

ABSTRACTS AND TITLES OF STUDENT WORK

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Ph.D. Dissertations

The Spatial Dynamics of the U.S. Computer Software Industry
Edmund Alfred Egan, 1997

This dissertation develops a theory of the changing locational orientation of the computer software industry in the United States, and tests the theory for the years 1977-1992. The research accepts the fundamental premise that the locational dynamics of industry are driven by technological change, and aims to uncover the reasons for, and trends in, technological change through a detailed historical analysis of the industry, and then theoretically relating these trends to locational changes.

In this context, Chapter 4 develops a history of independent industry, with a particular focus on the rise and fall of IBM as the dominant force in software. Chapter 5 consolidates the findings of the previous chapter in an analytical vein: the emergence of an independent software industry was an institutional innovation, closely tied to the development of microprocessor, which permitted the full realization of the increasing returns inherent in packaged software, and thus dramatically reduced the cost of software development specific to a variety of industries and other social domains.

Chapter 6 develops the locational theory that this transformation of the "software bottleneck" tends to favor locations which are concentrations of major users of computer software, since these centers will have special competence in the many specialized fields for which new software will be developed. This theory is tested through a path analysis multiple regression, calibrated at four points in time from 1977 to 1992. The model confirms the hypothesis that the software industry employment is tending to drift toward user centers and away (in relative terms) from computer hardware and semiconductor centers. The model includes local wages as a correcting variable, and produces the interesting result that the industry is moving towards high wage areas, in direct contradiction to the product life-cycle model of industrial maturation.

Finally, the conclusion develops the theoretical hypothesis that computer software functions as a "medium for the expression of intellectual labor," and argues that the emergence of an independent software industry has critical implications for urban and regional development policy in a knowledge-based economy.

Income, Race, and Space: A Comparative Analysis of the Effects of Poverty Concentration on White and Black Neighborhoods in the Detroit and Pittsburgh Metropolitan Areas

Karen Joyce Gibson, 1996

This dissertation provides a comparative analysis of the spatial distribution of poverty among the white and black populations in the Detroit and Pittsburgh metropolitan areas using the 1990 Census. Unlike most poverty research, both the white poor and suburban areas are investigated in an attempt to untangle the effects of space (poverty concentration) from the effects of race (housing and job discrimination) on the socioeconomic characteristics of the population. The hypothesis that the white poor have better life chances than the black poor because they do not live in concentrated poverty is tested.

The findings suggest that white and black neighborhoods with poverty rates between 20% to 40% share many socioeconomic characteristics. The intra-racial comparison reveals that characteristics typically labeled "pathological" and associated with black culture are associated with class, i.e., the percentage of married family households is lower and the percentage of single-parent households is higher in both poor white and black neighborhoods.

The inter-racial analysis reveals that even when poverty and educational attainment levels are held constant, black unemployment rates are significantly higher than white unemployment rates. This is contrary to William Julius Wilson's hypothesis that the lack of role models contributes to high black unemployment: the greatest racial disparity in the unemployment rate is found in low poverty tracts where role models are most numerous. The severe detachment from the labor market that African-Americans experience, especially residents of high poverty tracts, is much greater in scope than the detachment in white high poverty tracts: these tracts comprise 40% of all black tracts compared to less than 2% of all white tracts.

Poverty concentration is associated with unemployment, low educational attainment, and single parent families, regardless of race. In Pittsburgh, low wage employment is also a factor.

Evidence of segregation by education and income in black Detroit supports the hypothesis that the absence of a black middle class helps create the "underclass". More case studies which examine the interplay between race and class are needed.

Policies which spatially disperse the poor are not enough; removal of labor market barriers on both the demand and supply sides is necessary.

Serving My People: Cultural Competence in Human Services
David Wiley Camp, 1997

This dissertation explores the topic of cultural competency in the planning and delivery of human services to African-Americans. It examines how service providers, managers, and experts in cultural competence define aspects of black culture that are relevant to their work, and how they articulate the requirements of both providers and organizations for culturally competent service delivery.

The research relies primarily on in-depth interviews with 42 informants, of whom 40 (95%) are black. The interviews were gathered in five groups for analysis. Three of the groups represented particular human service organizations (HSOs); a fourth group was comprised of specialists in community development; a final fifth group comprised people considered experts in cultural competency. The major themes from each of these groups were distilled, and are presented in separate chapters. In addition, the findings of the entire group of interviews were tallied, and the overall themes are discussed.

There was remarkable agreement among the informants and between informant groups on a variety of points about culturally competent services. Organizations serving black clients should explicitly respond to these clients': 1) tendency to be particularly skeptical toward social service providers, and 2) common orientation toward religion and/or spirituality. One important tactic for improving cultural competence is to hire black service providers, because their styles of interacting with black clients often undermine client skepticism. Another important strategy for providers and HSOs is to integrate an understanding of current and historical conditions of blacks populations into their efforts to motivate individual clients. At the program design level, service planners should construct mechanisms to explicitly address self-esteem challenges that are specific to black people.

The prioritization of cultural competence by an organization is affected both by the management's personal interest in the topic and by the organization's service mandate. Specifically, an organization mandated to serve clients of diverse ethnicities can face additional

impediments in responding to black-specific issues. An additional important finding is that although managers in disparate organizations may have different ideologies about black people, they often have quite similar definitions of culturally competent services.

Building Neighborhood and Local Emergency Capability: The Role of Community-Based Disaster Preparedness Programs
David Michael Simpson, 1996

Communities in California face a classic planning problem: dealing with certain events that will occur at an uncertain time in the future. The problem in this case is natural disasters, and specifically earthquakes. California is considered "earthquake country," with communities in the urban regions of San Francisco and Los Angeles at high risk for damaging earthquakes, some potentially catastrophic.

The recurrence of earthquakes in California has created a new form of disaster preparedness, based on community self-reliance rather than local or state governments as the initial responder. These community-based programs have taken shape in several ways, but the most successful among them integrate earthquake preparedness activities at the neighborhood block level.

This dissertation examines the emergence of community-based disaster preparedness programs in general, creating a typology of community-based programs. It also focuses on one program in particular. With 70% of its neighborhoods participating in its earthquake preparedness program, the City of Albany was chosen for a more thorough examination. Earthquake preparedness activity data from over 700 Albany households were compared to a control city, and the San Francisco Bay Area. In-depth interviews with 54 key informants, or block leaders, in the program provide insight at the block level, and provide a means of organizational comparison among the different blocks.

At the household level, the research shows that neighborhood-based disaster preparedness programs can have a significant positive impact on household earthquake preparedness, indicating higher levels of preparedness activity when compared to a control city without a program, as well as a random sample of the general population in the region. At the neighborhood block level, the program can dramatically alter the interaction that takes place on the block, and transform the quality of life as perceived by the residents. These results are traced to the effectiveness of peer networks and the creation of an accepting environment, a "preparedness community," that makes discussion and action regarding earthquake preparedness a part of the community culture.

The research demonstrates that community-based disaster preparedness programs, if targeted to the neighborhood block level, can be an effective means of increasing the capability of individual and neighborhoods to respond to emergencies. The program further serves as a catalyst for increased interaction and shared activity, and neighborhood residents report that they feel a greater sense of community.

From Fortress Japan to Global Networks: Locational Specificity of Globalization for the Japanese Electronics Industry in the 1990s

Yuko Aoyama, 1996

The globalization of Japanese industries has become a pervasive trend, particularly since the mid-1980s. While there are abundant studies on successful Japanese industries in business and management, few studies exist within the realm of economic geography that provide an empirical analysis on the activities of Japanese firms at the global level. In this dissertation I argue that the current industrial location at the global level is best described as the simultaneous process of decentralization and agglomeration. The results of my research show that the process of globalization is by no means random. Economic activities that have gone beyond political boundaries have been agglomerating in a selected set of locations.

Evidence used in this dissertation includes a up-to-date database of 3,200 overseas establishments of the Japanese electronics industry in North America, Europe and Asia. This database contains essential information on each establishment, including the date of establishment, function, types of products, ownership and keiretsu information, and when available, the location of their suppliers and markets. I constructed this database using multiple data sources in order to ensure a comprehensive coverage. In addition, interviews were conducted with Japanese executives in Japan and overseas, to better understand corporate decision making process and locational strategies.

In the case of the Japanese electronics industry, overseas establishments do not necessarily concentrate in what are considered low-cost locations of the world. Instead, it has a tendency to agglomerate in already existing industrial districts and reinforce their strengths. In Europe, the Japanese electronics industry in all activities (consumer, industrial or components) concentrates in Germany up to the mid-1980s, and more recently the bulk of investment has shifted to England. Lower cost locations such as Ireland and Spain have not attracted significant Japanese investment in this sector. In North America, high cost California attracts the

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overwhelmingly disproportionate share of investment. In Asia, most Japanese investments are directed toward Taiwan, Singapore, Hong Kong and Malaysia.

These findings suggest that globalization has not made geography meaningless. Firms remain selective in deciding their choice of locations, and production cost is not the sole driving factor toward globalization in the 1990s. The rising importance of Asian markets matched by the sluggish growth of European and North American markets have influenced the decisions of Japanese electronics industry to establish operations in Asia.