

Spatial Structures in the Social Sciences 2012 Winter GIS & Inequality Institute

Final Presentation Program

January 20, 2012 Population Studies and Training Center, Seminar Room

9:30 – 9:45 am	Welcome
9:45 – 10:45 am	Session I: Analysis of Demographic and Socio-Economic Inequalities: International Perspectives
10:45 am – 12:00 pm	Session II: Analysis of Demographic and Socio-Economic Inequalities: U.S. Perspectives
12:00 am – 1:00 pm	Lunch
1:00 – 2:00 pm	Session III: History and Space
2:00 – 3:30 pm	Session IV: Health and Wellbeing
3:45 – 4:45 pm	Session V: Local Perspectives on Inequality
4:45 – 5:00 pm	Certificate Presentation
5:00 pm	Close of Conference

PARTICIPANTS

Jean Bauer (Digital Humanities Librarian)

Elisabeth Becker (Public Health)

Lindsey Brickle (City of Providence)

Qi Chen (Visiting Student)

Sean Dinces (American Studies)

Alex Eble (Economics)

Alexandra Effenberger (Economics)

Martin Fiszbein (Economics)

Chishio Furukawa (Economics)

Alan Glazer (Public Policy)

Ampson Hagan (Public Health)

Weeam Hammoudeh (Sociology)

Morgan Hardy (Economics)

Naomi Jacobs (Education)

Laura Keohane (Health Services Research)

Heather Lee (American Studies)

Wei Liu (Visiting Student, Univ. Chicago)

Lyn Malone (American Studies)

Kristen McCausland (Epidemiology)

Erica Mullen (Sociology)

EeCheng Ong (Economics)

Dan Rounsaville (Center for Alcohol and Addiction Studies)

Laura Smith (Public Policy)

Daniel Sorando (Sociology)

Jessica Unger (American Studies)

PROGRAM

SESSION I:

ANALYSIS OF DEMOGRAPHIC AND SOCIO-ECONOMIC INEQUALITIES: INTERNATIONAL PERSPECTIVES

Alex Eble, *Luck and Will in China's Regional Development*

Wei Liu and Qi Chen, *The Inequality between West and East of China Based on the ArcGIS Analysis-- One Child Policy and Migration*

Chishio Furukawa, *Age-differentiated Evacuation Decisions from Radiation in Fukushima after 3.11 Disasters*

Daniel Sorando, *Spatial Patterns of Residential Settlement in Spanish Cities*

SESSION II:

ANALYSIS OF DEMOGRAPHIC AND SOCIO-ECONOMIC INEQUALITIES: U.S. PERSPECTIVES

Erica Mullen, *Immigrants in "New" Destinations: From Where Are They Coming and to Where Are They Going?*

Weeam Hammoudeh, *Exploring Neighborhood Effects on the Status of Foreign-Born Persons in the US*

Alexandra Effenberger, *Analyzing Political Participation across Space: Voter Registration in the US*

EeCheng Ong, *Redistricting or Gerrymandering?*

Alan Glazer, *Appalachia AdultZone - Step 1*

Martin Fiszbein, *Inequality and Unemployment in the US, 1970-2000*

**SESSION III:
HISTORY AND SPACE**

Jean Bauer, *An Impressive Failure: Information Flows and the Jay Treaty*

Sean Dinces, *The United Center as 'Good' Business?*

Heather R. Lee, *Seeing the Data Spatially: Visual Representations of Chinese Restaurant Labor Markets in the U.S., 1935-1946*

Jessica Unger, *Building a Community on 'The Dry': Relationships across Space*

**SESSION IV:
HEALTH AND WELLBEING**

Elisabeth Becker, *The Burden of HIV Among South Africa's "Young Carers": A Spatial Exploration of the KwaZulu Natal Providence*

Morgan Hardy, *Infections and Inequalities: Market Incentives and Disease Prevalence*

Laura Keohane, *Mapping Medicare Beneficiaries' Eligibility for Medicaid and Part D Subsidies*

Lyn Malone, *Does Your Health Depend on Where You Live?*

Kristen McCausland, *Excise Taxes, Tobacco Retailers, and Smoking Behaviors: Does Proximity to State Borders Matter?*

Dan Rounsaville, *Drug-Related Death and Geographic Opportunity in Rhode Island*

**SESSION V:
LOCAL PERSPECTIVES ON INEQUALITY**

Lindsey Brickle, *Safer Living: An Examination of Providence Crime By Neighborhood*

Ampson Hagan, *Strategic Placement of Liquor Stores in Providence, Rhode Island: Examining the Relationship between Location/Movement of Liquor Stores and Demographics*

Naomi Jacobs, *How Does Home Location Impact Access to Education? A Case Study of Public Transit Options, Distance From School, and Attendance at Roger Williams Middle School (RWMS)*

Laura Smith, *Rhode Island and the Housing Crisis: Examining Foreclosures from 2009 to 2011*

PRESENTATION ABSTRACTS

Jean Bauer - An Impressive Failure: Information Flows and the Jay Treaty

In the spring of 1794, Great Britain and the United States were on the brink of war. Before John Jay sailed for England as Envoy Extraordinary to negotiate a new treaty, the Secretary of State, Edmund Randolph, tried to provide him with a holistic picture of British and American claims over Canada, western posts, Caribbean trade, and the treatment of British ships and consuls in American ports. This information, however, could not be gathered in time, and Randolph promised Jay that more documents would be sent to him in England. This was an unprecedented information gathering process in the history of the U.S. Foreign Service, and included sending out special agents to report on British seizures of American ships in the Caribbean.

During the GIS Institute, I have mapped of all the letters *sent* to Jay before he signed the treaty in November 19, 1794. I have also mapped the subset of letters which Jay *received* before the treaty was finalized. These maps demonstrate the scope of the State Departments efforts, while also showing the very real limits of Jay's knowledge, and therefore his possible success, at the negotiating table. All data has been drawn from *The Early American Foreign Service Database* (<http://www.eafsd.org>).

Elisabeth Becker- The Burden of HIV Among South Africa's "Young Carers": A Spatial Exploration of the KwaZulu Natal Providence

The *Young Carers Project South Africa* is an ongoing academic study aimed at understanding the lives of children who care for sick adults in their household. This project is the largest study to date on the mental health of AIDS orphaned children and their caregivers. These children, or 'Young Carers', are at high risk for problems regarding their mental, physical and sexual health. Policy briefs stemming from this research indicate that 'Young Carers', along with other HIV-affected children, are at increased risk for abuse and transactional sexual exploitation, psychological distress, bullying and educational setbacks. South Africa bares one of the highest HIV infection rates in the world and this spatial analysis will further explore the subsequent consequences that stem from this impact in the KwaZulu Natal Providence. The goals for the GIS portion of the project include creating reference maps and using exploratory analyses to illustrate the spatial distribution of HIV- related stigma dynamics and differential access to grants among vulnerable populations. This data hopes to add to the larger study purpose of assessing the problems experienced by these "Young Carers", identifying what factors can aide them and developing effective interventions.

Lindsey Brickle - Safer Living: An Examination of Providence Crime By Neighborhood

My final presentation looks at the location and incidents of crime in the City of Providence. Focusing primarily on the Neighborhood level, I seek to identify and illustrate the relationship between socioeconomic conditions and crime. Mayor Taveras's office has made the control of illegal guns a priority in his administration. I will map the occurrences of crimes (specifically gun related) in the City to see if there are any relevant patterns or clusters which could help the Providence Police prevent and combat crimes of this nature through increased patrols or "beats" or targeted outreach. I will also seek to determine if there is a significant correlation between crime incidents and foreclosed or abandoned properties, as well as to try and identify any dependance between those variables.

Sean Dinces - The United Center as 'Good' Business?

I would like to develop a spatial analysis component for a dissertation chapter that questions the popular narrative forwarded by Chicago boosters that the United Center, the Bull's basketball arena constructed on the city's Near West Side between 1991 and 1994, has provided an effective and equitable neighborhood economic development tool for longtime local residents. While urban sociologists and economists have debunked arguments about the efficacy of stadiums as nodes of development, to my knowledge their long lists of empirical examples rarely if ever include the United Center. This indicates the wide purchase of claims that 'unprecedented' concessions offered to local residents by United Center ownership have actually allowed longtime residents to share in 'arena-linked growth'. Surprisingly, some urban studies scholars have even repeated this argument in recent neighborhood histories of the Near West Side. My archival and census research indicates that this narrative fails on multiple counts. In the first place, the neighborhood west of the arena, which includes the redevelopment of the Henry Horner Homes, has suffered from extensive depopulation since construction began on the arena. The bulk of those leaving have been low-income African-Americans—the demographic that the arena developers and a local community development corporation argued would benefit most from the several million dollars in loans and philanthropic contributions offered in exchange for local support of the project. Moreover, rapid economic development east of the arena has resulted from an expansion of real estate speculation moving westward from the Loop (a process that began in the early 1980s) rather than the investment draw of the United Center. I plan to use a combination of topographical and time series census maps to represent and better understand these circumstances.

Alex Eble - Luck and Will in China's Regional Development

The role of geographic "luck" has long been an important question in development discussions. Proximity to transportation links – in the past, rivers and the coast – and fertile farmland has been a major determinant of many cities' (and indeed, regions') economic success. China poses an interesting example in which to investigate these issues, as its development strategy has been to strategically choose areas for development and invest large amounts of money to develop them. In addition, there has long been a difference between development in the east and west of China. It is a hotly debated question how much of this is the result of historical accident and how much of it is the result of the deliberate government policy described above. Though I cannot end these debates, I hope to use Chinese data to investigate the relation of several city- and province-level socio-economic indicators to major geographic features, both natural and man-made, and in doing so contribute to what we know on these issues. Specifically, I will look at the way that health, education and income levels vary with respect to access to roads, proximity to rivers, access to arable, fertile farmland and proximity to ports. I hope that this investigation will point towards future analyses which may come closer to answering questions about the relative importance of luck and deliberate policy action in the realm of development.

Alexandra Effenberger - Analyzing Political Participation across Space: Voter Registration in the US

From an economic point of view voting seems to be puzzling. As the probability of each individual to be the pivotal voter in a given election is rather small, it would be in her interest to abstain from voting, which involves certain costs such as gathering information or travelling to the polling place. However, citizens do vote. In my future research, I would like to analyze in

detail why certain individuals vote and others do not. To begin with, it is important to get an idea of what type of individuals vote in elections. Therefore, this project relates voting behavior in the US to different socioeconomic and demographic variables. Due to data limitations I will focus on voter registration instead of actual turnout. Using data at the voting district level, the project tries to address three ideas. First, voter registration will be mapped in terms of socioeconomic and demographic variables such as age or race. Second, I would like to analyze if in addition to individual characteristics aggregate demographics also matter. For example, young people might only vote if there is a large enough group of young people in society that share the same political interests. Even if it was irrational for the individual to vote, it might be rational for the group to vote if the group is large enough to influence the election result. Finally, voting behavior of an individual might be correlated with her neighbors' actions. Therefore, I will analyze the data in terms of spatial clustering.

Martin Fiszbein - Inequality and Unemployment in the US, 1970-2000

I map inequality (as measured by the Gini index) and unemployment rates across US states in 1970 and 2000. This allows us to visualize the heterogeneity of these variables across space and their evolution over time. Using spatial analysis tools, I assess the existence of clusters in the distribution of unemployment rates, as well as the degree of spatial autocorrelation in inequality. I discuss the foundations for spatial autocorrelation in unemployment, and see whether it has experienced changes over time. This is part of a larger project which studies inequality as a determinant of unemployment. I will outline the basic ideas of this project and discuss how spatial analysis can be useful in this context.

Chishio Furukawa - Age-differentiated Evacuation Decisions from Radiation in Fukushima after 3.11 Disasters

Benefits of evacuation from radiation, such as cancer that takes decades to develop, are negatively correlated with age. This paper tests if high expected benefit from evacuation led young children and accompanying mothers to evacuate farther away from the high radiation areas disproportionately, compared to elderlies and fathers. There is some evidence consistent with this hypothesis, taking confounders, such as occupational mobility, volunteers deliverability, and quality of evacuation centers, into account.

Alan Glazer - Appalachia AdultZone - Step 1

The Appalachian Region in Kentucky is located in the eastern part of the state and is made up of over fifty counties. Nearly every county is considered economically distressed. This project is a first step towards the creation of a comprehensive approach to meeting the needs of low-income workers in this region. The approach is tentatively set to incorporate both workforce training programs that make it possible economically to raise people's incomes and workforce support programs like stress and substance counseling, job-search programs, transportation, and child-care. Thru spatial analysis the project will be better able to identify the target audience of this approach, spatial causes and impediments related to the issue, and the location of existing services. Further analysis will aid in the selection of locations for each aspect of the project. The project is the start of the larger project to create these "Appalachia Adult Zones".

Ampson Hagan - Strategic Placement of Liquor Stores in Providence, Rhode Island: Examining the Relationship between Location/Movement of Liquor Stores and Demographics

The health effects of alcohol consumption and alcohol abuse have been thoroughly examined, with there being noted differences in both patterns of alcohol consumption and health effects of alcohol use between whites and minorities in the United States. In society, liquor stores have been seen as facilitators of alcoholism, which has been known to increase aggression in males leading to violence and crime, as well as a myriad of other societal problems. The sentiment that liquor stores allow for the perpetuation of alcoholism, unemployment and poverty is especially prominent within minority communities. This research will focus on the locations of liquor stores in Providence, Rhode Island and will examine the demographics of the communities in which those establishments lay using spatial analysis to examine the possible association between liquor stores and percentage of minorities near those liquor stores, as well as other variables. This research will also study the increase and movement of liquor stores in the county, and will help answer the question, “why are there so many liquor stores in this particular neighborhood?”

Weeam Hammoudeh - Exploring Neighborhood Effects on the Status of Foreign-Born Persons in the US

Extensive research has focused on the foreign-born US population, ranging from settling patterns, socioeconomic characteristics, etc. Other research has also highlighted the importance of contextual factors on people’s lives. While foreign-born immigrants tend to be more disadvantaged, on average, compared to native born Americans, their contextual factors are likely to impact their opportunities as well as those of their children. Some studies have noted that immigrants with support networks, usually through other immigrants, may have access to more opportunities in the labor market among other areas. This presentation will focus on the educational attainment, health insurance status, and poverty status among foreign-born persons in various regions, categorizing them by the proportion of foreign-born migrants. Here the proportion of foreign-born persons in an area will be used as a proxy for access to a migrant support network. Using US census data, the goal of this exploratory study is to examine to whether migrants fare better in areas with a greater proportion of foreign-born persons than in areas with a predominance of native-born persons. For the purposes of this presentation, the unit of analysis will be regional (i.e. Northeast, South, Midwest, and West), and may further be disaggregated to focus on specific states or cities.

Morgan Hardy - Infections and Inequalities: Market Incentives and Disease Prevalence

Every introductory macroeconomics course will tell the story of why there are many treatments for things like erectile dysfunction and hair loss while children still die of malaria or AIDS every day. It is not that malaria is a more complicated scientific issue for biologists. It is that those who suffer from malaria do not have market power. Hair loss is a rich person problem, therefore investment in research and development for that problem is economically attractive for the private sector. No private company would rationally invest in an AIDS vaccine, because once it were invented, those who needed it could not pay the price to actually turn a profit. It would be impossible for this company to not give their product away for free without public outcry. I will use country level GDP, population and disease data in order to visually display this concept. I will show various graphs of the world colored by disease prevalence, first weighted by

population and then by GDP. The eye will easily see why there is still no cure for AIDS, but no wealthy man needs to go bald.

Naomi Jacobs - How Does Home Location Impact Access to Education? A Case Study of Public Transit Options, Distance From School, and Attendance at Roger Williams Middle School (RWMS)

Current policy states that Middle School students in Providence must live at least 1.5 miles away from their school to qualify for a paid bus pass. If the student does not meet the criteria, he or she is expected to walk or shoulder the cost. At \$62 per month, an unlimited bus pass can often be a serious financial burden on RWMS families, which are predominantly low-income. It is also possible that students do not have a convenient bus stop near their homes. The main purpose of this presentation is to describe students' access to Roger Williams Middle School via public bus transit routes and walking distance. This information will also help to explore the relationship between students' access to school and their attendance trends.

Laura Keohane - Mapping Medicare Beneficiaries' Eligibility for Medicaid and Part D Subsidies

As a condition for receiving federal Medicaid funding, the federal government requires states to provide Medicaid coverage to certain populations based on income level and disability. States can also elect to expand Medicaid coverage to individuals with higher incomes. This flexibility has created Medicaid eligibility requirements that vary greatly from state to state. For example, how quickly elderly individuals "spend down" their assets to qualify for Medicaid could depend on a state's income and asset thresholds. In contrast, the Medicare Part D prescription drug insurance program uses national income and asset eligibility requirements to determine whether low income beneficiaries are eligible for premium and co-payment subsidies. Using Medicare enrollment data, I present a series of maps to track changes in Medicare beneficiaries' eligibility for Medicaid benefits and Part D subsidies from 2008 to 2009. I investigate whether beneficiaries who are eligible for generous Part D subsidies but not state Medicaid benefits are located in states with less generous Medicaid benefits. This analysis is preparatory work for a study on factors that influence Medicaid spend down trends.

Heather R. Lee - Seeing the Data Spatially: Visual Representations of Chinese Restaurant Labor Markets in the U.S., 1935-1946

Combining conventional history methodology and interdisciplinary approaches, I use in my dissertation government, personal, and business documents to recover the pivotal yet unexamined historic contributions Chinese restaurant workers have made to today's multibillion-dollar commercial food industry. In my first chapter, I use spatial analysis of their social networks to argue that the Chinese used an ethos of family obligation to create cheap labor force for Chinese restaurants. I culled personal and work address from draft records, a personal address book, and private letters and plotted those locations in GIS using ARC maps. The resulting maps visually represent migration and inhabitation patterns that show a transcontinental Chinese community that is clustered around family businesses. These clusters represent concentrations of cheap laborers that were employed by relatives. By taking into consideration the spatial dimensions of these people's experiences, I use evidence that historians frequently ignore and am able to ask questions about community formation and social networking that historians have not asked. The spatial analysis approach is critical to my post-dissertation research, which will

explore the Chinese restaurant industry from an urban history perspective, attempting to understand how business and occupational choices of the Chinese are connected to urban development.

Wei Liu and Qi Chen - The Inequality between West and East of China Based on the ArcGIS Analysis-- One Child Policy and Migration

We try to use the Arcgis tool to analysis the inequality phenomena in China across the States Statistic 2002 and 2009. The map provide the visualize the variable of Dependency Ratio of Population, ratio of high education and primary education, the income of whole family a year in rural and urban, the ratio of people working in the Primary Industry and Secondary Industry based the comparison between West and East of China. Though our research, we can make own our conclusion: The One-Child Policy and Migration are main reason to influence the inequality between the West and East of China. Now do you believe that the Income Gap of people who working in two areas will be reduced by the manufacturing industry moving to mid of China because of labor cost and Exchange Rate have been increasing?

Lyn Malone - Does Your Health Depend on Where You Live?

Since the early 1990's there has been much discussion of the concept of "food deserts" – places where, for a variety of reasons, healthful, affordable food is difficult to obtain. I decided to explore a similar concept with relation to health – are there "health deserts" too? I found that the concept does, indeed, exist in geographical units described by the U.S. Department of Health and Human Services as "Medically Underserved Areas" or MUA's. An area is designated an MUA through the use of a composite statistic called the Index of Medical Underservice or IMU. The IMU uses four variables to assign a score to an area: the ratio of primary medical care physicians per 1,000 population, infant mortality rate, percentage of the population with incomes below the poverty level, and percentage of the population age 65 or over.

I am an educational consultant who focuses on the use of geospatial technologies in K-12 education. For that reason, I decided that my project would be to create a GIS lesson about Medically Underserved Areas. In Part 1 of the lesson, students will assign US counties a score based on a simplified Index of Medical Underservice. In Part 2 of the lesson, students will explore the health implications of living in an MUA, by comparing several health indicators in MUA's (those with low IMU scores) with regions having high IMU scores. In my presentation I will share the lesson plan, the sequence of mapping elements in the lesson, and finally, demonstrate an online version of the lesson which I will create in ArcGIS.com.

Kristen McCausland - Excise Taxes, Tobacco Retailers, and Smoking Behaviors : Does Proximity to State Borders Matter?

Raising cigarette prices by increasing tobacco excise taxes at the state and local levels has been shown to be highly effective in reducing smoking. Research has demonstrated that increased cigarette prices are associated with decreased cigarette consumption, increased quit attempts, and higher rates of smoking cessation. While these types of policies have been effective at the population level, research indicates that individuals who participate in price minimizing or tax avoidance behaviors (i.e. seeking out untaxed tobacco products) are less likely to make a quit attempt or to quit successfully. Other contextual factors which impact smoking behaviors have also been identified. For instance, tobacco retail density in neighborhoods has been found to be

associated with both adult smoking rates and smoking initiation among youth. Given geographic variation in tobacco taxes and other tobacco control policies, it is important to consider contextual factors along municipality or state borders which may support or undermine the potential effectiveness of these policies. Using GIS, this project will produce exploratory work from a case study to examine whether tobacco retail density differs near municipality/state borders where tobacco tax differentials exist. In addition, this project will describe these border communities in terms of socio-demographics and smoking characteristics. These results will better inform future research projects regarding the effect of tobacco control policies on neighboring states and priority planning for state tobacco control programs.

Erica Mullen - Immigrants in “New” Destinations: From Where are They Coming and to Where are They Going?

The Midwest and Southeast United States witnessed an immigrant population boom during the 1990s and 2000s. Much recent immigration research over the past decade focuses on the migration of immigrants—both those who just arrived in the United States and those who have been in the country for some time—to these “new” destinations and the industrial changes that precipitated this movement. The research so far neglects the sizable migration of immigrants *out* of new destinations. This presentation will use 2000 Public-Use Microdata Series data to map some major new destination states and document not only where immigrants in these states came from, but also where immigrants who left went. This analysis will focus on immigrants already in the United States who migrate internally, called “secondary migrants”. Additionally, I will show the income profiles of the selected flows to provide a better picture of how immigrants coming and going are (or are not) different on this dimension. This presentation is part of a larger dissertation project that will hone in on the livelihoods of immigrants in new destinations and how they are different from immigrants in other parts of the United States.

EeCheng Ong - Redistricting or Gerrymandering?

Electoral boundaries in the U.S. are redrawn every ten years, based on the decennial census. Political redistricting is largely the responsibility of state legislatures, who have huge stakes in election outcomes. In most states, the process is controlled by a commission of politicians. In other states, a commission may be purely advisory or may act as a backup. Finally, a few states employ independent commissions to redraw district lines.

Since the power of defining electoral boundaries falls mainly in the hands of elected politicians, it is not surprising that political redistricting in the U.S. is almost synonymous with gerrymandering.

Partisan gerrymandering occurs when a party dominates a state legislature, and draws boundaries to safeguard and expand its power. Bipartisan gerrymandering (or incumbent protection or sweetheart gerrymandering) occurs when parties agree to preserve their respective districts. I will discuss an example of a bipartisan gerrymander—the 2001 California redistricting. Although Democrats controlled the state legislature and the Governor’s mansion, two-thirds legislator support was required in order for the proposed redistricting plan to be immune to a citizen referendum. Thus both parties cooperatively redrew district lines to maintain the status

quo. In the subsequent 2002 election, not a single legislative seat in California changed party hands.

Dan Rounsaville – Drug-Related Death and Geographic Opportunity in Rhode Island

This project will map the location of drug related death (overall and divided into categories such as overdose or accident), and look for a relationship with areas of economic, educational, and residential opportunity in Rhode Island. The model of opportunity zones in Rhode Island I will be based on a project by the Kirwan institute which mapped opportunity in Connecticut. Opportunity zones take into account educational quality, economic health, and neighborhood stability, with publicly available data from the census and Rhode Island standardized test scores.

Laura Smith - Rhode Island and the Housing Crisis: Examining Foreclosures from 2009 to 2011

This project will use data from HousingWorksRI and The Warren Group to review the prevalence of single and multi-family foreclosures in Rhode Island from 2009 to 2011. Particular emphasis will be placed on reviewing how initiatives such as Building Homes Rhode Island have impacted the crisis. This exploratory analysis is intended to be a springboard for further research with HousingWorksRI, thus is limited in scope at this time.

Daniel Sorando - Spatial Patterns of Residential Settlement in Spanish Cities

The aim of this project is to represent on a map in a GIS system the settlement patterns of the different socioeconomic groups living in some of the main Spanish metropolitan areas. Both geographical and social data set are referred to the last Spanish Census available (2001). With regard to this, geographical data consist on census tracts information whereas social data refer to a variety of demographic, socioeconomic and housing variables of its residents. All they have been reduced with a factor analysis in order to find significant dimensions that distribute people around these spaces. Therefore, these factors are the actual data being mapped.

These patterns are studied not only to know how the values of these social factors are distributed across space but also to identify the presence of both non-random clusters of specific kinds of population and mixed areas. In addition, spatial relationships involved in the distribution of each one of these factors are quantified with a measure of global spatial autocorrelation (Moran's I). Finally, all this information is compared to the classification of the census tracts made with a K-Means cluster analysis using the social dimensions. The main purpose is to offer a wide view of the spatial patterns of urban segregation in the Spanish metropolitan areas being investigated.

Jessica Unger - Building A Community on 'The Dry': Relationships Across Space

On the high plains of southeastern Colorado there is a piece of land known as "The Dry." This (appropriately named) area was an African American homesteading community that only flourished for a few short decades in the early twentieth century. Dust storms and the destruction of the irrigation system by local ranchers led to a virtual abandonment of the region by the 1930's. "The Dry" became the subject of an archaeological investigation starting in the summer of 2010, continuing through the present.

Research at “The Dry” has focused on issues of class and race, as well as the relationships between the residents who settled on this land. Although there has been little actual excavation, the archaeological work has focused heavily on surveying the landscape.

During the 2011 field season, researchers collected artifact data from a homestead owned by a woman named Viola Mitchell. By plotting the distribution of different classes of artifacts across the site, researchers hope to identify clusters and make inferences about the function of different spaces.

In addition, in order to look at the “bigger picture,” the location of residential structures will be mapped across the region. Although the survey work has not yet identified all of the homesteads at “The Dry,” many sites from one extended family have been located and will provide an interesting initial look at how family networks played out across space.