To the Graduate Council:

I am submitting herewith a thesis written by James Nathaniel Maples entitled "Industrial Concentration and Quality of Life." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts, with a major in Sociology.

Stephanie Bohon, Major Professor

We have read this thesis and
recommend its acceptance:

Paul Gellert

Joongbaeck Kim

Accepted for the Council:

Carolyn R. Hodges
Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

Industrial Concentration and Quality of Life at the County Level

A Thesis
Presented for the
Master of Sociology Degree
The University of Tennessee, Knoxville

James Nathaniel Maples
December 2008

Copyright © 2008 by James Nathaniel Maples
All rights reserved.

Dedication

This thesis is dedicated to the memory of my friend Max.

Abstract

The purpose of this study is to examine the effects of industrial concentration at the county level on quality of life among residents of US counties. Data on various aspects of quality of life and industrial characteristics were collected for all United States counties. Four quality of life-related variables (infant mortality, percent of female-headed households, the burglary rate, and income inequality) were regressed on industrial concentration percentage and industrial concentration types. Industrial concentration was associated with an increase in infant mortality, a decrease in the burglary rate, and had no effect on the percent of female headed households or income inequality. Examining specific industry types, manufacturing proved significant in increasing the percent of female headed households, was less effective in reducing burglaries compared to other industry types, and was generally worse on quality of life than any other industry types.

Table of Contents

Chapter 1: Introduction	**Page**
Introduction	1
Background	2
County as Community	3
Chapter 2: Industrial Concentration	
Defining Industrial Concentration	6
Time	7
Type	9
Skill	11
Monopolization	11
Chapter 3: Quality of Life	
Quality of Life	13
Quality of Life Hierarchies	18
Chapter 4: Data and Methods	
Measurement	22
Controls	24
Limitations	25
Methods	26
Results	29
Chapter 5	
Conclusions	35
Bibliography	38
Appendix:	
Table 1	43
Table 2	43
Table 3	44
Table 4	45
Table 5	46
Graph 1	47
Graph 2	48
Vita	49

List of Tables (Appendix A)

Table	Page
Table 1: Correlation Between Infant Mortality, Female Headed Households, Number of Burglaries, and Gini Coefficient	43
Table 2: Descriptive Statistics of Infant Mortality, Female Head of Household, Number of Burglaries, and Gini Coefficient by Industry Type	43
Table 3: Impact of Industrial Concentration on Infant Mortality, Female Head of Household, Burglaries, and Gini Coefficient	44
Table 4: Impact of Industrial Type on Infant Mortality, Female Head of Household, Burglaries, and Gini Coefficient	45
Table 5: Impact of Industrial Concentration on Infant Mortality, Female Head of Household, Burglaries, and Gini Coefficient, Full Model	46

List of Figures (Appendix B)

Figure	Page
Graph 1: Interaction between Industrial Concentration and Female-Headed Households by Industry Type	47
Graph 2: Interaction between Industrial Concentration and Burglaries Per Thousand People by Industry Type	48

Introduction

The purpose of this study is to examine the effects of industrial concentration at the county level on quality of life among residents of US counties. The American landscape (both present and historical) is dotted with geographic areas associated with location-specific industries. For example, Detroit is the Motor City and Toledo is the Glass City. In the same sense, people associate the slaughterhouses with Chicago, or even coke ovens with Beckley. Place identity often leads to investment in keeping these industries strong and fixed. However, history has shown that places dependent on a single industry have often faltered during times of industrial collapse. These are the moments when company towns and heavily focused industrial concentrations are most noticeable, and most troublesome. Industrial concentration may put communities at the mercy of the market, yet what is left to be determined is the level of industrial concentration that is problematic, the specific arenas in which problems might occur, and the impact of industrial concentration in a range of industries (many of which continue to flourish). Thus, this study seeks to compare counties where workers are highly concentrated in a single industry with those counties where they are not in order to answer three overarching questions: 1) are increases in industrial concentration associated with a reduction in the quality of life of residents in industrially concentrated areas? 2) what specific qualities, if any, are impacted at the county level? and 3) are concentrations in some industries more detrimental than others?

Background

Industrial concentration has been well researched using qualitative case studies, particularly those cases with extraction concentrations. Gaventa (1982) offers a classic text on the power relations of industrial concentrations in coal, and Feagin (1997) outlines Houston's oil industry, demonstrating the geographic specificity of concentrations, along with the role of government funding in extending the longevity of the concentration. Other authors, examining single industries and using qualitative techniques, have also concluded that non-extraction industrial concentrations have similar negative effects, lending credence to the idea that any kind of industrial concentration can affect quality of life. Dandaneau (1997) explores the collapse of Flint, Michigan, which was an automobile manufacturing haven in its prime. DeVries (1972) focuses on agricultural industrial concentrations, while Phillimore and Bell (2005) illustrate the problems of industrial concentrations in chemical manufacturing in the United States. Ortega (1999) makes a similar claim for industrial organization and manufacturing in India. Although the negative findings of these authors are fairly consistent across a broad range of industries, the fact that they are all qualitative case studies suggests the need for a quantitative examination that would allow for the comparison of multiple industries across a variety of locations. I attempt to do this with my study.

Those researchers studying industrial concentration point out that its effects are not merely isolated to the immediate area of concentration. Kildegaard and Williams (2002) argue that industrial concentration creates economic risks for banks, which in turn creates problems for investors, wherever they may be.

Gilligan (1993) demonstrates the problems of price increases in industries where concentrations occur. Dobbin and Zorn (2004) further express the far-reaching economic effects of industrial concentration in considering the Enron collapse and its overall effect on the nation. These authors provide support for the idea that the effects of industrial concentration are capable of reaching beyond the immediate location of the actual concentration into the broader community (and, in some cases, across an entire economy). Hence, examining the community surrounding the concentration appears a reasonable way of examining the effects of the concentration itself.

Despite the myriad studies of industrial concentration on quality of life, and the general conclusion that these concentrations are harmful to the residents living in these concentrated areas (and sometimes elsewhere), to date, no one has systematically compared industrial concentrations in different geographic locations. Does industrial concentration have a different effect on quality of life in one area than in another? What qualities are affected and which concentrations are most harmful?

County as Community

Although it is interesting to compare and contrast Gaventa's Central Appalachian study to Feagin's study of Houston, it is difficult to make any concrete assumptions about similarities and differences between an entire (mostly rural) region and a metropolitan area. A region (such as Central Appalachia) is comprised of multiple populations located in many cities, towns, and hollows. In Gaventa's (1982) case, the coal mining communities were a

fraction of the region, and many residents in Central Appalachia were arguably not linked to the coal industry, nor were they directly subjected to its power. However, pre-Enron Houston's metropolitan area residents were predominantly tied to the oil industry (Feagin 1997); those who did not work for oil companies likely worked in related industries that allowed oil companies to thrive or depended upon the economic fortunes of oil workers. Similarly, as the coal-based industrial concentration of Beckley (and thus, Fayette County, West Virginia) increased over time, so did the number of coal-related industries, even as coal mining itself began to wane.

In this study, I propose to examine the impact of industrial concentration by comparing its impact on the quality of life of residents at the county level. Comparing across counties offers an advantage over examining cities or metropolitan areas, because, as Dobbin and Zorn (2004) and Kildegaard and Williams (2002) note, industrial concentration can affect more than the residents in an immediate location. It is unlikely that a single town or city could fully encompass the effects of industrial concentration. Furthermore, towns and cities are highly differentiated by their cultural and ethnic history, land values, past economic history, and socioeconomic status such that the data may present a less than accurate portrait of what is really occurring. Metropolitan areas work slightly better, as they encompass multiple cities and towns as well as more of the area surrounding a particular industrial concentration, but metropolitan areas still fail to account for rural and exurban areas. Further, metropolitan areas, typically a mix of urban and suburban areas, would not reasonably account for industrial concentrations like the one presented by Gaventa (1982).

As an alternative, I propose to examine US industrial concentration at the county level. Although also not ideally suited to measure the total impact of industrial concentration, county level data allows the researcher to compare a larger geographic region. Furthermore, this unit of geography would encompass all types of residential areas in the immediate vicinity (urban, suburban, and rural). It would demarcate an area where many of the workers in the industrial concentration are likely to work. Ideally, the unit of analysis used would be the *labor market area* (see Kritz and Gurak 2008), but it is not possible to get certain quality of life measures for those areas. Thus, the county unit allows for ease of comparison of industrial concentrations across places, since most comparative indicators of quality of life and characteristics of the labor market area available at the county level.

Chapter 2: Industrial Concentration

Defining Industrial Concentration:

For my study, I will conceptualize industrial concentration as the concentration of workers in a specific industry living in a constrained geographic area, measured as the percent of workers in the dominant industry (Anderson and Gerber 2008). This is a fairly new way of defining and examining industrial concentration, and it is one well suited for research in the field of inequality studies. Anderson and Gerber (2008) use this method for studying the maquiladora industry along the Mexican-American national border. Using an approach in the same vein as Peet and Hardwick's (1999) critical modernism, Anderson and Gerber (2008) focuses on the effects of the concentration of employment on the individual and community with an eye towards the costs and benefits of concentration.

Examining the concentration of workers in a single industry within a geographic constraint (in my case, county boundaries) works as an effective means of conceptualizing (and even operationalizing) industrial concentration for quantitative analysis. It is important, however, to also account for time (how long the concentration lasts), type (industry that is being concentrated), skill level (level of skills required of concentration employees), and monopolization. Although my study can only account for part of these aspects (primarily industry type, but skill level in a lesser sense), these are still worth mentioning due to their relevance to the overall idea of industrial concentration.

Time

Concentrations fall into two categories: short-term concentrations and long-term concentrations. Short-term concentrations are demands that are linked to either a finite period of demand, a finite ability to provide the resources to meet the demand, or both. These concentrations require a minimal amount of infrastructure to exist: a basic transportation system to move workers in and goods out, basic lodgings for workers, the industrial tools for obtaining raw goods or manufacturing them as applicable, and a basic support system for keeping everyone alive and working. When modern industrial concentrations occur in rural areas, these usually have to be created, or at least nurtured into existence, and such needs may be demanded from local government (Feagin 1998; Maples 2007; Gaventa 1984). In other instances, short-term concentrations may appear on the outskirts of urban areas, as in Anderson and Gerber (2008).

Arguably, all towns begin on this path, existing solely to meet a particular need. The main question is whether or not the industry (and the communities surrounding the industry) in this area chooses to remain on this single industry path. Most communities would likely pursue a more diverse economic climate by default, and this is the reason that not every town or city in the US has a high concentration of its workers in a single industry. However, the potential for creating capital may instead lead to a mono-economic climate, with a single industry at its head (Feagin 1998); communities surrounding these industries may have little consideration in the decision (Gaventa 1984).

When demands are considered relatively constant for the foreseeable future and no other industries take root in the community, long-term concentrations may appear. Initially, the needs of a long-term concentration would be the same as for short-term concentrations, but as the concentration perpetuates itself, a more developed infrastructure is needed to continue production. For example, a system of providing long-term expectations for workers and their families (such as the availability of durable goods, land, acceptable housing) would be required to attract and maintain workers, as the availability of surplus capital is insufficient in the long run. This may also include increase expectations on local government to provide more schools and other community services, such as police and fire departments. The additions of extra infrastructure help support the longevity of the concentration (Feagin 1998).

There is much difficulty, however, in identifying the exact amount of time needed to identify a concentration as long-term. I would argue that it is not so much a set length of time, but rather the process of moving beyond the presence of minimal infrastructure, and on to making accommodations to enhance the concentration. Most industrial concentrations, then, would appear as short-term concentrations at first, and then develop over time into long-term concentrations if ample considerations occur to maintain their presence and assuming the market and supplies are sufficient. In comparison, most towns may begin as industrial concentrations in a specific area, but select to encourage other economic growth to occur.

My study is a snapshot of industrial concentration at a single time point: March 1999. Other research on industrial concentration has taken time into

greater consideration, tracking the development and collapse/survival of the concentration over its life. Gaventa (1982), Feagin (1997), and Dandaneau (1997) are excellent examples of including a historical element to industrial concentration as a way of telling the story. In my study, I am unable to go to this depth to explain the effects of concentrations over extended periods of time. However, I intend to rectify this in future research by using data over a period of years to create a longitudinal study.

A second limitation is that, in my study, I am unable to determine the difference between short-term and long-term concentrations. Although this data would be interesting, I feel that my study provides an overview of industrial concentration in the continuous United States counties *at all points of concentration*. Essentially, my results represent the mean. However, in future studies I would like to examine short-term concentrations and long-term concentrations separately to determine if they differ from the results of my study.

Type

My study uses the industry types listed in the North American Industrial Classification System (NAICS). This typing represents an effective cross-section of industrial groupings for simplifying research, one in which broad types (such as manufacturing) collectively represent the many industries that fall in that area (car manufacturing, computer manufacturing, clothing manufacturing, etc). In the United States, a handful of industry types dominate. Manufacturing is, by far, the largest industrial employer in the nation, followed by the retail industry, hospitality and tourism, and medical care. Extraction (a combination of the

forestry, mining, utility production, and waste disposal industries) also places among the top five.

Each industry type feasibly has its own characteristics that may affect quality of life. For instance, the manufacturing industry often requires little technical training for employment. It also has long term potential based on demand, is able to adapt to new demands, and is highly mobile. This means that an industry concentrated in manufacturing may be able to make more requests of local government in order to maintain manufacturing jobs in the county (Chen 1997). This would be compared to something slightly less mobile like the tourism and hospitality service industry. Tourism and hotels are often locked into a certain amenity-laden, geographic area, and employers in this industry may have less ability to negotiate because they are decentralized. That is, in a county dominated by tourism, they may not be a single, large employer. Extraction industries must, by necessity, have access to the product being extracted, but employers in this industry may be able to negotiate for where the extraction takes place, if multiple locations exist.

There are also issues as to how well jobs in some industries pay and how much tax revenue is returned to the economy by its presence, which can also create or reduce negotiating power for employers. It is worth mentioning here that the highest paying types of jobs, those requiring high level of skill and training, rarely are in the dominant industry. In fact, so few cases exist in the US, my study is unable to examine them as a single industrial type. Still, this is an important distinction that should be discussed.

Skill

Industrial concentration types can be divided into two forms depending on the skills required by the workers involved: skilled and non-skilled. Most concentrations fall into the latter category; job skills needed for employment at the entry level, and for many of the positions that follow, do not require advanced degrees, if any. Any training that is needed will typically be taught on site or on the job. Manufacturing, for example, only requires basic skills common to most workers. Training to assemble products (or use machines that assemble the product) can typically be taught under a supervisor's watchful eye. Another example would be on the job training received in coal mining, where workers typically begin in low level positions to learn how mines work, and may then advance from there as their experience allows. For the purposes of this study, although my data allow me to distinguish between specialized and non-specialized industries, the number of cases of industrial concentration in specialized industries is too low for robust analysis.

Monopolization

Concentrated industries vary by the number of employers within the concentration. In the early days of concentration, there may be only a single entrepreneur operating the job site. Competition may increase, with multiple employers in the same field. This is a frequent occurrence in American coalfields prior to the 1950s, when resources were essentially shared (Maples 2007). However, land ownership determined who received what share of the coal. As mentioned with long-term concentrations, diversification may also occur,

resulting in the creation of additional jobs in related fields that still depend on the concentration itself. In future studies, I hope to give more attention to the idea of multiple employers versus single employer concentrations, as this may be a crucial aspect of understanding how the concentration relates to the community, and how it affects the concentration's ability to function.

Chapter 3: Quality of Life

This study examines the impact of industrial concentration on quality of life, but it is important to note that quality of life is an umbrella term, and quality of life (QOL) research crosses a diverse field of interests. One will find QOL research in any field that focuses on some aspect of human existence, whether discussing human health (Cohen 2006; Schipper 1984), the inequality or satisfaction of existence (Shafer 2000; Reisig and Parks 2000), the sustainability of existence (Anderson and Gerber 2008), or the implementation of plans to improve human life (Michalos and Zumbo 1999). QOL research, along with the term *quality of life* also continues to expand its presence and usefulness in new issues: the ethics of end of life decisions, the philosophical and economic complications of infinite consumption in a finite world, improvements and development in developing nations (McGillivray 2005).

The widespread interest in QOL creates a lack of consistency in its conceptualization and operationalization across disciplines, however. First, there are literatures on both wellbeing (sometimes listed as well-being or well being) and quality of life (also sometimes listed as quality-of-life). Frequently, the terms are discipline-specific, but their operational treatment is the same. McGillivray (2005) and Easterlin (2001) recognize diversity between varying terms, even going so far as to use separate terms, and then ultimately equating them. Dasgupta (2001) argues for no delineations between the two concepts. I also side with the equivalency position, and I draw on literature labeled as quality of life as well as literature labeled as well-being in my study, and I refer to all of it as

quality of life. However, when relying on authorities who use a different term or phrase, I will use the authors' terms, where appropriate.

The definition of quality of life I use for this study comes from two sources. The first, (McGillivray 2007), states that well being is " ….a description of the state of individuals' life situation" (p.3). The second is by Sirgy and his colleagues, who conceptualize quality of life as "an examination of a person's present satisfaction and wellbeing, and the potential for maintaining and/or improving that state of being in the future" (Sirgy 2002; Sirgy , Rahtz, and Samli 2003; Sirgy and Rahtz 2004). Although these definitions are fairly simple, they still captures the essence of what quality of life (or well being, as McGillivray was describing at the time) means.

Quality of life is a latent construct that representative the many facets of the human condition. Still, there are clearly two elements of this construct: a nebulous feeling of what it means to be human (as in Sirgy's many works), and concrete physical conditions and its interactions with other objects (as in McGillivray 2007). Gasper (2008) outlines two common approaches to quality of life conceptualization, and thus addresses the differences between the philosophical and the physical. The first approach is represented by philosophical musings on quality of life. This includes research into the meanings of essentially unmeasurable concepts like happiness, pleasure, and the benefits of avoiding painful experiences. This ties into the early discussions of utility. Philosophical considerations of quality of life are present in QOL research, and happiness and satisfaction are often included indices. Although Gasper asserts that philosophers often fail to include an economic component to their research, I

would cite Marx's contributions to the study of alienation. Fromm's work (1973) also falls in this category (and extends from Marx's work) arguing that human existence, when dominated by economically-oriented rationale, is hindered from truly developing in a meaningful sense. Of course, Gasper (and many other researchers) argues against using purely economic terms as a means of conceptualizing quality of life. This is in accordance with the assertion that quality of life is diverse, and it supports the idea that a single indicator cannot encapsulate its full meaning.

The second approach derives primarily from science, especially social science. Most QOL research falls in this category. Researchers utilizing this approach are responsible for conceptualizing (from the abstract) what quality of life means, and then creating indicators and categories that capture that meaning. A number of researchers (including Friedman 1997, Sirgy, Rahtz and Lee 2004, Carley 1981, and Sirgy, Rahtz, and Samli 2003) provide a basis for designing quantifiable indicators of quality of life, and a method for indexing, measuring, and interpreting them. McGillivray (2007), in an attempt to better conceptualize oquality of life and well being, composed loose prerequisites for understanding what comprises these concepts. He lists *being* as a central component of the conceptualization, noting that *quantity* of life is an important consideration. A dead being cannot experience quality of life, so quality of life cannot be equated only to longevity. How those years are experienced are crucial in considering quality of life. Thus, it does act as a counterpoint to the idea of a rich life with an early death. It follows that the child of a millionaire who never needed to work may not necessarily have the quality of life of a seventy year old

who has worked basic jobs his entire life. McGillivray also includes the idea of a meaningful death for both the millionaire child and the seventy-year old laborer. Ideally, this would include a communal infrastructure that ensures both have a natural death (as opposed to being a victim of homicide or suicide).

McGillivray (2007) also includes the need to consider the time patterns associate with living each day. This includes the idea of 18-hour workdays versus 8-hour workdays, the work expected of the individual at home (such as the expectations of females to be both laborer and housekeeper in the family unit), commute time, and the even the time associated with leisure activities (both good and bad). Human lives are frequently focused on obtaining the necessary means for survival. In modern times, this occurs via the economy, or rather, laboring as a means of earning income. Thus, there is a need to account for the time spent obtaining these needs, including the events that must transpire so they may be secured. The counter point to this is also the time spent in leisure. While a certain amount of leisure is needed, there is arguably a cutoff point where time could be spent more towards advancement of the human condition. Marx's arguments regarding alienation would be of particular interest here. Thus, McGillivray (2007) also refutes that excessive leisure and excessive labor, like a long but meaningless life span, cannot fully encapsulate quality of life.

McGillivray contends that quality of life is not simply economic wealth and consumption, although placement within in the socioeconomic stratum does have a certain degree of importance. Measures of income (such as the gross domestic product) have been discussed as quality of life indicators. Development is also discussed, as globalization links economies for the importation and exportation

of goods and services often creating inequality (Peet and Hardwick 1999). Even under a beneficial arrangement of exchange, however, many human needs (friends, family, culture) come from non-market sources. This is explained by the Easterlin paradox, in which workers receive declining marginal returns to happiness from incremental increases in wealth (Easterlin 2002). Other researchers also argue that there are weak or no correlations between material wealth and happiness, health, and participation in society (Travers and Richardson 1993; Myers and Diener 1995). Still, McGillivray also specifies the need for work as a social center of socialization and culture.

Similarly, Nussbaum and Sen (1993) and Nussbaum (2000) argue that there are certain nuances to human life that are within the social context. In essence, there is value in being able to live a fulfilling life that includes interaction with the natural world, as well as other humans, *in addition* to having the necessary means for a meaningful survival. Their *capability approach* includes several items that, they argue, should be pursued rigorously. These include concepts similar to McGillivray's (2007) such as the ability to live a full life (one without premature death), and to have a meaningful death. However, many of Nussbaum and Sen's (1993) and Nussbaum's (2000) ideas lean on *participating* while living. For example, they include political involvement, the active pursuit of rights (including property rights), interaction with other members of the species (including developing emotional relationships with individuals and communities), and cultivating the mind through education and thought. Both works demonstrate that there is more than just the individual to consider when examining quality of life.

Quality of Life Hierarchies

Quality of life goes beyond being a study of the individual. There is a dynamic relationship between the individual and community in QOL research, and this relationship has taken particular precedence in current QOL literature. McGillivray (2007) notes that his research is "an evaluation of a person's life situation" and the "concept or abstraction used to refer to whatever is assessed in an evaluation of a person's life situation" (McGillivray 2007). One can use McGillivray's work to think of quality of life as a duality. First, we have the individual, who is the expression of quality of life. Second, we have the community, which both predicts and alters the individual's quality of life by its content. In turn, the community acts as an expression of the grouped individuals' quality of life. Sirgy, Rahtz, and Lee (2004) created an entire text focusing on the best indicators for community research. They, along with more or less the entire quality of life research community, now advance the usage of categories of both individual and community categories and indicators as a means for quantifying quality of life.

My study uses four indicators of community well being across three categories. The four indicators used in this study (infant mortality rates, percent of female headed households, burglary rate, and income inequality via the Gini coefficient) were selected for two reasons. First, the limited number of variables allows the study to remain fairly simple, while still calling attention to industrial concentration, the variable of interest. Second, the indicators (and the categories used to select these indicators) provide a limited, but basic, comprehension of the

community's quality of life, with infant mortality calling special attention to the health of individuals within the community. The three categories being used are health, social issues, and economic stability, and a short summary of each follows.

Health measurements in quality of life research are often from the medical and nursing field, especially medical ethics. The notion of quality of life here is frequently based on the idea of the individual's ability to enjoy a meaningful life experience during or post a qualifying event ranging from chronic disease (Cohen 2006; Schipper 1984) to acute sinusitis (Linder 2007) and even plastic surgery and amputation (Levine 2005; Hagberg 2001). In the health category, much of the research is focusing on an aging populace, end of life care, and to a lesser but related degree, assisted suicide. Of all the categories, health is easily the most direct and evident measurement of individual quality of life, thus there is a need for the other categories to broaden the focus.

The social issues category initiates this adjustment by immediately addressing the social structures that enable humans to maintain (and in some cases, improve) quality of life. This is a wide category, and can range from family structure issues (such as females as head of households) to crime levels in the community. In other examples, Shafer (2000) focuses on the construction of greenways and trails in urban areas as a means of improving quality of life for residents. The study focuses on how the residents' use of the trail (transportation, recreation, etc) correlates to their perceived quality of life improvements. Reisig and Parks (2000) examine community satisfaction with police services and how this relates to quality of life. Miller (1993) considers decreases in quality of life

for victims of crimes. Michalos and Zumbo (1999) surveys British Columbians living in Prince George about their perceptions of government services, usage of tax dollars, and government policies in relation to their own life satisfaction. Whereas health measures of quality of life primarily are focused on the individual, reviewing government services and public policy provides a consideration of the structure in which the individual resides.

The economic stability category is the glue that holds the quality of life measurement together. Economic conditions affect health (access to health care and insurance), social conditions (social services available to rich vs impoverished communities), and environment (the idea of pollution being less controlled in poor areas, see Dasgupta 1998.) Frequently, quality of life research on economic qualifiers will crossover with one of the other three categories. For example, Park (2002) accounts for the role of poverty in decreasing quality of life for children with disabilities, linking health and economics. Marcouiller (2004) focuses on the use of amenities in agriculture to increase quality of life for residents at the county level, linking social services to economics. Marans (2003) includes environmentally aware economic planning as part of optimizing social services in hopes of improving quality of life, pointing out the link between the environment and economics.

For my study, I have selected four specific indicators from these categories that have previously been used in quality of life studies. Infant mortality was used as a key component of Morris' (1979) classic study in the field of quality of life. It has been used more recently in Pamuk's (1988) longitudinal study on social inequality and employment type, and in Matteson, Burr, and Marshall's

(1998) study on the relationship between government infrastructure and infant mortality. Female-headed households were studied (in terms of neighborhood quality of life) by Reisig and Parks (2000), Bassuk and his colleagues (1997), and Gupta (1997). Burglary rate was examined in a quality of life context by both Golub and his colleagues (2003) and Kawachi, Kennedy, and Wilkinson (1999). Finally, the Gini coefficient was examined alongside overall health by Kennedy and his colleagues (1998), Diener and Diener (1995), and Diener (1995).

Chapter 4: Data and Methods

Measurement:

My measurement of industrial concentration is based on Anderson and Gerber (2008). Anderson and Gerber, in examining maquiladoras along the Mexican-American border, calculated industrial concentration by dividing the number of workers employed by the maquiladora sector in a geographic region by the total number of workers in that geographic region. Similarly, I divide the total number of workers in the dominant industrial sector of a county by the total number of workers in the country, obtaining an indicator of the proportion of workers in the dominant industry. The data I will use to formulate this variable comes from the North American Industrial Classification System, or NAICS. The data represents concentrations as of March 1999. I will examine the top level of specificity, where employers are described most generally. In a future study, I will examine higher levels of specificity.

Infant mortality is a frequently used indicator of health in QOL research, and it is considered the most important measure of population health among demographers. It provides a proxy for limits to health such as malnutrition in the community, and the incidence of diseases. To some degree, by using it as a measure of health, it would also be included in Nussbaum and Sen's (1993) research on potentiality for improving one's lot in life (capability approach). My data for infant mortality come from the National Center for Health Statistics data released in 2000.

Measurements of female-headed households also falls into Nussbaum and Sen's (1993) realm: measuring capability to improve quality of life under existing conditions. Conceptually, the proportion of female-headed households examines the many problems that surround females as head of households: single parent households, gender employment bias (both in employment type and income), the effects of reduced parental presence in a child's life, limitations on opportunities of self improvement, the increased likelihood of poverty, and so forth. The key concept here (and a key component in Sen's capability approach) is that individuals in this situation are predisposed to lower quality of life, as are their offspring. By examining the percent of female headed households, we get an idea of the future of the county: higher instances of female headed households may demonstrate a likelihood of more people experiencing decreased quality of life in the foreseeable future. The data for this measurement is from the 2000 American Community Survey.

The county burglary rate (burglaries per 1,000 people) is a quality of life measurement, but it also contains a hint of the capability approach. Primarily, this variable is measuring fear. When robberies occur, they force victims to live at the crime scene, thus experiencing the crime continually. Further, there is always the fear that the perpetrators will return. Additionally, victims are left with the lasting effect of the theft in terms of capability to manage without those goods, or to replace them. While insurance may help economically (assuming the victim has insurance that covers the costs of the crime), it does little to quash fear. My measurement of burglaries comes from Uniform Crime Reports County Data set for 2002.

The Gini coefficient is a standard measure of income inequality (Atkinson 1970). It is represented as a ratio with values between zero and one. As the value moves closer to one, income inequality is increasing. A perfect score of one would be a distribution where one person has all the wealth, and the rest have none. Similarly, zero would mean everyone has the same income/wealth distribution. For this study, the Gini coefficient was comprised of data from the 2000 American Community Survey.

Table 1 shows the correlation of the dependent variables in this study (see Appendix A). The variables for the Gini coefficient and female headed households, to some degree, are measuring the same thing: inequality. There was also a similar (but much weaker) relationship between female headed households and infant mortality, and again between female headed households and burglaries.

Controls

Several controls are used in this study. Educational attainment is measured via the number of persons over 25 with a high school diploma (or equivalent). This control is from the 2000 American Community Survey. Dependency (the ratio of workers to individuals dependent on those workers) was created by adding the number of persons over 65 and under 18 in a county (the dependent population), subtracting it from the total population (to find the working population), and then dividing the dependent population by the working population and multiplying by a constant (k=100). This control originates from 2000 data found in the American Community Survey and the US Census

Population Estimates Program. Poverty is measured by the percent of persons below the poverty line, and uses data found in the American Community Survey from 2001. Unemployment is measured by the unemployment rate, a percentage measurement of the persons unemployed in the county. This control uses data from the 2000 American Community Survey. Metro status is a dummy variable showing whether or not a county was classified as a metropolitan county in 1993. Metro status in 1993 data comes from the Census Bureau Population Division estimates for 1993. Population in 2000 was also controlled for, via data from the US Census Population Estimates Program.[1]

Limitations:

My study regrettably varies in one major way from the works of the authors cited in my theoretical framework. While their studies focused on a single geographical area over a period of time (including an in-depth study of that area), my study takes a single snapshot of 3000 plus geographical areas (counties), and does so without the benefit of extensive research on each instance. This means that historic concentrations may be missed: Fayette County, for instance, shows no record of its previous coal concentration. Similarly, newly developing concentrations could remain hidden, and economic collapses of existing concentrations could remain unnoticed. Although future research beyond my thesis will likely focuses on this, for now it remains beyond the scope of my study.

My study also is unable to determine the density of other employment options in the county. Even though 51% of workers may be employed by a

[1] All indicators were manually entered into a dataset.

particular industry type, this doesn't account for where everyone else works: it could be the other 49% are employed by another high industrial concentration, or it could be evenly distributed across all other industry types. Additionally, although I examine the data across industry types, I cannot fully account for the levels of more technologically/scientifically-advanced concentrations in a county as described in the literature review. There are simply too few cases.

The county unit also suffers from the limitations of municipal borders. County borders are determined by geographic and political means that are inconsistent across places. County and state borders may fall amid metropolitan areas, or even be bedroom communities for geographic industrial concentrations in another county. Workers also cross these borders daily on the way to work, something that my study cannot control for. Also, two states were dropped due to a lack of sufficient data: Hawaii and Alaska. As a result, my study is focused on counties in the 48 continuous states. A small handful of new counties were also excluded, as data could not be obtained for the geographic concentration of workers. Washington, D.C. was excluded for the same reason.

Methods

For this study, ordinary least-squares regression models were constructed separately for each dependent variable (see Table 2 in Appendix A for descriptive statistics). All models were assessed to see if they met Gauss-Markov assumptions. As counties are clustered within states, sandwich estimators were generated, because non-robust standard errors were likely to be inflated.

Negative skewness associated with a high reporting of no infant deaths (imr=0) in many counties also affected normality. For the infant mortality models, truncated regression was used so that I could exclude counties with no infant mortality in my analysis. For the models of infant mortality there were also eleven counties that were eliminated because of issues of influence (as determined by their Cook's d values). Influence is a condition where a single data point is an outlier or has a high degree of leverage, or both. Excluded from the infant mortality models were Sherman County OR, Alcona County MI, Presidio County TX, Mineral County MT, Dewey County SD, Worth County MO, Webster County GA, Stewart County GA, Steele County ND, Harmon County OK, and Bedford City VA. The models of female-headed households fail to include twelve counties with high influence: Shannon County SD, Yuma County AZ, Harris County TX, Owsley County KY, Todd County SD, McPherson County NE, Bronx County NY, Maverick County TX, Cook County IL, Starr County TX, Presidio County TX, and Los Angeles County CA. The models of the burglary rate were the most likely to exhibit incidences of influence, and 29 counties had to be dropped from the analysis. Almost every county dropped was a major metropolitan county, generally reflective of higher crime in urban areas. Deleted counties include the following: Stanislaus County CA, Hennepin County MN, Pinellas County FL, Dallas County TX, Oakland County MI, Hillsborough County FL, Fairfax County VA, Bexar County TX, Fresno County CA, Suffolk County NY, Hidalgo County TX, Kern County CA, Nassau County NY, Middlesex County MA, Baltimore City MD, Palm Beach County FL, Bronx County, New York County NY, Riverside County CA, Orange County CA, Broward County FL, San Bernardino

County CA, San Diego County CA, Clark County NV, Queens County NY, Harris County TX, Kings County NY, Cook County IL, and Los Angeles County CA.

There were no influence issues in the models using the Gini coefficient, but there were instances of missing data, mostly from the counties in Virginia. As the total number of missing cases was less than 5%, these cases were listwise deleted.

I examined the counties with the highest influence to give an idea of the threshold. In infant mortality, almost every county deleted were small populations, most of which were around 2,500 in population. Notably, almost all also had high dependency ratios and small working populations. By far, the highest infant mortality rate was reported in Steele County, ND, which had a rate of 76.9 and a population of 2,258. Steele County had a very low percent of female-headed households (3%) and low burglary rate (1 per 1000). Income inequality was low as well (38%). The county's concentration was in retail (at 18.3%). The bottom cutoff for high scores was Mineral County, MT, with a rate of 43.5, and had a population around 3,884. Mineral County was very similar to Steele: female-headed household of 10.9%, no reported burglary rate, and inequality of 37%. Mineral County was also concentrated in retail at 28.9%.

The female headed-household counties with high influence had no particular similarities. Influence was highest with Bronx County, NY, which had a rate of 41.1. The infant mortality was 8.5, burglary was 300 per 1000 persons, and inequality was 48%. Bronx County includes the Bronx borough, and was concentrated in the health sector at 39.7%. Comparatively, Todd County, SD, was the bottom extreme at 35.8%. Todd County had an infant mortality of 23.3, a burglary rate of 3 per 1000, and inequality of .46. The population was 9050, and

the concentration was 35% in the construction industry (from the *other* industry type).

Burglary rate influences were almost entirely metro area counties. By far, the highest was Los Angeles County at 12,616 per 1000 persons. Los Angeles County was low on infant mortality (5.4), while female-headed household was at 19.4, and inequality at 46%. Los Angeles County was concentrated in retail at 16%. On the other extreme, Hillsborough County, FL was likely influential due to its high population but low crime instances (population 380,841, burglary rate at 202 per 1000). Hillsborough had a low infant mortality (4.1), a mid range female-headed household percentage (12.5%), and inequality of 38%. It was concentrated in manufacturing at 20.3%.

I also examined the list of counties removed for repeat cases, and 3 cases were found: Bronx County NY, Los Angeles County CA, and Presidio County TX The first two, Bronx and Los Angeles Counties, are synonymous with urban centers located within their borders. Both were included on the burglary influence list (as were many other metros) and the female-headed household influence list. Presidio County was excluded from the female-headed household and burglary datasets. Per the Census Bureau's American Fact Finder, Presidio is a very poor county with a disproportionate ratio of females to males.

Results:

Table 2 includes a summary of my dependent variables by industry type (see Appendix A). The data prove notable in several cases. Infant mortality is interesting in two ways. First, manufacturing-dominated counties show an

increased infant mortality compared to the rest, well above seven deaths per thousand live births. This also falls above the 2000 US average infant mortality of 6.89, as calculated by the National Center for Health Statistics. However, the *other* category had, by far, the lowest rate at just over 5 infant deaths per thousand live births. It is noteworthy that this category includes many technically skilled positions, as well as fields requiring advanced degrees. This category also proved to be significantly different than other industry types across three of four dependent variables in Table 2. This would provide additional evidence to the argument that there is an inverse relationship between infant mortality and socio-economic status, which, in turn, is linked to educational attainment (Stockwell, Goza, and Roach 1995).

Next, the percent of female headed households were highest in counties dominated by manufacturing, with other also again at the bottom. The results fluctuate around the 2000 average of female headed households (12.2 percent) per the Census Bureau's 2000 demographic profile. Examining the burglary rate, however, I found that manufacturing counties had lower burglary rates than most of the field, with other again being the lowest. In counties dominated by extraction industries, there were almost ten crime incidences higher than the next highest county type (which was retail dominated), and extraction counties were also almost 40 incidences higher than the *other* category. Income inequality (the Gini coefficient) was fairly stable, with extraction counties having the most inequality, and other and manufacturing counties having the least inequality. Of note, the World Bank (2004) reported the United States Gini coefficient as 40.8. Only one concentration type (other) fell below this benchmark.

In Table 3, I regressed infant mortality, female head of household, burglary rate, and the Gini coefficient separately on industrial concentration (see Appendix A). Infant mortality and burglary rate were both significant at $p<.001$. For every one percent increase in industrial concentration, infant mortality increased 14 more infant deaths per thousand live births, and the burglary rate declined by four fewer burglaries per thousand people. However, both R squared's were low. Neither the percent of female headed households nor the Gini coefficient were significantly associated with industrial concentration in the bivariate models.

In Table 4, I regressed the four quality of life-related variables on industry type (see Appendix A). As industry type is a categorical variable, manufacturing was excluded, as it is by far the most common industry in the United States. Infant mortality was significantly ($p<.001$) associated with concentrations in the health industry and in extractive industries (four more deaths per thousand, on average, than concentrations in manufacturing; $p<.001$ and $p<.05$, respectively. For the model predicting the percent of female headed households, only the retail industry was significant (.01), showing a 1.5 percent fewer female-headed households, on average, than counties concentrated in manufacturing. The catchall *other* industry category was marginally significant, as were concentrations in the hotel industry when compared to manufacturing. All of the industry types except retail were significantly associated with the burglary rate, all showing reduced effects on burglary, relative to manufacturing. Industry type was not significantly associated with income inequality.

Table 5 shows the full model with industrial concentration, industrial types, and the controls predicting quality of life (see Appendix A). With controls and industry type, industrial concentration was significant in three of four variables. A one percent increase in industrial concentration showed a corresponding increase of 7 infant deaths per thousand (significant at $p<.01$), a decrease of 2 burglaries per thousand (significant at $p<.001$), and a decrease in income inequality of 2.913 (significant at $p<.001$).

Examining the other variables in table 5, industrial type remained significant in all of the models. Using the full model and examining infant mortality, all industry types were significant at $p<.01$ (retail, extraction) or $p<.001$ (health, hotel, other), all showing , on average, one to five infant deaths per thousand more than what you see in counties concentrated in manufacturing. All industry types also significantly predicted the percent of female-headed households at $p<.01$ (hotel, extraction) or $p<.001$ (health, retail, other), and all showed that the percent of female headed household was one to two percent lower than in counties concentrated in manufacturing. All industry types were significantly associated with the burglary rate at the $p<.01$ (hotel, retail) or $p<.001$ (health, extraction, other) level, but each showed one fewer crime per thousand than what is seen in manufacturing counties, on average. None of the industry types were significant with the Gini coefficient.

The R-squared for three quality of life-related variables in the final model was notable. Fifty-six percent of the variance in the percent of female headed households was accounted for by the full model. The model also accounted for 56 percent of the variance in the Gini coefficient across counties, and 45 percent of

the variance in the burglary rate was explained. Truncated regression yields no true R-squared value, but the approximated R-squared value was very low in comparison.

Because the regression coefficient for the regression of industrial concentration on the Gini coefficient became significant in the full model, I checked to see if an interaction was occurring between industrial concentration and unemployment. The results were significant inequality ($p<.001$; and also for female-headed households; $p<.001$). Because I also have the counterintuitive finding that higher unemployment is associated with lower infant mortality, I speculate from these findings that unemployment may be interacting with other predictors in my model, as well.

Since the selection of reference categories is usually somewhat arbitrary, I also used different omitted categories in industry type to see the effects. In the model predicting inequality, using the hotel industry as a reference revealed significant differences between health and the hotel industry ($b=-1.6$; $p<.05$) and between retail and the hotel industry ($b=-1.5$; $p<.01$).

To determine if some concentration in some industries are more detrimental than others, I tested for interactions between industrial concentration and industry type. The interactions were not significant for income inequality or infant mortality. When examining industrial concentration's effect on the percent of female headed households by industry type in Graph 1 (see Appendix B), it is clear that the percent of female headed households increase with increases in industrial concentration in the manufacturing industry. Meanwhile, increases in industrial concentration in the

health, retail, and other industries resulted in declines in female-headed households, with health the steepest decline and other the least so. The hotel and extraction industries were not significant.

The effect of industrial concentrations on the burglary rate by industry type is shown in Graph 2 (see Appendix B). Here, it can be seen that the burglary rate declines with concentrations in all industries, but some industrial types showed more decline than others. The health industry type showed the steepest declines in burglary rates. Manufacturing demonstrated significantly less decline than the others. Extraction, hotel, and other were not significant.

Chapter 5: Conclusions

The purpose of my study was to answer three overarching questions, 1) are increases in industrial concentration associated with a reduction in the quality of life of residents in industrially concentrated areas? 2) what specific qualities, if any, are impacted at the county level? 3) are concentrations in some industries more detrimental than others? Industrial concentration, when examined alone, is associated with an increase in infant mortality, but it has no effect on inequality (Gini coefficient) or female headed households. Surprisingly, industrial concentration is also associated with a decline in the burglary rate. This suggests that some aspects of quality of life decline with industrial concentration, some are unaffected, and some actually improve. When industry type and other factors are accounted for, income inequality also seems to decline significantly with increased industrial concentration.

Further, manufacturing is associated with higher percentages of the of female headed households. Concentrations in other industries actually improve quality of life on that dimension. Second, manufacturing concentrations seem to be associated with a declining burglary rate, but the effect is less strong than for every other industry. Third, counties with high concentrations in anything but manufacturing quite often have a better quality of life than counties with lower concentrations. This is particularly interesting because manufacturing is the focus of preservation by the US government (US Department of Commerce 2004) and is also the most common industrial concentration in this study (1466 instances). Notably, manufacturing has declined over the years along with the

changing face of the American economy, and this must be taken into consideration (Dunne, Roberts, and Samuelson 1989). Essentially, manufacturing jobs are not what they once were. Manufacturing definitely requires further research to explain its role in affecting quality of life.

Overall, the results of this study weave an intriguing tale about industrial concentration. The burglary rate decrease could be explained by a lowered need to commit the crime itself. There is an established relationship between unemployment and burglaries over time (Reilley and Witt 2007), so it may be that the presence of jobs may account for the decrease in burglaries. However, this employment does not necessarily mean that the populace has a better socioeconomic position.

Industrial concentration is also associated with a decrease in income inequality. However, it may also mean that the entire population has lowered incomes. This also supports the argument that the days of company towns are at an end. Absentee ownership is continually on the rise, allowing owners to distance themselves from the companies they operate (Beck, Humphrey, and Firebaugh 2000; Veblen 1923). Thus, owners may be more likely to live in richer areas outside the county, removing themselves from the inequality measurement within the county. Notably, Beck, Humphrey, and Firebaugh (2000) found that companies run by absentee owners in their study were more likely to fail over time, which ties into the problem of concentrations owned under this arrangement.

The increases in infant mortality may also be explained by a decrease in income (shown as a decrease in inequality). Infant mortality is a measure of the

overall health of the population; thus, high levels of infant mortality reflect limited access to health care and/or high disease loads. It is entirely conjecture to argue this, but perhaps the lack of medical insurance, or rather the high expense of purchasing medical insurance, is to blame. If industries that are highly concentrated use their market position as the only employer in an area as a means of escaping providing insurance for employees, then the link between higher rates of industrial concentration and higher infant mortality can be explained. Essentially, in areas where the benefits of having a job *period* outweigh the benefits of waiting for a job that also has good benefits, companies may not be under the demand to provide the needs of their workers. Rather, they are only expected to give them a paycheck, nothing more.

Bibliography:

Anderson, Joan B. and Gerber, James. 2008. “Fifty Years of Change On the US-Mexico Border: Growth, Development, and Quality of Life.” Austin, TX: University of Texas Press.

Atkinson, A.B. 1970.“On the Measurement of Inequality”. Journal of Economic Theory, September 1970.

Bassuk, E.L, J.C. Buckner, L.F. Weinreb, A Browne, S.S. Bassuk, R Dawson, and J.N. Perloff. 1997. “Homelessness in female-headed families: childhood and adult risk and protective factors. American Journal of Public Health, Vol 87 Issue 2: 241-248.

Beck, Frank D. and Humphrey, Craig R and Firebaugh, Glenn. 2000. “The effect of absentee ownership on local employment change.” Sociological Focus, vol 33.4, pp 385-407.

Bowland, B. J. and Begin, J. C. 2001. “Robust estimates of value of a statistical life for developing economic.” J. Policy Model. 11.2, 385-396.

Bragg, Melody. 1995. *Thurmond and Ghost Towns of the New River Gorge*. Beaver, WV: Gem Publications.

Bullard, Robert D. 2000. *Dumping in Dixie: Race, Class and Environmental Quality*. Boulder, CO: Westview Press.

Caudhill, Harry M. 1962: *Night Comes to the Cumberlands*. Boston, MA: Little, Brown and Co.

Chen, David. 1997. “Tax Breaks Preserve Jobs” from New York Times, April 9. (http://query.nytimes.com/gst/fullpage.html?res=9A04E3D8143CF93AA35757C0A961958260). Retrieved August 10, 2008.

Cohen, R.D. 2006. “The Quality of Life in Patients with Crohn’s Disease.” Alimentary Pharmacology & Therapeutics, V16.9, Pp 1603 – 1609.

Dandaneau, Steve. 1997. *A Town Abandoned: Flint, Michigan Confronts Deindustrialization*. New York, NY: SUNY Press.

Dasgupta, Partha. 1998. "The Economics of Poverty in Poor Countries." Scandinavian Journal of Economics 100(1): 41-68.

De Vries, Pieter J. 1972. “From Plantation to Tourism: Social Change in Montserrat, West Indies”. Canadian Sociology and Anthropology Association (CSAA).

Diener, Ed. 1995. "A value based index for measuring national quality of life." Social Indicators Research, Volume 36, Number 2: pp 107-127.

---- and Diener, Carol. 1995. "The wealth of nations revisited: Income and quality of life." Social Indicators Research, Volume 26, Number 3: pp. 275-286.

Dobbin, Frank, and Dirk Zorn. 2005. "Corporate Malfeasance and the Myth of Shareholder Value". *Political Power and Social Theory*, vol. 17, pp. 179.

Dunne, Timothy, Roberts, Mark J, and Samuelson, Larry. 1989. "The Growth and Failure of U.S. Manufacturing Plants". Quarterly Journal of Economics (MIT). Volume 104:4, pp 671-98

Eller, Ronald. D. 1982. *Miners, Millhands, and Mountaineers: Industrialization of the American South, 1880-1930*. Knoxville, TN: University of Tennessee Press.

Feagin, Joe. 1998. *The New Urban Paradigm*. Lanham, Maryland: Rowman & Littlefield.

Fromm, Erich. 1973. *The Anatomy of Human Destructiveness*. New York, NY: Holt Paperbacks.

Gasper, Des. 2007. "Income-based measures of average well-being". From *Human Well-Being: Concept and Measurement*, edited by Mark McGillivray. New York, NY: Palgrave Macmillian.

Gaventa, John. 1982. *Power and Powerlessness: Quiescence and Rebellion in an Appalachian Valley*. Champaign, IL: University of Illinois Press.

Gilligan, Thomas. 1993. "Industrial Concentration." From Fortune's Encyclopedia of Economics edited by David Henderson. New York, NY: Warner Books.

Golub, A. Johnson, B.D., Eterno, J. 2003. "Quality-of-life policing: Do offenders get the message?" Plicing: An International Journal of Poice Strategies and Management, Vol 26 Number 4: pp 690-707.

Gupta, Mayra Buvinicand Geeta Rao. 1997. "Female-Headed Households and Female-Maintained Families: Are They Worth Targeting to Reduce Poverty in Developing Countries?" Economic Development and Cultural Change, 45:259.

Haworth, John and Hart, Graham J. 2007. *Well Being: Individual, Community, and Social Perspectives*. New York, NY: Palgrave Macmillan.

Hagberg, Kerstin. 2001. “Consequences of non-vascular trans-femoral amputation: a survey of quality of life, prosthetic use, and problems.” Prosthet Orthot Int, V 25.3: 186-194.

Kawachi, Ichiro, Kennedy, Bruce P, Wilkinson, Richard G. 1999. “Crime: social disorganization and relative deprivation.” Social Science and Medicine, Vol 48 Issue 6: pp 719-731.

Kennedy, Bruce P. , Ichiro kawachi, Roberta Glass, and Deborah Prothrow-Stith. 1998. “Income distribution, socioeconomic status, and self rated health in the United States: multilevel analysis. BMJ 317(7163):917.

Kildegaard, Arne, and Peter Williams. 2002. “The consequences to the banks of the collapse of money values.” From *Essays in Persuasion*. New York, NY: Harcourt Brace.

Kritz, Mary M., and Gurak, Doug. 2008. “ Foreign born destination choices: national origin and differences in dispersion.” Paper presented at annual meeting of Population Association of America, April 2008, New Orleans, LA.

Lee, Howard B. 1969. *Bloodletting in Appalachia*. Charleston, WV: West Virginia University Press.

Levine, Elie, Linda Degutis, Thomas Pruzinsky, et al. 2005.“Quality of Life and Facial Trauma: Psychological and Body Image Effects.” Annals of Plastic Surgery. 54(5):502-510

Linderer, Jeffrey A., Daniel E. Singer, Melissa van den Ancker, and Steven J Atlas. 2007. “Measures of health related quality of life for adults with acute sinusitis.” Journal of General Intestinal Medicine, Vol 18.5.

Maples, James N. 2007. “For Rent: A Political Economy Review of the New River Gorge.” Paper presented at annual meeting of Southern Sociological Society, April 2007; Atlanta, Georgia.

Marans. R. W. 2003. “Understanding Environmental Quality through Quality of Life Studies: The 2001 DAS and its use of Subjective and Objective Indicators.” Landscape and Urban Planning 65 (2003) 73-83.

Marcouiller, David W., Kwang-Koo Kim and Steven C. Deller. 2004. "Natural Amenities, Tourism and Income Distribution " Annals of Tourism Research 31.

Matteson, Donald W, Burr, Jeffrey A, and Marshall, James R. 1998. “Infant mortality: A multi-level analysis of individual and community risk factors.” Social Science & Medicine, Volume 47 Issue 11, pp 1841-1854.

McGillivray, Mark (editor). 2007. *Human Well-Being: Concept and Measurement*. New York, NY: Palgrave Macmillian.

Michalos, A. C., & Zumbo, B. D. 2002. "Quality of Life in Quesnel, British Columbia." Edgeworth Series in Quantitative Educational and Social Sciences 1.

Miller , TR, Cohen MA, Rossman SB Victim costs of violent crime and resulting injuries. Health Aff 1993; 12:186-197

Morris, M.D. 1979. *Measuring the Condition of the World's Poor: The Physical Quality of Life Index*. New York, NY: Pergamon Press.

Nussbaum, Martha and Sen, Amartya. 1993. *The Quality of Life*. Oxford,UK: Oxford Press.

---. 2000. *Women and Human Development: The Capabilities Approach*. Cambridge, UK: Cambridge Press.

Ortega, L. 1999. "Industrial Concentration and Performance: A Study of the Structure, Conduct, and Performance of Indian Industry." Review of Industrial Organization, Volume 14, Number 1, pp. 91-94.

Pamuk, Elsie R. 1988. "Social-class inequality in infant mortality in England and Wales from 1921 to 1980." European Journal of Population, Vol 4 Number 1, pp 1-21.

Park, Jiyeon, Ann P Turnbull, and H Rutherford Turnbull III. 2002. "Impacts of Poverty on Quality of Life in Families of Children with Disabilities." Exceptional Children, Vol 68.2, Pp 151-170.

Phillimore, Peter, Patricia Bell. 2005. *Trust and Risk in a German Chemical Town."* Ethnos 71:1.

Reilly, Barry, and Witt, Robert. 2008. "Domestic burglaries and the real price of audio-visual goods: Some time series evidence for Britain." Economics Letters, Volume 100, Issue 1, July 2008, pp 96-100.

Reisig, M. D., & Parks, R. B. 2000. "Experience, quality of life, and neighborhood context: A hierarchical analysis of satisfaction with police." Justice Quarterly, 17, 607-630.

Schipper, H. J Clinch, A McMurray, and M Levitt. 1984. "Measuring the quality of life of cancer patients: the Functional Living Index-Cancer:

development and validation." Journal of Clinical Oncology Vol 2, Pp 472-483.

Shafer, C. Scott, Boong Koo Lee, and Shawn Turner. 2000. "A tale of three greenway trails: user perceptions related to quality of life." Landscape and Urban Planning, V 49.3-4, Pp 163-178.

Sirgy, M. Joseph, 2002. *The Psychology of Quality of Life*. Dordrecht, The Netherlands: Kluwer Academic Publishers.

Sirgy, M Joseph, Don Rahtz, and A Coskun Samli. 2003. *Advances in Quality-of-Life Theory and Research*. Boston, MA: Kluwer Academic Publishers.

Sirgy, Joseph M, and Rahtz, Don. 2004. *Community Quality-of-Life Indicators: Best Cases*. Dordrecht, Netherlands: Kluwer Academic Publishers.

Stockwell, Edward G., Franklin W. Goza and Jack L. Roach. 1995. "The relationship between socioeconomic status and infant mortality in a metropolitan aggregate, 1989–1991." Sociological Forum, Volume 10, Number 2 / June, 1995.

US Department of Commerce. 2004. "Manufacturing in America: A Comprehensive Strategy to Address the Challenges to US Manufacturers." Available online at http://www.trade.gov/media/publications/pdf/manuam0104final.pdf . Accessed October 28,2008.

Veblen, Thorsten. 1923. *Absentee Ownership: Business Enterprise in Recent Times: The Case of America*. New York, NY: B.W. Huebush/Viking Press.

World Bank. 2004. *2004 World Development Indicators*. Washington D.C: World Bank.

Appendix A: Tables

Table 1: Correlation between Infant Mortality, Female Headed Households, Number of Burglaries, and Gini Coefficient

	Infant Mortality	Female Headed Households	Number of Burglaries	Gini Coefficient
Infant Mortality	1.00	-	-	-
Female Headed Households	.1874***	1.00	-	-
Number of Burglaries	-.0004	.1599***	1.00	
Gini Coefficient	.0221	.5254***	.0180	1.00

***p<.001

Table 2: Average Infant Mortality, Female Head of Household, Number of Burglaries, and Gini Coefficient by Industry Type

	Manufacturing n=1466	Hotel n=113	Extraction n=100	Health N=566	Retail n=709	Other n=151	Total n=3051
Infant Mortality	7.455 (6.370)	6.496 (7.609)	6.452 (7.533)	6.879 (7.660)	6.921 (7.473)	5.126[ab] (7.835)	7.007 (7.004)
Female Head of Household	13.662 (5.295)	12.185 (5.892)	12.918 (5.848)	12.761 [a] (6.040)	12.145 [a] (4.465)	11.956 [a] (7.184)	13.203 (5.208)
Number of Burglaries	79.604 (392.216)	82.194 (372.423)	96.48 (337.667)	74.784 (179.810)	87.917 (271.510)	57.828 (144.570)	80.345 (325.427)
Gini Coefficient	41.2 (6.0)	41.5 (6.7)	42.7 (4.4)	42.0 (6.8)	41.3 (6.6)	40.1 [cd] (9.9)	42.07 (3.718)

NOTE: Standard deviation in parentheses.
[a] Different from manufacturing-dominated counties (p<.05)
[b] Different from retail-dominated counties (p<.05)
[c] Different from extraction-dominated counties (p<.05)
[d] Different from health-dominated counties (p<.05)

Table 3: Impact of Industrial Concentration on Infant Mortality, Female Head of Household, Burglaries, and Gini Coefficient
(OLS regression coefficients shown, standard error in parenthesis)

	Infant Mortality	**Female Head of Household**	**Number of Burglaries**	**Gini Coefficient**
	Model 1	**Model 2**	**Model 3**	**Model 4**
Industrial Concentration	14.063*** (3.849)	.285 (2.356)	-3.558*** (.627)	0356 (1.328)
Constant	7.342 (.503)	12.892 (.557)	3.843 (.297)	.420 (.005)
R^2	.0001576~	0.00	.0588	0.00
n	2353	3099	3095	3051
F	n/a	.01	.32.23***	.07

* =.05, **= .01, ***=. 001
~ truncated, estimated R2

Table 4: Impact of Industrial Type on Infant Mortality, Female Head of Household, Burglaries, and Gini Coefficient

(OLS regression coefficients shown, standard error in parenthesis)

	Infant Mortality	Female Head of Household	Number of Burglaries	Gini Coefficient
	Model 1	**Model 2**	**Model 3**	**Model 4**
Health	4.155** (1.468)	-.946 (.623)	-.570** (.213)	.888 (487)
Hotel	1.588 (1.872)	-1.466† (.731)	-.748** (.271)	0.379 (.513)
Retail	.0923 (.939)	-1.520** (.534)	-.317 (213)	0.210 (.448)
Extract	3.933* (1.801)	-.733 (.919)	-1.004*** (.218)	.861 (.610)
Other	3.189 (2.176)	-1.696† (.847)	-.988*** (.278)	0.089 (.526)
Manufacturing	-	-	-	-
Constant	8.646 (.302)	13.651 (.711)	3.114 (.170)	41.81 (.447)
R^2	.0014409~	.0158	.0330	.0086
n	2353	3099	3095	3051
F	n/a	1.80	8.94***	1.65

* =.05, **= .01, ***=. 001
~ truncated, estimated R2
† marginally significant .051

Table 5: Impact of Industrial Concentration on Infant Mortality, Female Head of Household, Burglaries, and Gini Coefficient, Full Model

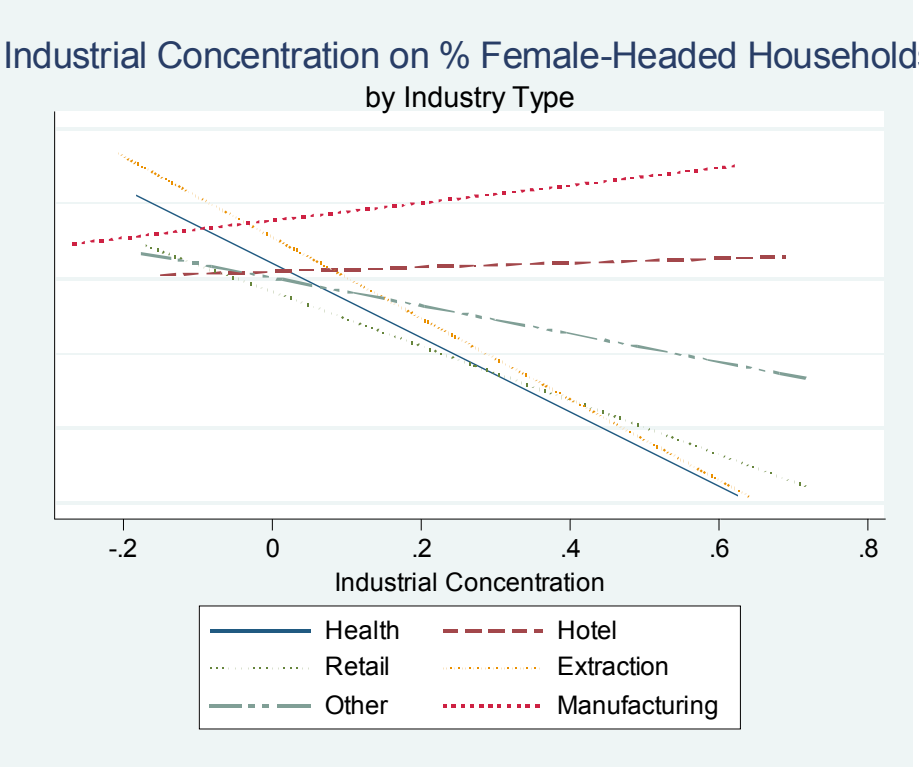
(OLS regression coefficients shown, standard error in parenthesis)

	Infant Mortality	Female Head of Household	Number of Burglaries	Gini Coefficient
	Model 1	**Model 2**	**Model 3**	**Model 4**
Industrial Concentration	6.829** (2.579)	-.841 (.836)	-2.158*** (.325)	-2.913*** (0.511)
Health	3.750*** (.695)	-1.370*** (.379)	-.482*** (.121)	-0.1 (0.168)
Hotel	3.439*** (1.363)	-1.519** (.484)	-.807** (.307)	.662 (0.332)
Retail	1.603** (.676)	-1.854*** (.300)	-.573** (.189)	-0.124 (0.191)
Extract	4.280** (1.373)	-2.016** (.719)	-1.191*** (.280)	0.231 (0.336)
Other	4.987*** (1.306)	-1.519*** (.414)	-.992*** (.139)	0.073 (0.330)
Manufacturing	-	-	-	-
Dependency	.197*** (.025)	-.109*** (.018)	-.400*** (.005)	-0.021* (0.009)
Educational Attainment	-.119** (.041)	.005 (.045)	-.014 (.012)	-0.039** (0.014)
Percent Below Poverty Line	.194*** (.043)	.435*** (.055)	-.002 (.011)	0.355*** (0.020)
Unemployment Rate	-.458*** (.094)	.277*** (.080)	.065** (.024)	-0.103** (0.047)
Metro status in 2000	-2.625*** (.654)	2.50*** (.259)	.939*** (.124)	0.201 (0.160)
Population in 2000	-.002* (.001)	.005*** (.001)	.003*** (.001)	0.001** (0.004)
Constant	4.078 (4.723)	11.310 (4.670)	6.770 (1.134)	41.83 (1.575)
R^2	.03827415~	.5584	.4496	.5641
n	2353	3099	3095	3051
F	n/a	49.09***	91.12***	99.82***

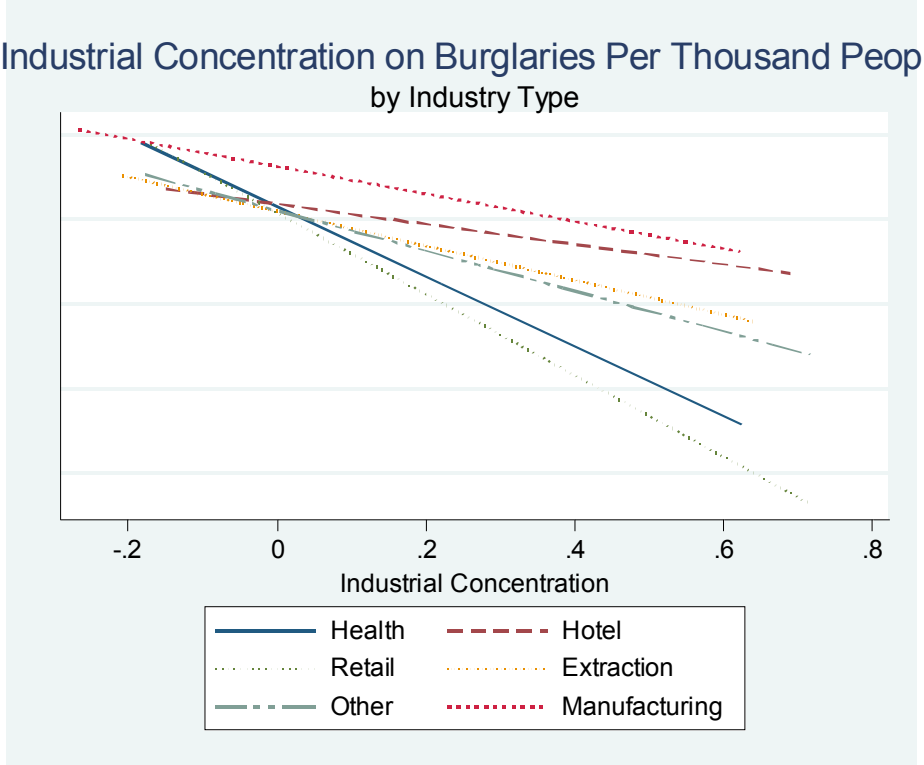
* =.05, **= .01, ***=. 001 ; ~ truncated, estimated R2

Appendix B: Figures

Graph 1: Interaction between Industrial Concentration and Female-Headed Households by Industry Type



Graph 2: Interaction between Industrial Concentration and Burglaries per Thousand People by Industry Type



James N. Maples

Degrees Received

- BA in Philosophy, The University of Tennessee 2006 (Magna Cum Laude)
- BA in Sociology, The University of Tennessee 2006 (Magna Cum Laude)

Service to the Profession

- Electronic Communications Coordinator and Webmaster, Southern Sociological Society, 2007-2011.
- Computer Liaison, Sociology Department at The University of Tennessee, 2006-2008.
- Sociology Representative on the Arts and Sciences Dean's Student Advisory Council, University of Tennessee, 2006.

Research Grants and Scholarships

- Summer Undergraduate Research Internship, University of Tennessee, 2006. Research Topic: "Schumpeterian Economics and Creative Destruction, with a Focus on the Television and Restaurant Industries." Research supervised by Dr. Harry F Dahms (The University of Tennessee) and Associate Vice Chancellor of Research Dr. W.F. Harris (The University of Tennessee)
- Conference Scholarship, Appalachian Studies Association, 2007.

Awards

- Sociology Student Special Mention Award, Sociology Department at The University of Tennessee, 2006.

Professional Associations

- Southern Sociological Society 2006-2008
- Southern Demographic Association 2008

Presentations

- 2008
  "The Potential Impact of Industrial Concentration on Quality of Life." Paper presented at the annual meeting of Southern Sociological Society. April 2008; Richmond, Virginia.
- 2007
  "The Role of Erich Fromm in Political Economy." Paper presented at the

annual Middle Tennessee State University Symposium, November 2007; Murfreesboro, Tennessee.

"Tourism and Industrial Concentration." Paper presented at the annual meeting of the Appalachian Studies Association. April 2007; Maryville, Tennessee.

"For Rent: A Political Economy Review of the New River Gorge." Paper presented at annual meeting of Southern Sociological Society, April 2007; Atlanta, Georgia.

- 2006
  "The Effects of Resource Exhaustion in the New River Gorge." Paper presented at annual Middle Tennessee State University Symposium, November 2006; Murfreesboro, Tennessee.

Presider

- 2008
  Southern Sociological Society Annual Meeting. Paper Session 128: Quality of Life.

Conferences Attended without Presenting

- Southern Demographic Association Annual Meeting, October 2008. Greenville, South Carolina.

Non-Academic Honors

- Eagle Scout Rank: Boy Scouts of America, 1996.