The Theory Underlying Concept Mapping, Novak further explained that "After age 3, new concept and propositional learning is mediated heavily by language, and takes place primarily by a reception learning process where new meanings are obtained by asking questions and getting clarification of relationships between old

concepts and propositions and new concepts and propositions. This acquisition is mediated in a very important way when concrete experiences or props are available." (Novak 2008, 3)

Both inside and outside of the classroom, the notion that research is a non-visual method and artifact is something that is being challenged across all disciplines. Within a linear design process, designers traditionally segment research and design methodologies from one another. Here, research is typically completed first as a written or text-based activity and then propositional designs follow. Through the pedagogical structure of a graduate research seminar we proposed to challenge this dichotomy. Fundamental to the course was the use of mapping as both an analytical and formative tool, specifically in understanding the intersection of physical and social aspects of place. Additionally, mapping was used to interrogate the relationship between research methods and the propositional nature of design. We proposed that the act of mapping can illuminate the rhetorical nature of data and engender conversations as to the conditions and prompts for research itself.

To illuminate the agency that mapping can lend to design practices, students dissected several mapping-based research projects which are regarded as design proposals in themselves due to their profound influence in re-shaping our perception and understanding of their landscape subjects. These mapping precedents included Mathur/da Cunha's Mississippi Floods: Designing a Shifting Landscape (2001), Alan Berger's Drosscape (2007), James Corner's Taking Measures Across the American Landscape (1996), and Robert Venturi, Denise Scott Brown, and Steve Izenour's Learning from

Las Vegas (1977). In studying these seminal works students analyzed the theoretical position of the author/designer, the visual language and graphic composition of each map, the sources and methods for gathering data, the relative measures or indicators of space and time, the rhetorical meaning of each map, and the dissemination strategies and implications.

In addition to precedent studies, students were introduced to specific research methods that guided and framed their weekly mapping studies. From archival research to participatory action research, the students were introduced to a method and then asked to employ that method in their strategy for sourcing, gathering and mapping data. These research methods also guided the content or lens through which students synthesized and visualized particular elements of place and context. Using this framework gave a structure to their cumulative research and prevented students from selecting a single path of research. It also encouraged a comparative approach to examining both the data and the strategies for mapping that data. Finally, it provided a structure for examining what and how information is displayed and distorted through the mapping process. Students were encouraged to query their own and others' findings through bi-weekly pin-ups and discussions.

FORMAT

Pedagogically, each method of information gathering during this 5-week course was linked to different cartographic techniques which in turn generated a variety of geo-spatial, cognitive, and phenomenological visualizations. Students expanded their design processes through the comparative nature of the maps and the information that they were gathering in each week. It was through the comparative nature of the maps and the information that the students were gathering in each week that their design toolbox (and more specifically their learning and research toolbox) expanded.

Students experienced and examined the technique of mapping as synthetic, analytical and formative. The maps acted as both output and input. Each student project approached one question or observed phenomena through a variety of viewpoints, perspectives, and sources of data over the course of the class. Comparing distinct variables helped to uncover potential hidden patterns, associations and relationships that were not evident when looking at one element alone. Once compiled, their collection of maps rendered a complex and "thick description" of place as defined by social, cultural, physical, and ecological processes.

THE ACQUISITION [OF NEW CONCEPTS AND PROPOSITIONS] IS MEDIATED IN A VERY IMPORTANT WAY WHEN CONCRETE EXPERIENCES OR PROPOS ARE AVAILABLE.

—BOB NOVAK

DATA TYPES

GEOGRAPHIC
Development (Types / Age);
Natural habitats;
Infrastructure; Transportation;
Topography; Hydrology

GEOPOLITICAL
Population density; Economic;
Political; Education; Ethnicity;
Religious; Zoning

INVISIBLE
Historical Perception; Expectations
for the future; Place Attachment;
Health & Well-being; Identity

VISUALIZATIONS

OVERLAY
JUXTAPOSITION
PROXIMITY
ISOLATION
SCALE
PERSPECTIVE

FILTER/ RESEARCH METHOD

HISTORICAL / CASE STUDY
Evident / Erased;
Collective / Individual;
Oral / Visual / Written;
Recent / Past

CORRELATIONAL
Like / Unlike
Physical / Non-physical
Tangential / Direct
Causal / Correlational
Primary / Secondary / Tertiary

PHENOMENOLOGICAL

ETHNOGRAPHY
Emergent; Evident; Speculative

PARTICIPATORY / ACTION
Shaped by the user /
Defined by the instrument;
Active / Passive

MAP TYPES

DATA MAPS
TEMPORAL / TIME BASED MAPS
PATTERN MAPS
COMPARATIVE MAPS
NARRATIVE MAPS

SIMPLIFICATION
Through simplification and isolation, the design researcher focuses on a single element as an entry point.

SIMPLIFICATION > ANALYSIS
The initial analysis of multiple, simplified elements is compared and new theories begin to emerge.

ANALYSIS
In the analysis of new theories, the design researcher patterns of causation and correlation.

ANALYSIS > CONCEPTUALIZATION
In the comparison of research that is data driven with that of observation of community and culture, the design researcher gains a deeper understanding of perceptions.

CONCEPTUALIZATION
Through the comparison and knowledge of the community and the data, the design researcher draws propositional conclusions about how the research might be applied.

WEEK 1
HISTORICAL RESEARCH
DATA / TIME MAPS
ISOLATION

WEEK 2
GEOPOLITICAL
CORRELATIONAL RESEARCH
COMPARISON

WEEK 3
GEOPOLITICAL
PHENOMENOLOGICAL RESEARCH
PATTERN MAPS

WEEK 4
INVISIBLE
ETHNOGRAPHIC RESEARCH
OVERLAY
NARRATIVE MAPS

WEEK 5
PARTICIPATORY RESEARCH
PERSPECTIVE
NARRATIVE MAP

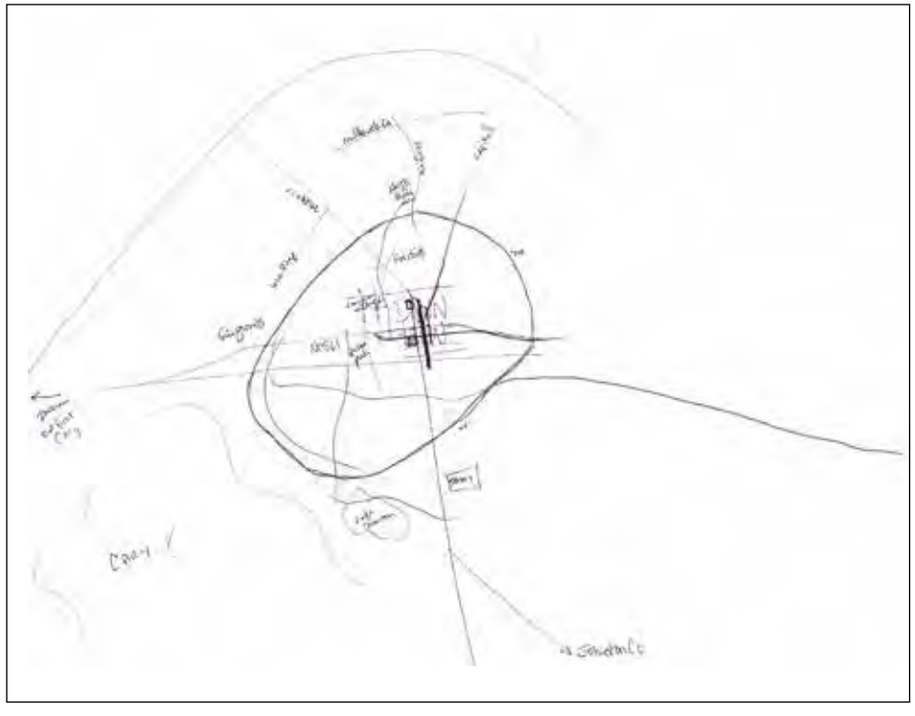
SUBJECT

TO DEPICT RELATIONS BETWEEN ANY MEASURED QUANTITIES… REQUIRES REPLACING THE MAP'S NATURAL SPATIAL SCALES WITH ABSTRACT SCALES OF MEASUREMENT NOT BASED ON THE GEOGRAPHIC ANALOGY.

—EDWARD TUFTE

THE SUBJECT: SOUTHWEST RALEIGH

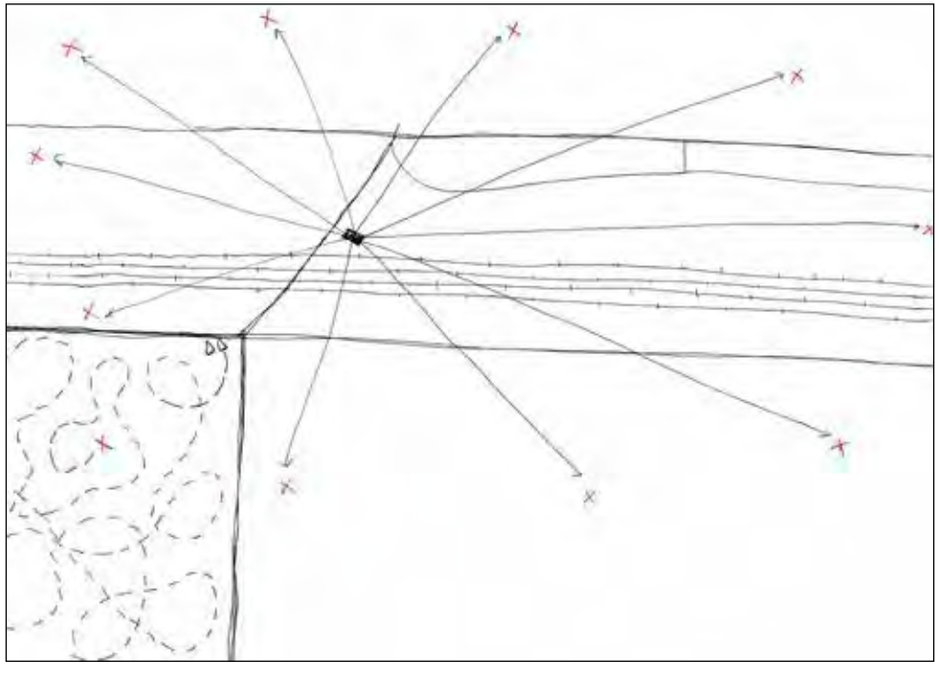
Southwest Raleigh is a very diverse political district and home to the Rex Hospital Health Care Complex, the North Carolina Art Museum, The North Carolina State Fairgrounds, NCSU University, the Dorothea Dix Property, Lake Johnson, Pullen Park, and many other cultural and community-based programs. It is also home to a range of residential neighborhoods with diverse demographics and real estate values. Despite the shared history and proximity of these communities and destinations,



Southwest Raleigh as a whole lacks an identity or cohesiveness due to the physical structure of each community, the era in which zones were planned and developed, current and past residents, diverse economic and cultural heritages, market pressures, infrastructural access, adjacent land uses, etc.

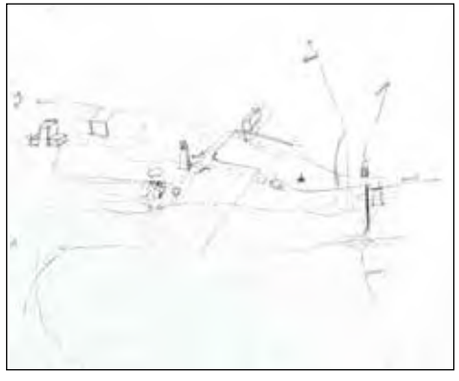
Through the research of this course we aimed to understand the past and current forces affecting change within the study area and offer insights into these individual communities.Students applied the research and visualization methods outlined by this course to individual research projects which contributed to the Uncovering Southwest Raleigh Initiative.

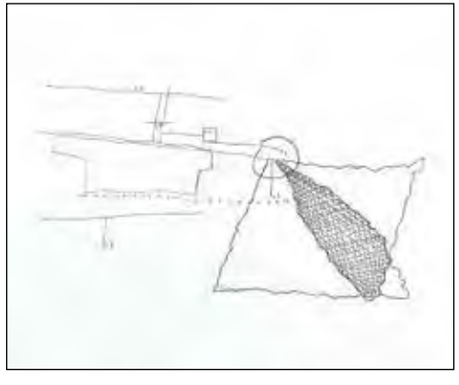
STUDENT'S COGNITIVE MAP: RALEIGH AS INFRASTRUCTURAL NETWORK

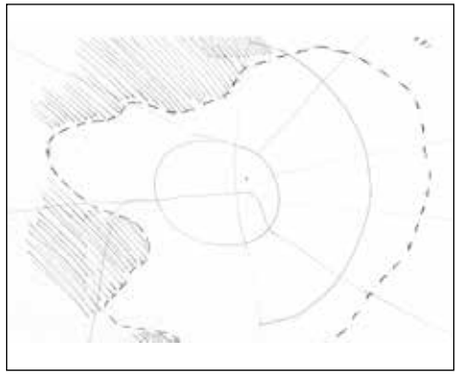


COGNITIVE MAPS

As a quick introductory exercise, students were asked to record how they perceived and understood the city of Raleigh and the district of Southwest Raleigh. Each student chose to depict different sets of information and to define different scales and extents of the city based on how they understood and navigated it. These maps were insightful as a survey tool and spawned a discussion on different orienting methods and their implied meanings. The intuitive strategies for depicting the city ranged from mapping the city as part of a regional urban system to recording the major destinations and landmarks to recording only the infrastructural paths and nodes between.







DOROTHEA DIX, BOYLAN HEIGHTS, AND FULLER HEIGHTS/CARALEIGH

Studied by K.Liang and J.Peeler

As three adjacent developments, Dorothea Dix, Boylan Heights, and Fuller Heights/Caraleigh share many geophysical and infrastructural characteristics, but as communities they have very different demographics, assets, and challenges. This study area is located directly south west of downtown Raleigh with access to many major roads and highways that connect the region.

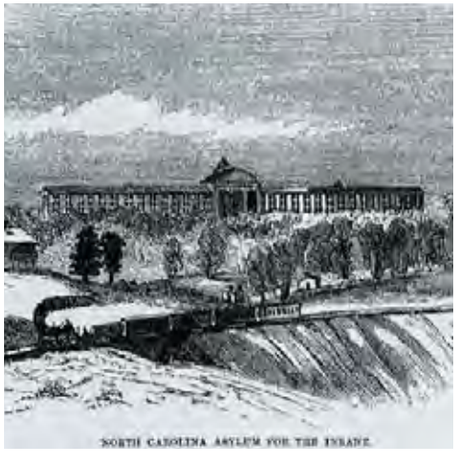
Dorothea Dix Hospital was the first anchor of this area to be developed in the late 1840's and 1850's as the state's primary mental health institution. At one point the hospital grounds occupied over 2,300 acres complete with farms, orchards, livestock, timber tracts, housing, and park grounds. Today the property has shrunk to 306 acres and in August of 2012 the last of the patients were moved from Dorothea Dix to Central Regional Hospital in Butner NC. In 2012 Governor Perdue signed a 99-year lease with the City of Raleigh for the property to be used as a public park, but the

STUDENT'S COGNITIVE MAPS: (L) POINTS AND LINES; (R,T) LANDMARKS; (R,M) DISTRICTS AND EDGES; (R,L) NETWORKED FIELD

future of this property is still highly debated.

Located directly north of the Dorothea Dix property across Western Boulevard is the residential neighborhood Boylan Heights which was planned in 1907 and built out through the 1920's. It is one of Raleigh's earliest planned suburbs located on a southwest facing slope within walking distance of downtown. The neighborhood was planned with a variety of house types and sizes for different needs and income levels. The largest and most ornate homes line the main street of the neighborhood, Boylan Ave, followed by the homes on Culter and Kinsey. The remaining neighborhood filled in with modest bungalows. When the Great Depression hit, many white collar residents moved to newer suburbs further out and many blue-collar residents lost their homes. This resulted in many of the houses becoming rentals and larger homes being subdivided into different apartments. This continued until the 1980s when the neighborhood was designated as a Historic District. Since, most of the houses have been restored and are predominantly owner occupied, escalating property values.

The Fuller Heights and Caraleigh neighborhood is located directly east of the Dorothea Dix Property across Lake Wheeler Road. The Caraleigh neighborhood was first developed around 1910 by the mill owners and expanded to Fuller Heights after WWII as the mill experienced another boom in production. The neighborhood is predominantly late-nineteenth and early twentieth-century small brick and wood framed houses with some more recent infill development in the 1980s and 1990's. The neighborhood is bound to the west by Lake Wheeler Road and bisected by Highway 401 / Highway 70 (expanded in the 1970s). Despite its proximity to downtown, the road and highway networks feeding into Raleigh at this location make it difficult to walk between Fuller Heights, the surrounding neighborhoods, and downtown.



(T) NORTH CAROLINA ASYLUM FOR THE INSANE, NOW DOROTHEA DIX CAMPUS
(B_L) RALEIGH, 1872 // (B_R) DOROTHEA DIX TODAY

PULLEN, KIRBY BILYEU, NAZARETH

Studied by T.Parker and G.Falba

Pullen, Kirby Bilyeu, and Nazareth are all located along a 1/4 mile segment of Western Boulevard directly east of NCSU's campus. Despite their proximity, these communities have very different physical characteristics and social demographics. This study area is about a mile and a half west of downtown Raleigh.

The most northern of these three neighborhoods, Pullen, developed between Hillsborough Street and Pullen Park beginning in 1901 with the majority of the homes built between 1901-1930. Currently this community is comprised of a mix of families (typically owner occupied units) and college students (typically rental units and fraternity houses). At the heart of this neighborhood is the Alexander Family YMCA, initially built in the 1950's and rebuilt in the 2000's, and Brownstone Hilton Hotel.

The Pullen Park property, which borders Pullen neighborhood to the west and south, was initially donated in 1887 by Richard Stanhope Pullen as a recreational space for the city. Today the 66 acre park is very active with baseball fields, tennis courts, an indoor aquatics center, Pullen Arts Center, Theater in the Park, and a family focused park with a train and large pond.

Located directly across Western Boulevard from Pullen Park is the Kirby Bilyeu neighborhood. This small neighborhood (only 26 residences) was initially developed on the site of the Bilyeu Estate beginning in the 1920's, but with the economic crash of the Great Depression and the building of the nearby city dump the development was not well maintained and quickly fell into disrepair. Beginning in the late 60's, with the presence of influential architect and professor James W Fitzgibbons, this neighborhood became home to many creative people intent on making it into a vibrant community.

This spirit continues today as highlighted by the annual Kirby Derby Festival.

The once thriving Nazareth community is located directly west of Kirby Bilyeu. The anchor of the original settlement was the Catholic Orphanage, built in 1899 by Father Thomas Frederick Price, which provided most members of the community with employment until it closed in 1965. The community was predominantly African American and established by four brothers of

the Pope family who purchased the property in the 1890's. Since the orphanage's closure, most residents have lost their homes or left the community. Today the Catholic Diocese of Raleigh, WRAL, and NCSU own the majority of the land and very few houses and residents remain.

(T) THE KIRBY DERBY IS A STAPLE IN KIRBY-BILYEAU

OBERLIN VILLAGE

Studied by M.Southard and J. Barghout

Oberlin Village is located about 2 miles west of downtown Raleigh with Wade Avenue running near the northern boundary, Cameron Village to the east, Hillsborough Street to the south, and University Park to the west.

Oberlin Village was Raleigh's first freedman community developed after the Civil War on part of plantation owner Duncan Cameron's property. When James E. Harris, former slave of Mr. Cameron, established Oberlin Village in 1866 he named it for his alma mater, Oberlin College in Ohio. The original 149 acre community primarily consisted of farmland and small houses, but quickly the residents built churches, schools, and opened businesses along Oberlin Road. The community was a thriving African American community through the 1950's. Today a few of the community's important institutions and historic homes still remain including Wilson Temple United Methodist Church (founded in 1865) and Oberlin Cemetery.

The Oberlin Village community has struggled to maintain its identity since Cameron Village, one of the country's first strip malls, was built in 1949. New commercial and residential growth continues to drive up property values pushing many of the original residents out and erasing much of Oberlin Village's historical landscape.

AVENT-WEST

Studied by K.Creech and B.Brooks

Avent West is located about 3 miles southwest of downtown Raleigh and is bound by Western Boulevard to the north and Avent Ferry to the south and east.

Developed from the 1950's-1970's as part of post-WWII suburban development, the Avent-West area has no central core and is marked by weak boundaries and edges. The area has few connecting corridors between its independently planned developments and the neighborhood is bisected by Interstate 440. Due to its proximity to NCSU, the neighborhood is marked by a strong political divide between property owners and renters. Avent West was only recently defined as a neighborhood by the city in the 1990s after the area demanded a political voice as a single family neighborhood to resist the political and market pressures of dense multifamily housing.

(T) STUDENTS FROM LATTA HOUSE / LATTA UNIVERSITY
(B) HISTORIC OBERLIN ROAD, A DIVERSE AND VIBRANT COMMERCIAL DISTRICT

METHOD

Studied by R.Steinsberger

The Method neighborhood is located about 4 miles west of downtown Raleigh bound to the north by Beryl Road, to the east by Gorman Street, to the south by Ligon Street, and to the west by Interstate 440.

Method, like Oberlin Village, was one of Raleigh's freedman communities established after the Civil War. In 1872 General Cox sold former slaves, Jesse Mason and Isaac O'Kelly, 69 acres of land which they subdivided among their families. The settlement was initially known as save-rent or slab-town until the inhabitants renamed the area Mason's Village. In 1890, the U.S. postal service built a post office and changed the name of the community to Method. In 1914, Berry O'Kelly opened the O'Kelly School and it became one of three fully accredited African American high schools in the state. Method remained a rural community with dirt roads and no water or sewer infrastructure through the 1950s, despite the city modernizing on all sides. North Carolina State University acquired the land south of Method in 1935 and built E.S. King Village to house its graduate and married student population in 1958. Later in the 1960's Raleigh annexed the Method neighborhood, extending basic water and sewer infrastructure and paving the streets. The O'Kelly school closed in 1966 after desegregation of the public school system. Today Method remains a predominantly African American community, but market forces and real estate development continue to pressures the community on all edges.

(T) EXTERIOR OF THE BARRY O'KELLY SCHOOL IN METHOD
(B) INTERIOR CLASSROOM AT THE BARRY O'KELLY SCHOOL

Images are fundamental stimuli to creativity and invention; they do not represent the reality of an idea but rather inaugurate its possibility.

-James Corner

MAPPING VISIBLE HISTORIES

ARCHIVAL ANALYSIS + DATA MAPPING

Readings: Mumford, Koolhaus, Corner, Tufte
Image Study: Venturi Scott Brown

To understand their neighborhoods and the people who occupy them, students were first tasked with using mapping as a synthetic gathering tool. As an introduction to the histories of their various neighborhoods, students used local archives, planning documents, and GIS based data as indicators of the built and social environment over time. In this initial phase, we encouraged the students to use a grounded theory approach.

For this course's application, this meant students approached the archival data they collected from a neutral position, allowing the data itself to reveal patterns to them rather than as a way to support initial speculations. Students focused on gathering and translating data they could access from existing public records–introducing them to traditional data gathering and mapping processes to build a foundation from which to examine both the neighborhoods and the mapping processes. Once the students accumulated a variety of sources and began to visualize the data itself, the conversation was directed towards the narrative that the map was illuminating and how that might be evaluated as accurate or biased. Here cognitive mapping allowed the students to clarify what they understood about the neighborhood and to identify where gaps in their information were to move forward in developing deeper meaning.

The process for mapping these initial findings proved to be tied closely with the geo-spatial aspect of the neighborhoods. Students gravitated towards mapping figure ground, building types, population densities, and demographic shifts. Focusing on what was visible in the neighborhood proved to be a natural starting place as students could 'test' the data through their own, simple observations.

STUDENT WORK

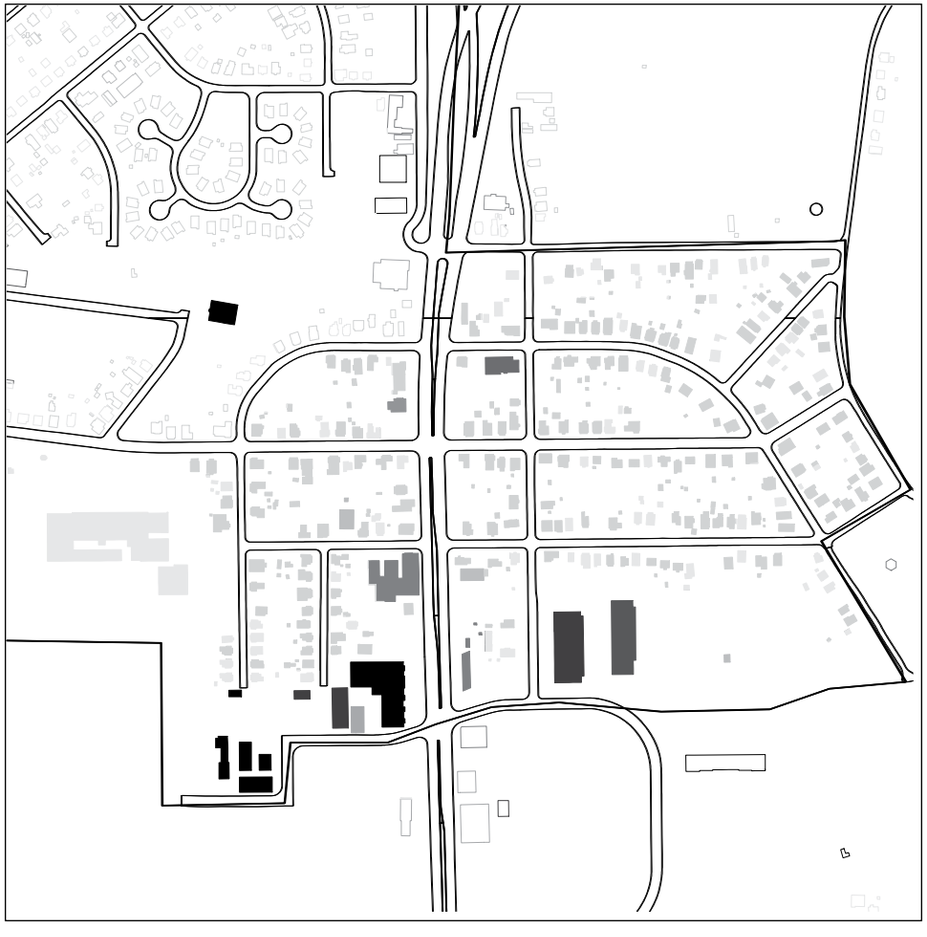
In this first week, students investigated a variety of visible data describing their neighborhoods through a series of geo-spatial data maps.

DOROTHEA DIX, BOYLAN HEIGHTS, AND FULLER HEIGHTS/CARALEIGH

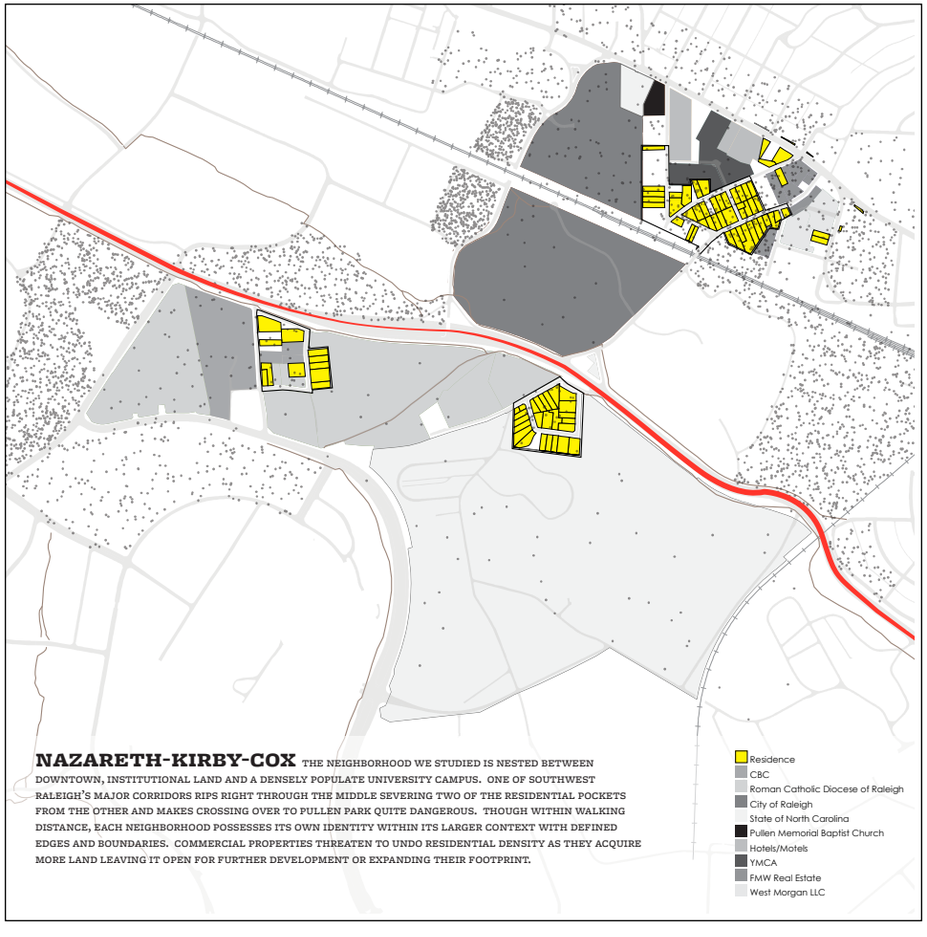
Jennifer Peeler and Katy Liang

Jennifer and Katy explored the history of the Fuller Heights/ Caraleigh and Boylan Heights neighborhoods through analyzing the built fabric of the neighborhood.

Most of the original building stock still exists in these neighborhoods making it a useful indicator overtime.



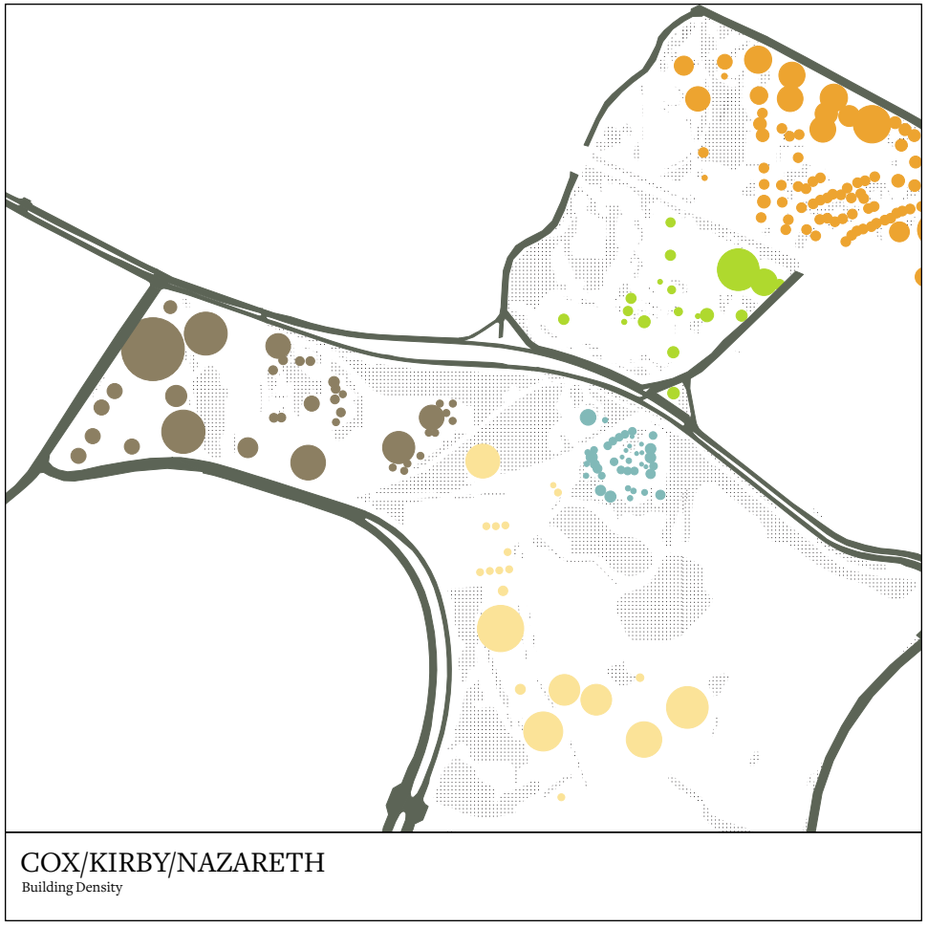
[L] JENNIFER PEELER, YEAR BUILT OF STANDING BUILDINGS
[R] KATY LIANG, YEAR BUILT [DARKER = NEWER]



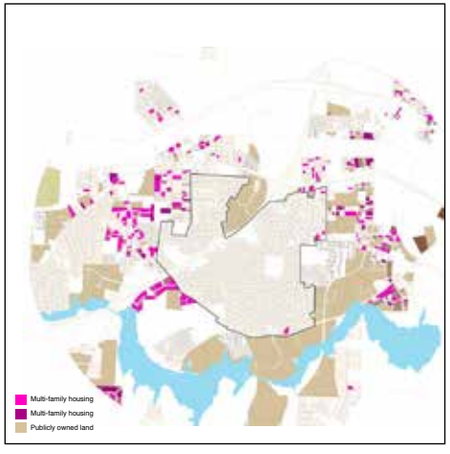
Pullen Park/Cox, Kirby Bilveu, Nazareth

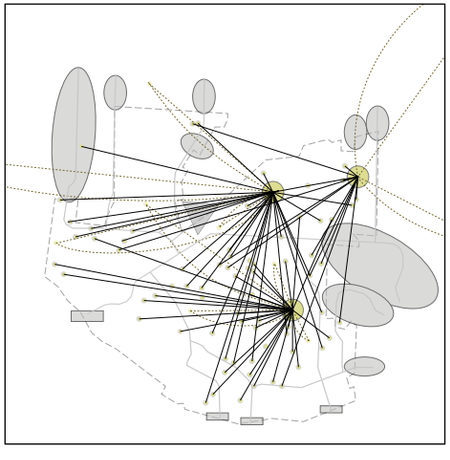
Tyler Parker and Gina Falba

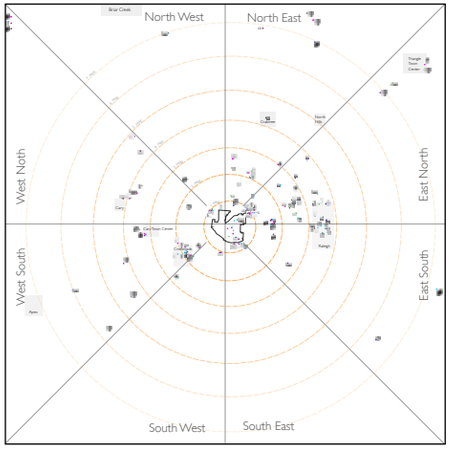
In an effort to catalog how these three adjacent residential neighborhoods are different, Tyler and Gina synthesized a variety of information from adjacent land uses, tree cover, building/lot size, year built, owner occupancy, demographics, etc. This early study illuminated how similar the neighborhoods were in physical attributes and infrastructural access, pushing the students to focus their future research on indicators of the social dimensions of the community to uncover why they are so distinct.



[L] TYLER PARKER, LAND USAGE
[R] GINA FALBA, BUILDING DENSITY IN NEIGHBORHOOD





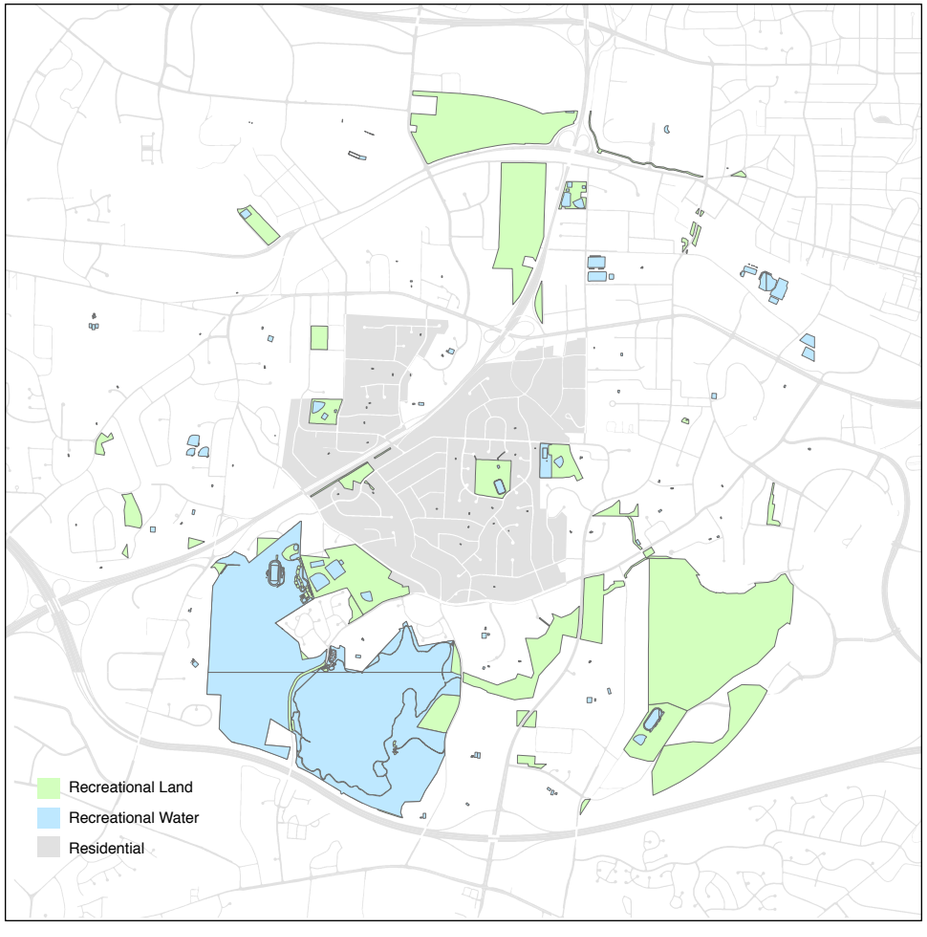


AVENT-WEST

Karen Creech and Brandon Brooks

Karen and Brandon were challenged to find a starting place in identifying their measures of place. In this series of historical maps they illuminated the context under which the neighborhood (or collection of subdivisions) was developed.

They found the clearest defining characteristic of the study area was its clear distinction in population density and owner occupancy from the surrounding areas.



(L) KAREN CREECH, DENSITY, RENTAL PROPERTIES, BOUNDARY AND ACCESS, ESSENTIAL SERVICES
(R) BRANDON BROOKS, RECREATIONAL SPACE

MAPPING OBSERVED PHENOMENA

CORRELATIONAL RESEARCH + TIME-SERIES / PATTERN MAPPING

Readings: Cosgrove, Corner, Lynch, Tufte, Fry
Image Studies: Berger, Fisk

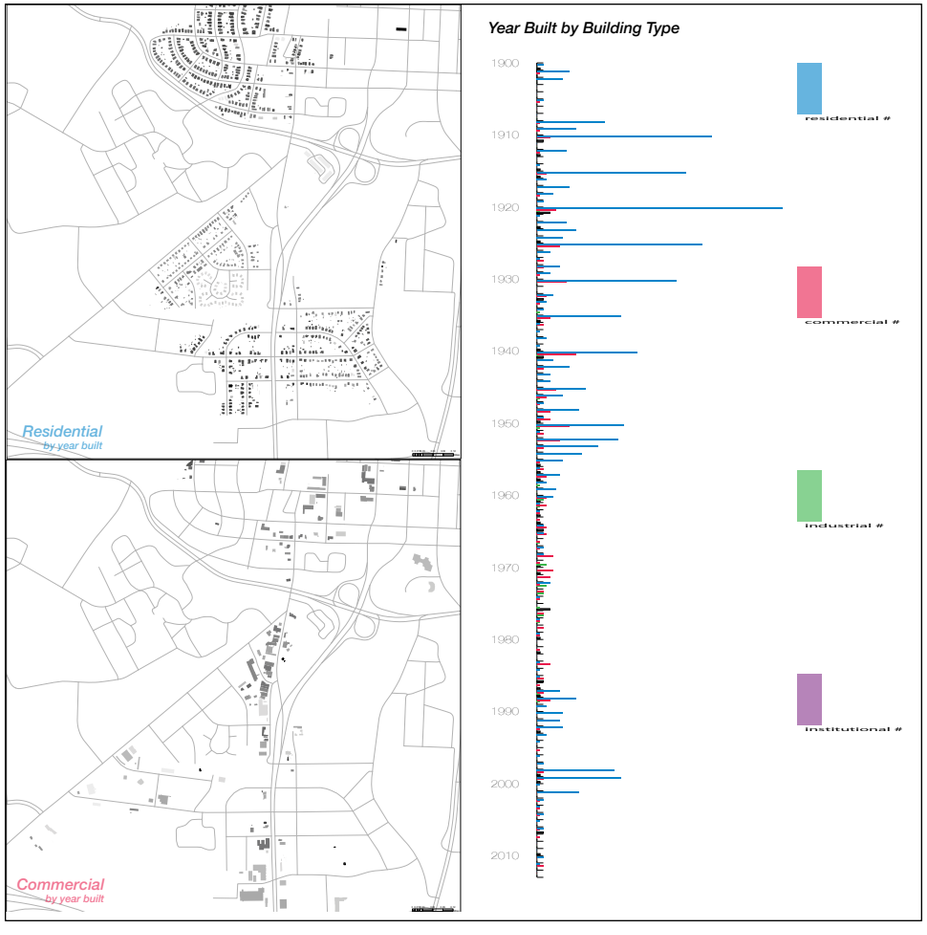
In the second week, students were introduced to correlational research by building on their original data maps through a series of observed conditions within the neighborhoods themselves. During this week students developed what we referred to as pattern maps where phenomena were identified as relational and co-variable. Students compared what they had learned by analyzing the archival data in the first week to what they learned through more intense observation of the site.

During this process, students were encouraged to uncover what was not readily observable–patterns of behavior or trends of change–and compare that with the 'visible' data collected in the first week. The overlaps, discrepancies, and alignments across sources prompted discussions surrounding the validity of data, the motivation of different authors, the biased projection of their cartographic techniques, and the rhetoric of their visual iterations.

This exercise instigated dramatically different results between students studying the same neighborhoods and from the students' assumed ideas in their first week's studies. In some cases, the data itself told a very visible and 'concrete' story, in other cases the site itself did and the data did not. Overall, the juxtaposition of the different techniques of data gathering with the consistency of the dissemination (the map) challenged the students to question their own methods, to make decisions based on what they began to understand more fully as incomplete and complex knowledge, and to generate decisions based on a quality of fit rather than a universal (or acontextual) solution. In addition, the process of mapping their observed phenomena with the data collected in the first week foregrounded the interpretive process of mapping.

STUDENT WORK

By analyzing and correlating diverse types of archival and observation-based information, students built on their research from the first week to uncover phenomena and trends of change through a series of pattern and time-based maps.

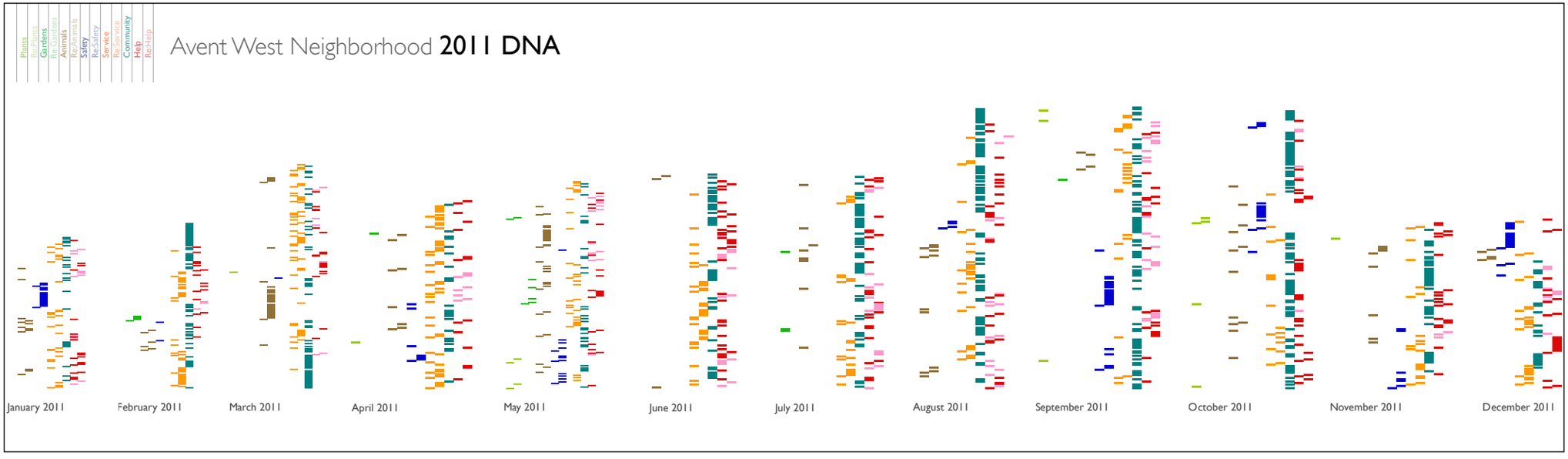


DOROTHEA DIX, BOYLAN HEIGHTS, AND FULLER HEIGHTS/CARALEIGH

Jennifer Peeler

Building on her first week's research, Jennifer chose to correlate the diversity of land uses, land values, building values and years built. Through her site observations she noticed that residential, commercial, industrial and institutional uses crisscross through the Fuller Heights and Caraleigh neighborhoods rather than developing in traditional zones. To begin to understand why, she isolated the different land uses and sorted each property by year built, by building value, and by land value to study spatial and market value relationships over time.

[L] YEAR BUILT AND BUILDING TYPES
[R] TYPE OF BUILDINGS AND SPATIAL AREA COMPARED TO VALUE OF LAND



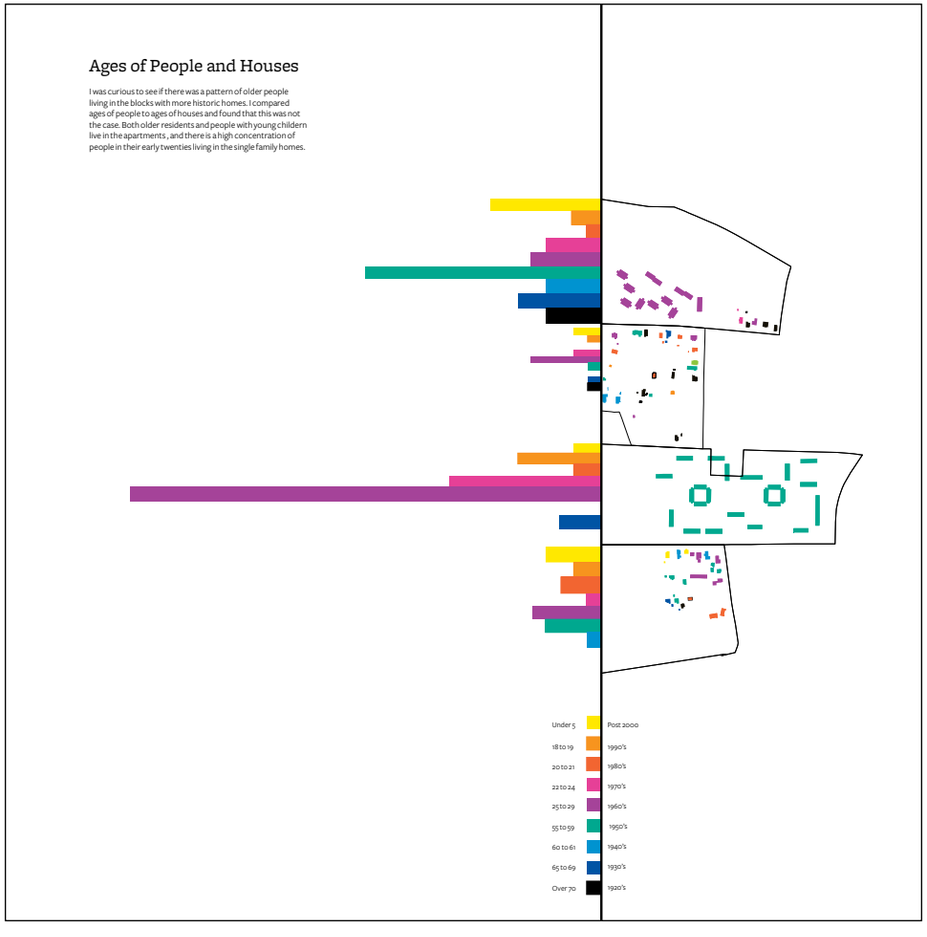
AVENT WEST

Karen Kreech

Since little visible evidence of the neighborhood was uncovered from the original historical data, Karen chose to look outside of traditional sources for evidence of the community. In her original assessment, the physical environment did not engender a community to examine, nor was there evidence of the potential for physical transformation based on observable criteria. Alternatively her research revealed an active online presence of the community that was long lived (10+ years). By categorizing and mapping active topic themes of the community chat group, she was able to reveal patterns of community interests, shifting beliefs and cycles of activities.

Karen also interrogated the inclusion and exclusion of segments of the physical neighborhood due to road access as well as the inclusion and exclusion of people due to invitation within the community chat group. By overlaying these two extremely different data sets, each with unique measures of community, space, and time, she was able to identify co-variable attributes and extract alternative indicators of community and place. What emerged was a rich understanding of what defined and bound Avent West as a cohesive precinct within the city, in addition to illuminating which typical neighborhood-based attributes were absent and the challenges those posed for navigating Avent West as a territory.

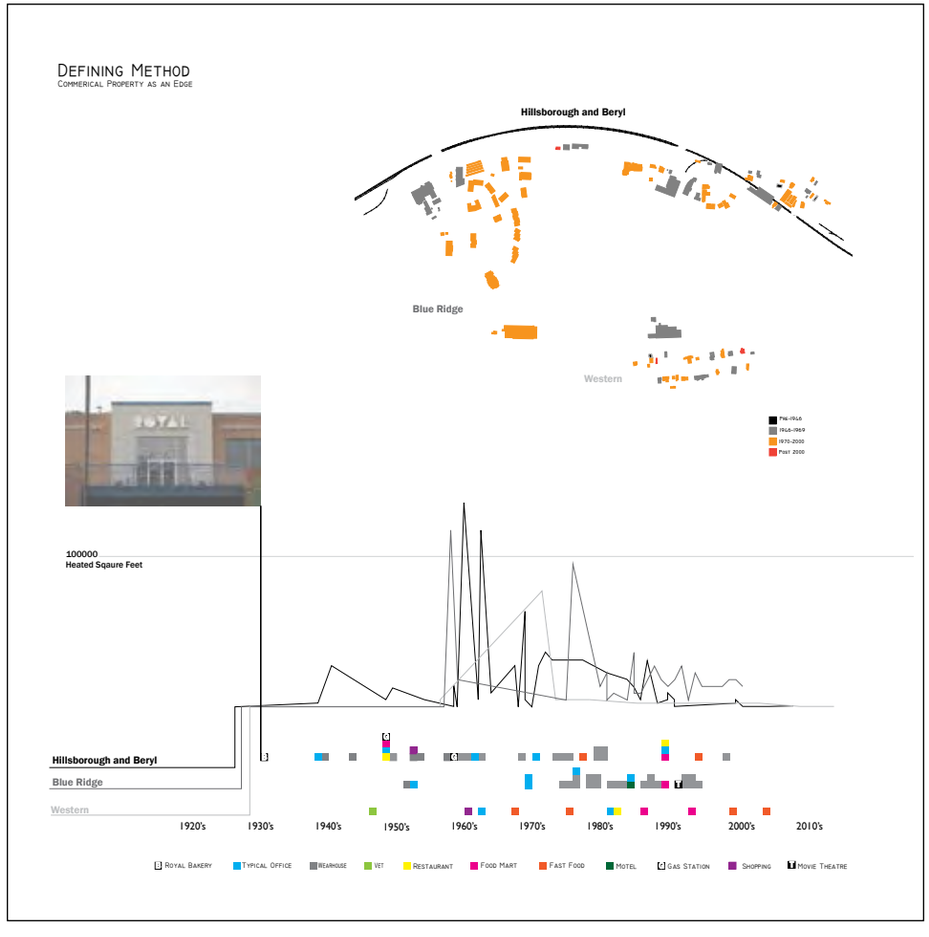
[T] MAPPING CHAT TOPICS ON THE AVENT WEST LIST SERVE
[R] COMPARING CHAT PARTICIPANTS WITH GEOGRAPHIC LOCATION



METHOD NEIGHBORHOOD

Rachel Steinsberger

Through this series, Rachel explored alternative projections of the diverse data sets in uncovering patterns and relationships. By re-projecting and overlaying visualizations based in measures of time, relative distance, and change, she exposed the rhetorical power of isolating or recontextualizing information towards creating meaning.



[L] COMPARING AGES OF PEOPLE AND HOUSES IN METHOD
[R] ADJACENCIES OF COMMERCIAL AND RESIDENTIAL BUILDINGS TO MAJOR ARTERIES

MAPPING RELATIONSHIPS

ETHNOGRAPHIC RESEARCH / MAPPING THICK DESCRIPTIONS

Readings: Schouten & Engelhart, Madanipour, Geertz, Tufte, McMillan & Chavis
Image Studies: Minard, Corner

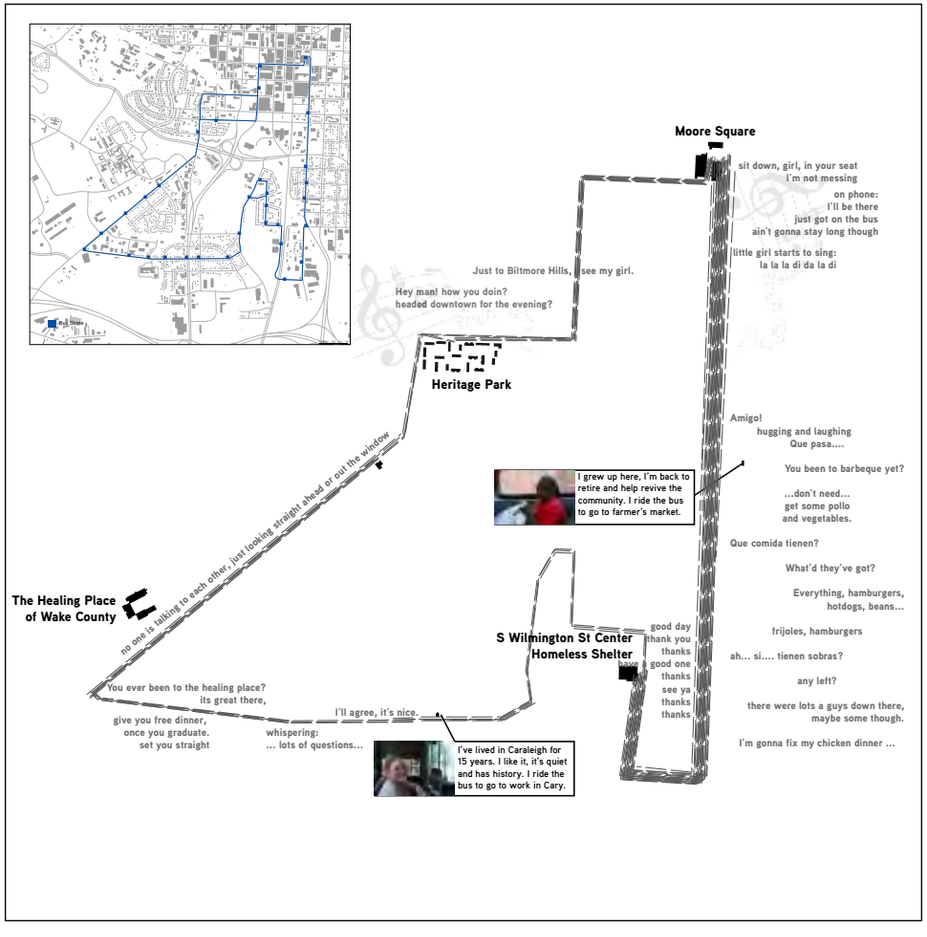
In the third week, students were introduced to ethnographic research as a way to study the social attributes of their study area and augment their previous maps with qualitative measures of cultural phenomena and community. Based on Clifford Geertz's theories of thick description, during this week students were tasked with uncovering the social narratives behind the patterns and trends mapped in the previous week. To develop these thick descriptions of place, students were prompted to investigate and derive additional contributing measurements of cultural, economic, and political forces.

Many methods of data collection were employed (site observation, interviews, surveys, etc) while the students embedded themselves in the community to uncovered the relationships between the social community and its environment. With these diverse measures and information sets, students were tasked with creating maps which offered a visual narrative of their communities by charting these complex relationships over time. The process of visualizing the invisible was a vital part of this week's research and understanding. Students were challenged to uncover the measures specific to their particular neighborhood and its process, as well as to visualize that data in a meaningful way which exposed the meta-relationships precipitating the data they had previously gathered.

In the most successful cases, the iterative act of visualizing and correlating discrete data sets through cumulative mapping exercises resulted in the students imaging a complex matrix of community structure typically "unseen" and often unconsidered by designers. The cartographic studies from this week had two main observable effects. Firstly, students began to see more clearly what they knew and what they didn't know (or needed to know more fully). Secondly, they generated stronger connections to the site and to what they perceived as the strengths and opportunities available for community growth and the interrelationships between space, place and culture in each of the neighborhoods.

STUDENT WORK

Building on their pattern maps which recorded different observed phenomena in the communities, students began to uncover the social dimensions of those trend by observing and visualizing measurable indicators of community and culture.



DOROTHEA DIX, BOYLAN HEIGHTS, AND FULLER HEIGHTS/CARALEIGH

Jennifer Peeler

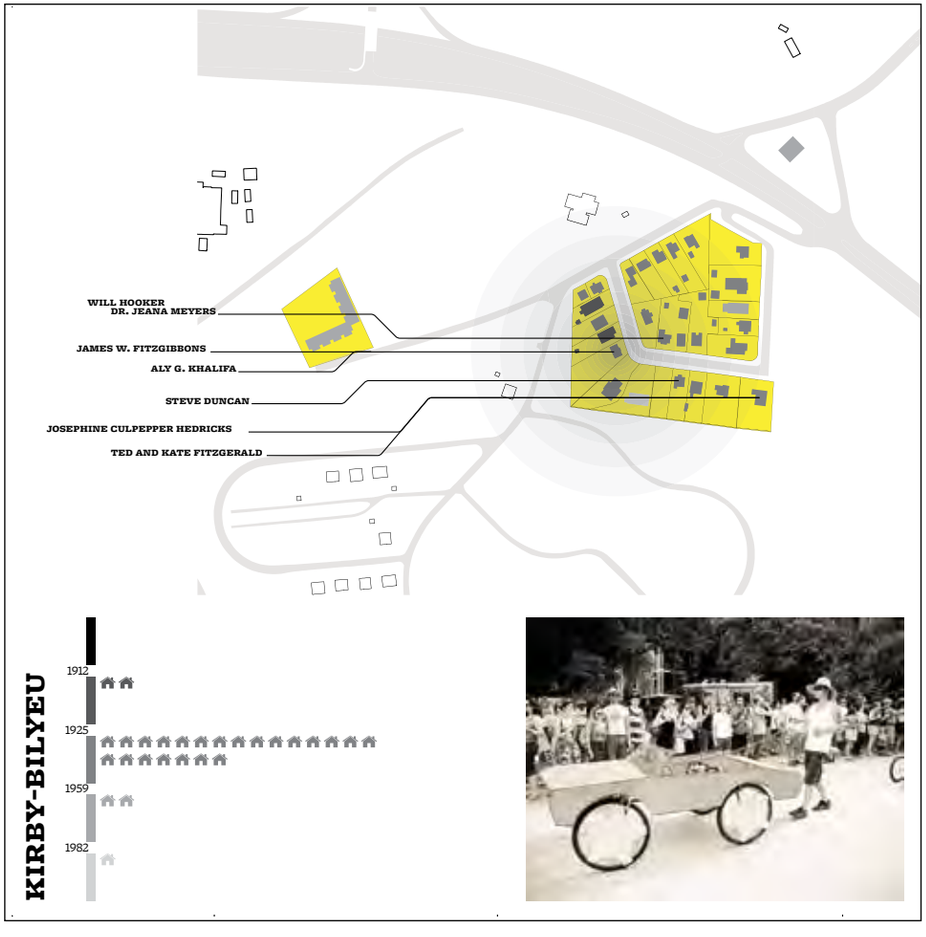
On Friday, June 8th and Saturday, June 16th Jennifer observed and surveyed the riders of the #21 Caraleigh Bus. Jennifer took note of where riders got on and off of the bus and the changes in ridership over the course of the day. She also surveyed riders on whether or not they were permanent residents of the area and what they perceived to be defining characteristics of the neighborhood.

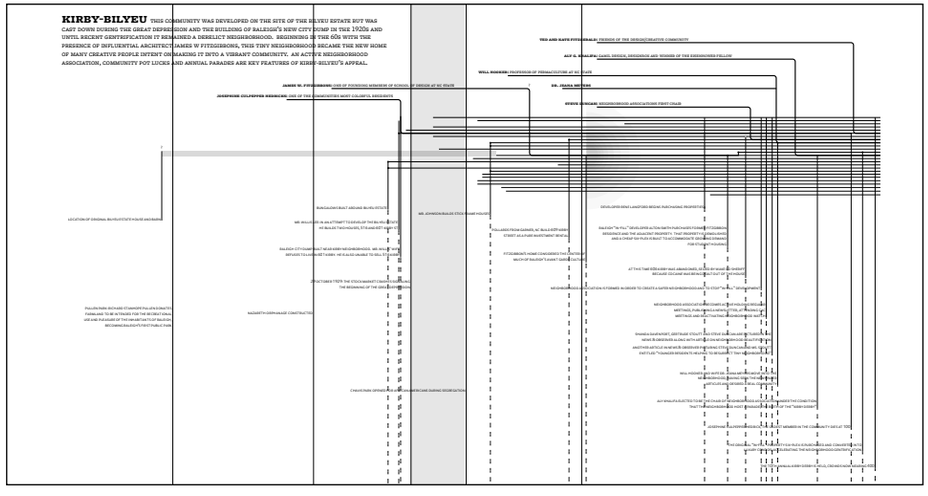
OBERLIN VILLAGE

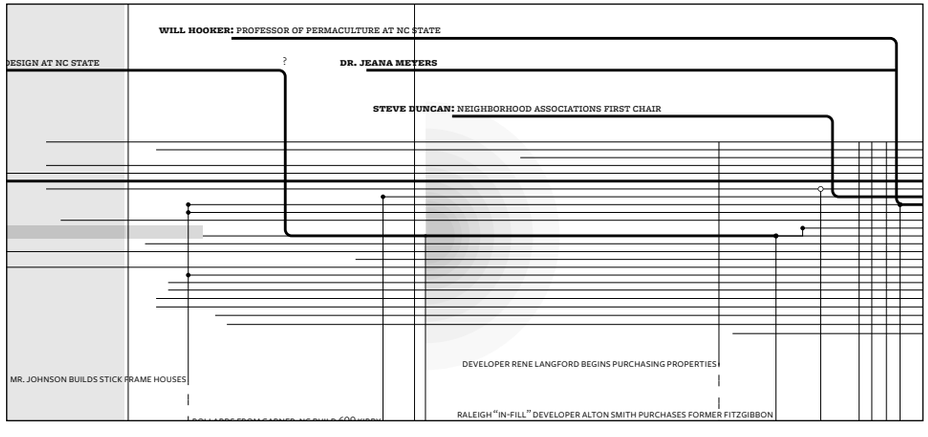
Julie Barghout

Through this series of maps, Julie visualized the evolution of Oberlin Village in terms of change in the physical environment, social community, and economic market. By visually overlaying different types of archival sources, from newspapers articles to person interviews to GIS data, she was able to correlate relationships between diverse types and sources of information offering a deeper understanding of how and why this neighborhood has changed over time.

[L] MAPPING BUS ROUTE AND PERSONAL STORIES
[R] MAPPING ARTIERIES AND ROADS DEFINING THE NEIGHBORHOOD





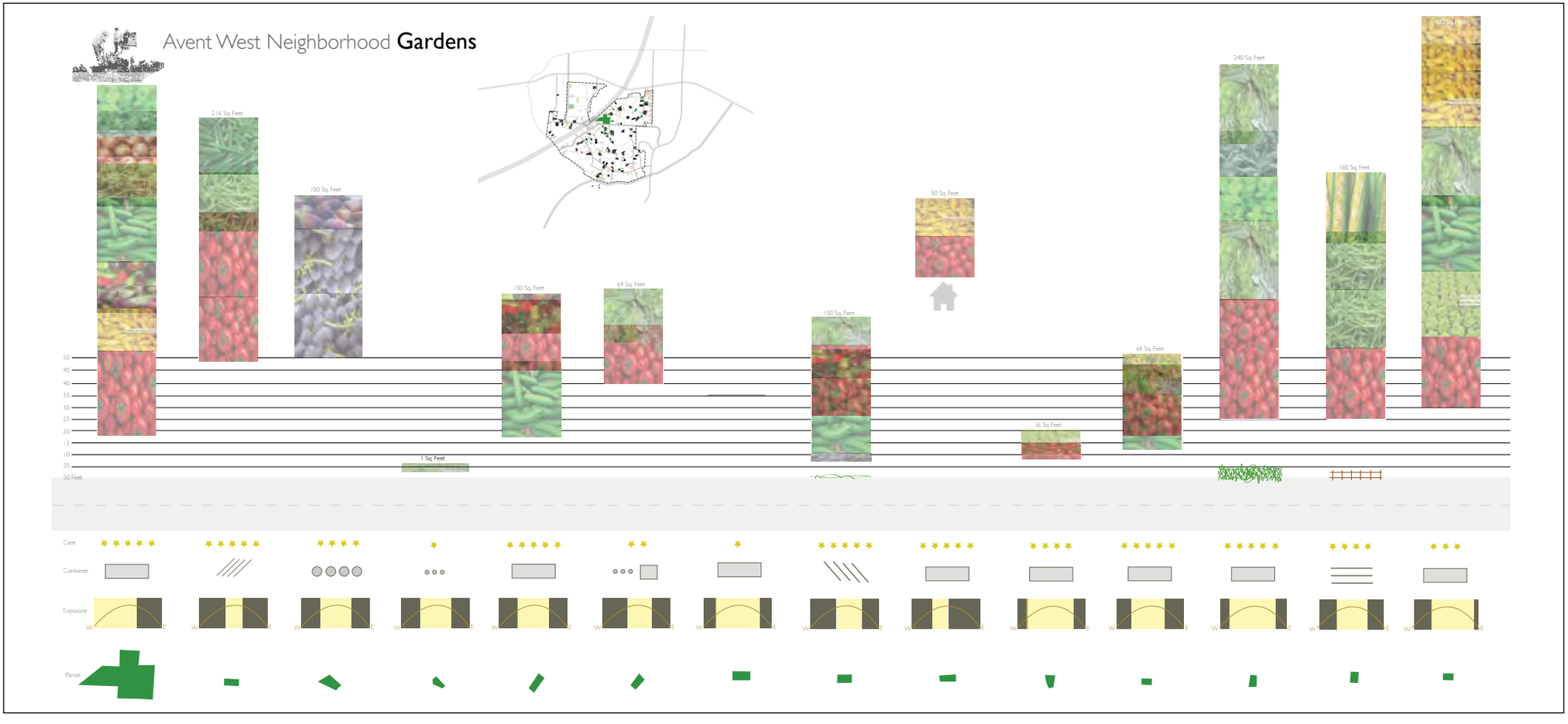


PULLEN PARK/COX, KIRBY BILYEU, NAZARETH

Tyler Parker

In an attempt to understand why these three communities had such different characteristics, Tyler researched the residents of the community over time in relationship to the development of the physical neighborhood.

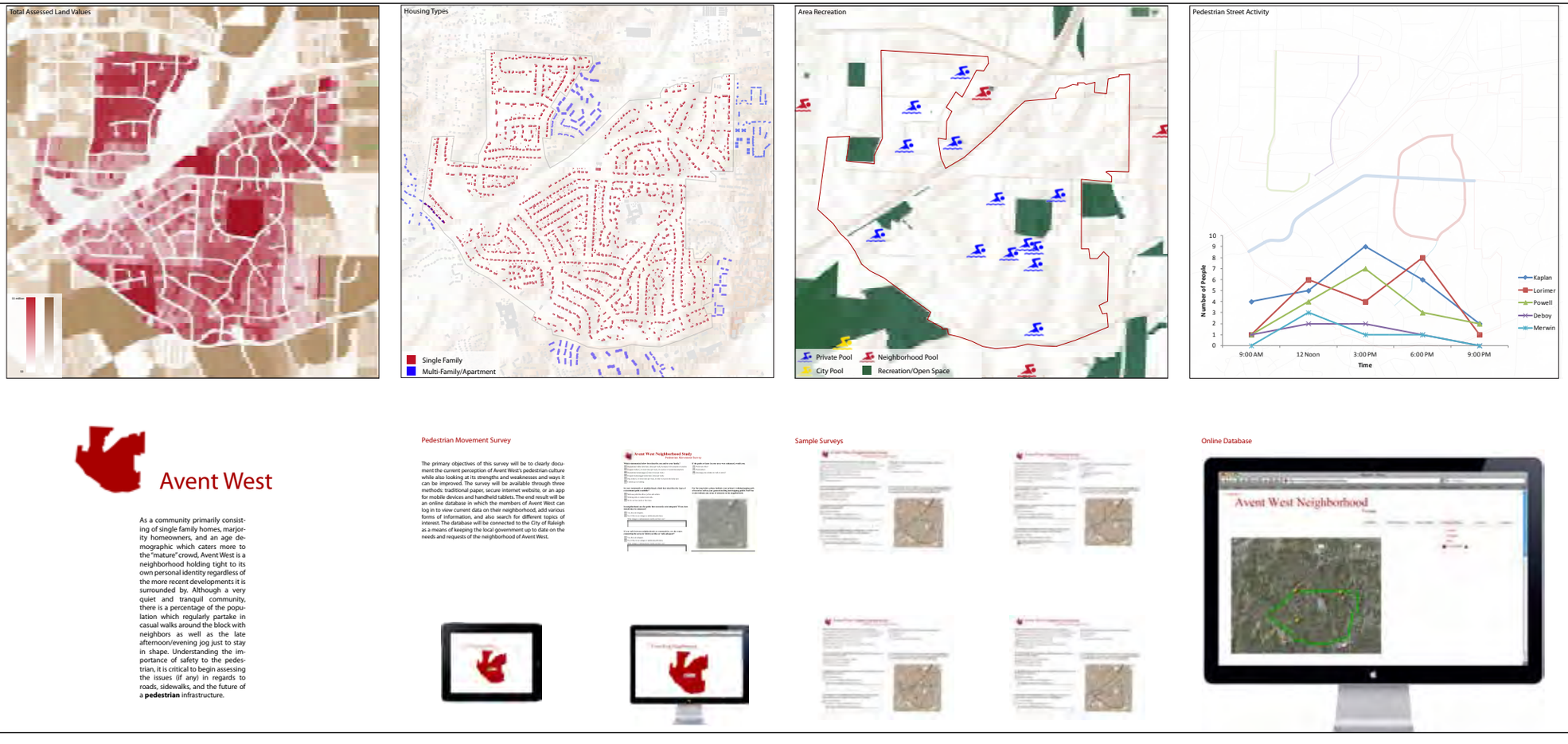
[L] WHEN HOUSES WERE BUILT AND SIZE OF PARCELS
[R] MAPPING RESIDENTIAL TIMELINES AND STORIES



AVENT WEST

Karen Kreech

Through visual ethnographic research methods, Karen identified the posts relating to 'plants and gardens' as a particularly active area in the online setting and one that could be observed in the physical environment. She ascribed criteria to an observational study which linked gardening to community connectivity and operated as a measure of social structures initially hidden. These criteria included plant types and variation, proximity to the sidewalk, size, permanence (planter box, in ground, pots, etc.), maintained care, and solar exposure. She developed her study further by overlaying the geographic location of the chat sessions with the location of gardens and long term property owners to illuminate patterns and links between her different measures and data sets from previous maps. In addition, the distance to the center of the 'community' was investigated for further correlation between physical and virtual community measures of space and connectivity.



AVENT WEST

Brandon Brooks

Brandon looked to recreational spaces as an indicator of community in Avent West. He found that the district of Avent Wests holds a high number of private pools and other private recreational spaces, while the surrounding neighborhood has mostly shared semi-private or public recreational spaces. On initial review this indicated a weak public sphere for the neighborhood, but to further uncover the relationship between recreation, public space, and community Brandon devised another measure he could observe:pedestrian movement throughout Avent West. Brandon took note of different levels of activity, time of day, type of activity, numbers of people, etc. He then devised a survey which polled the residents of the community who were out exercising about how often they walked or jogged, their opinions of the pedestrian infrastructure, and interactions with others. Through this survey, he ultimately concluded that underneath Avent West's fractured and isolated physical fabric, the neighborhood was quite active as a community.

MAPPING AS PARTICIPATORY TOOL

PARTICIPATORY ACTION RESEARCH + MAP AS SURVEY INSTRUMENT

Readings: Lima, Putnam, Riegnets et. al., Sanoff, Cahill
Image Studies: Yellow Arrow, Taxi_onomy, Lynch, Halprin

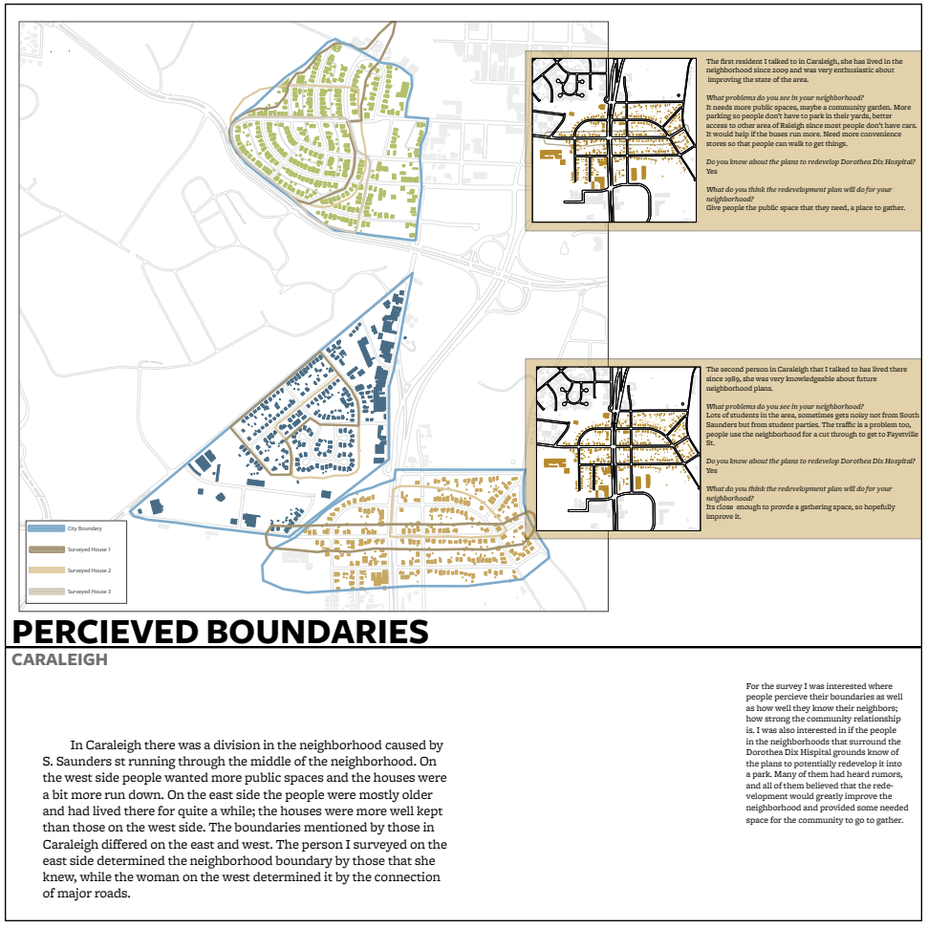
After extensive data-based and observational-based research, students were then challenged to engage the community's perception and understanding of those systems through the design and implementation of a map which acted as a culture probe. The responses gathered by the culture probes challenged the maps they had previously created against the mental maps and models of those who lived and engaged deeply in the neighborhoods. Students used the process of mapping as a survey tool for gathering diverse perspectives in a non-mapping environment that they then in turn translated into a visual form.

Through this process, students used mapping as both a gathering and dissemination tool. Students designed generative and evolving maps that could gather information and stories on a number of levels- from earmarking where people felt at home, to demonstrating how they enacted this feeling. Using mapping as a mediating tool pushed their understanding of the decisions and ideas previously put forth in their research and visualization processes. The map became a communication tool for the probe or survey-a baseline or benchmark through which to communicate and extend understanding between students and community members.

The outcomes from this week were perhaps the most profound because of the authenticity ascribed to primary source data gathering. Additionally, students in this phase had to reverse the process that they had previously been engaging in with their maps by focusing on the creation of open-ended maps that would change and evolve as more perspectives were engaged. This approach foregrounded the ever-changing and subjective nature that mapping can take.

STUDENT WORK

In this week mappings, students engaged the perception of the community through maps which operated as surveying tools and visualizations of multiple perspectives.



DOROTHEA DIX, BOYLAN HEIGHTS, AND FULLER HEIGHTS/CARALEIGH

Katy Liang

Katy designed a map-based survey instrument which recorded the resident's perceived boundaries of their neighborhood. She then overlaid these edges with one another and the area that the city formally defined as the neighborhood.

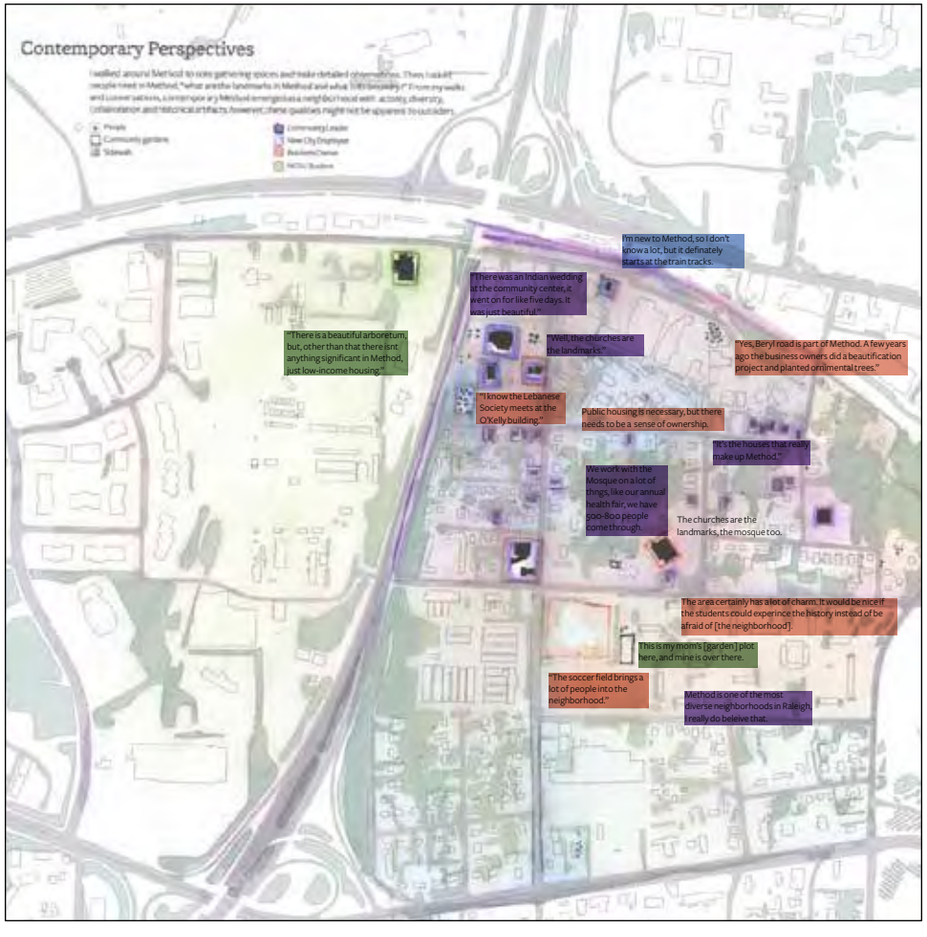
PULLEN PARK/COX, KIRBY BILYEU, NAZARETH

Gina Falba

To capture the character of each community in her study area, Gina surveyed the residents for words they would use to describe their neighborhood and correlated those descriptions with her own observations of the public or communal space in the neighborhood.

In her visualization of this information she overlayed the resident's word over their home and highlighted the front porches, patios, outdoor furniture and their upkeep as indicators of the social community in the physical environment.

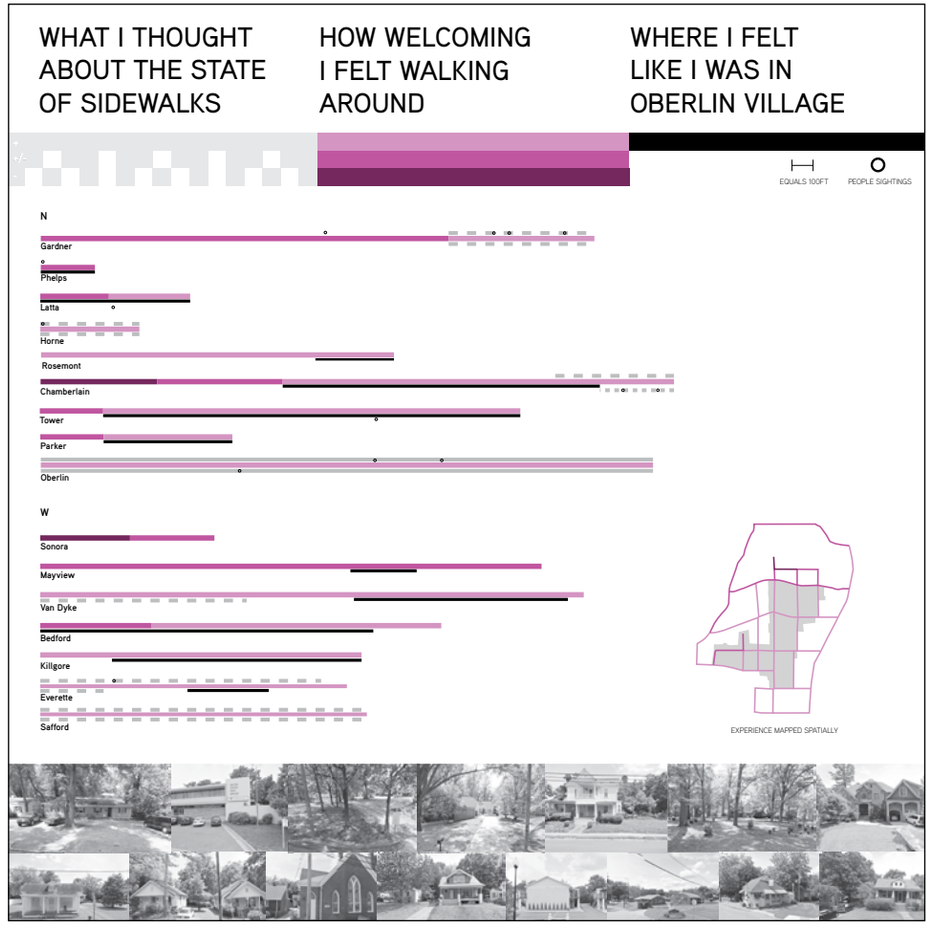
[L] PERCEIVED NEIGHBORHOOD BOUNDARIES
[R] COMMUNITY DESCRIPTIONS AND MEASURES OF THE PUBLIC SHERE



METHOD NEIGHBORHOOD

Rachel Steinsberger

Rachel conducted a number of different field studies which contributed to these maps including observations of where people gathered and interviews of people she met while in the neighborhood. These studies provided a socio-cultural layer to her geospatial maps that augment the physical environment with personal memories and accounts of places and events. These extra layers of information reinforced the character of the neighborhood's clear but distinctly different edges and uncovered the communities active historic core.

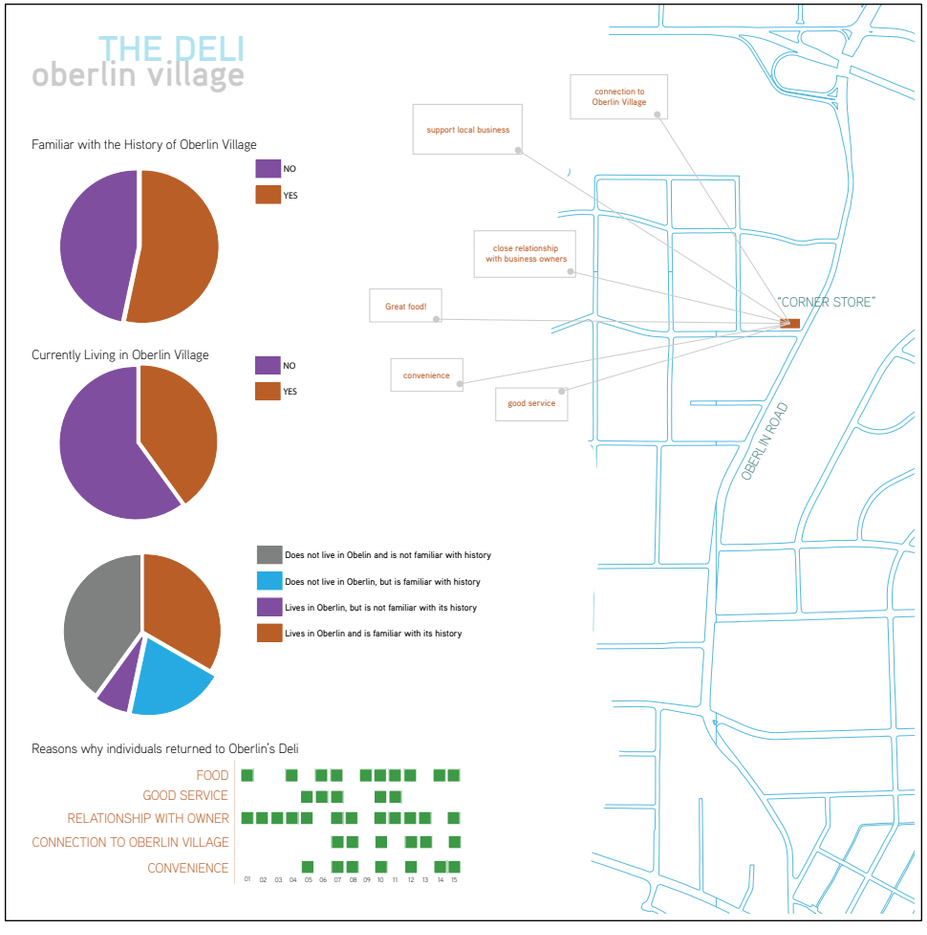


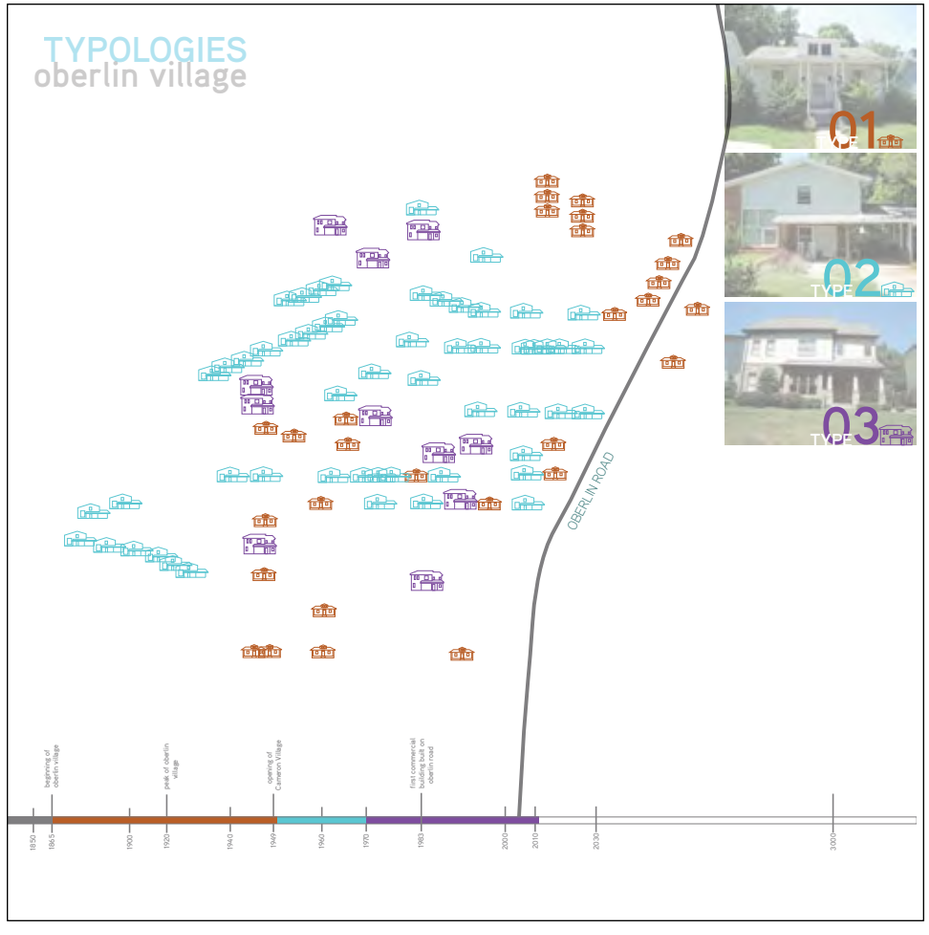
OBERLIN VILLAGE

Michael Southard

Through this abstract map of the neighborhood, Michael recorded his own perception of where Oberlin Village "remained", where the sidewalks and street where well maintained, and how welcome or safe he felt in walking through the neighborhood.

[L] PERSONAL MEMORIES OF PLACES AND EVENTS
[R] CURRENT CONDITIONS AND PERCEIVABLE HISTORIES





OBERLIN VILLAGE

Julie Barghout

In an effort to survey residents of Oberlin Village, Julie choose to distribute her survey at the corner deli which draws long term residents, newcomers, and passer bys. The historic deli is known as the "corner store" and it still stands in its original location. Fifteen individuals filled out a survey with basic questions relevant to Oberlin Village. The results of the survey show that returning customers not only return to the Deli for good food and service, but because they have a deep relationship with the owner or because they used to live in Oberlin Village and have fond memories of the corner store. Observing and recording variations in housing types and renovations as an additional measure of change over time in Oberlin Village, she narrowed down the architectural fabric of the neighborhood to three types of homes that still exist today. These maps illustrate the dramatic decline of the original built fabric. These visual studies show marked evidence of the neighborhoods social and economic transition through the recording of its architectural style and orientations.

[L] CORNER STORE COMMUNITY SURVEY
[R] BUILDING FABRIC AS TRACES OF HISTORICAL PAST

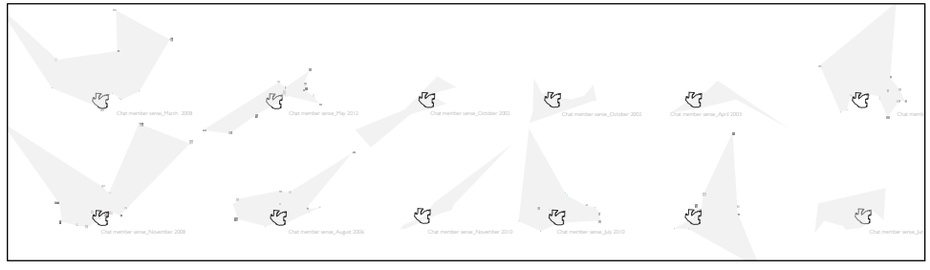
MAPPING FUTURES

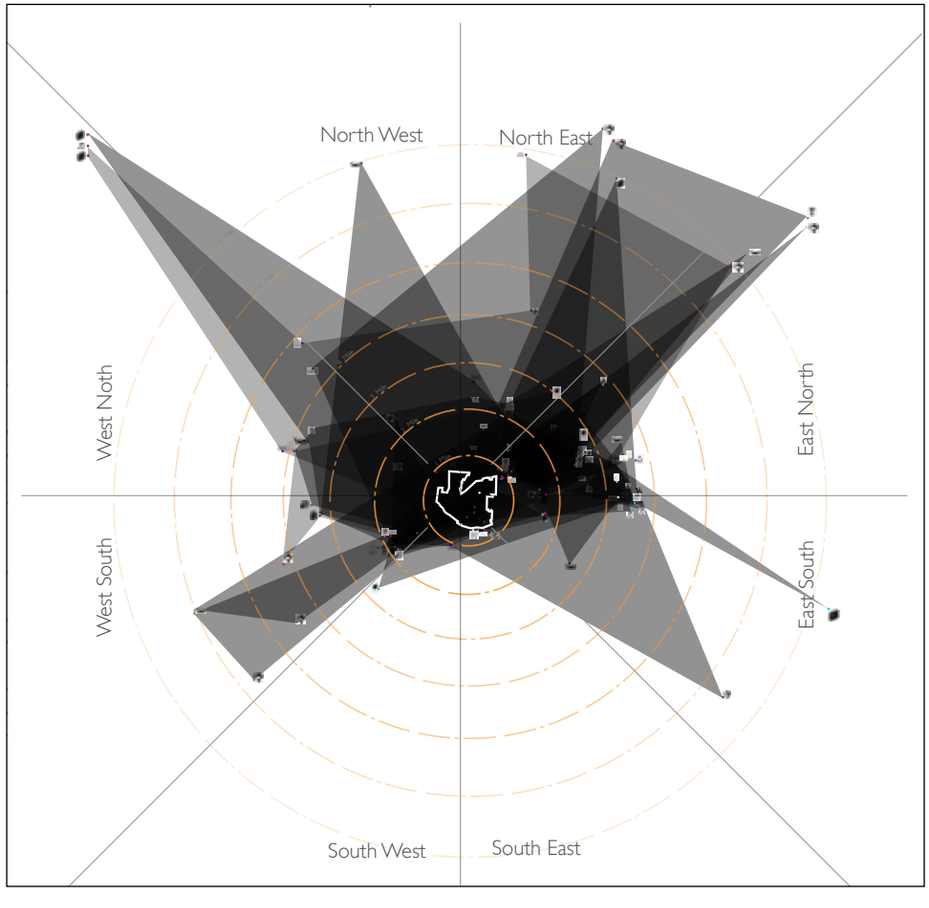
Through the course, students were consistently asked to explain, justify and consider what they were representing, why they were representing it, and what they thought their images were saying or explaining about the neighborhood and community. Through the mapping research process, students formed a deep, thoughtful and rigorous understading of the area. Possibly more importantly, students began to 'see' things in the neighborhoods that were not readily visible, with the potential to greatly affect the formative decisions that designers must make through their interventions.

Avent West

Karen isolated the community based services mentioned in the Avent West list serve and located them in relationship to the neighborhood. This series of maps illustrate the daily operating territory of the community extending far beyond its defined boundary due to the lack of services within or directly adjacent to the neighborhood.

These maps illuminate the motivations for future planning which considers the development of multi-use nodes rather than isolated residential communities.





[T] KAREN CREECH, PERSONAL DAILY TERRITORIES FROM ACTIVE CHAT MEMBERS
[B] AVENT WEST'S FUNCTIONAL TERRITORY

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This course and publication was made possible by the NCSU Innovative Course Grant which funds course development for experimental summer courses across departments. This grant also funded three teaching assistants who greatly contributed to the cross-disciplinary instruction and development of the course: Michael Carbaugh, masters student in Graphic Design, Brittney Cofield-Poole, doctoral student of Psychology in the Public Interest Department , and Aliaa Elabd, doctoral student of Philosophy in Design in the College of Design.

Much of the data utilized by the students to focus their projects was supplied by the School of Management, College of Humanities and Social Sciences, and local governing bodies. This existing data was augmented with information the students collected through on site observation, participatory surveys, and cognitive mappings.