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ECONOMIC DEVELOPMENT AND COMMUNITY SOCIAL CHANGE

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Abstract

There is growing recognition that economic development in advanced industrial societies involves massive capital migration from one industrial sector to another, from one community to another, and even from one nation to another. Economic development is a continual process of opening new areas, spatially and sectorally, while closing others. Development projects in rural communities provide a timely and valuable laboratory in which to learn how the restructuring of advanced industrial societies affects local social structures. This chapter extracts and reviews what has been learned from studies of communities coping with rural industrialization and natural resource development, especially large-scale projects. Particular attention is given to changes in employment patterns, income, population, agriculture, local businesses, and public sector costs and revenues. The findings reveal an underlying tension between the free movement of capital, on the one hand, and community stability and worker welfare, on the other hand. The authors conclude that local social changes are integral elements of external processes of economic development. They may be understood by directing attention to the spatial patterns of social, economic, and political inequality and to the mechanisms that generate and sustain unevenness.

INTRODUCTION

Between 1970 and 1979, the number of manufacturing jobs in nonmetropolitan US counties increased 23.9%, while those in metropolitan America grew only

3.9%. Regionally, over the same period manufacturing employment in the South and West increased at a much faster rate than in other regions, especially in nonmetropolitan counties (30.2% in the South and 62.3% in the West).¹ Spatial decentralization of manufacturing activity like this is a common experience among advanced industrial nations and includes both relocation in less developed countries and "rural industrialization."

Reflecting the thrust toward greater energy independence following the Organization of Petroleum Exporting Countries' (OPEC) actions in 1973, mining and mineral extraction employment in the United States, Canada, Norway, and Australia rose (Ypsilantis 1983). The future is certain to include the introduction of many large-scale energy and other resource-related development projects, which are almost always located in rural areas; the technology of advanced industrial and "postindustrial" nations demands this.

Several factors make these two forms of economic development—rural industrialization and resource exploitation—worthy of attention, even though extractive and manufacturing activities account for a declining share of employment in postindustrial nations.

Large-scale development projects in rural communities provide a timely and valuable laboratory in which to examine some of the processes of economic development in postindustrial nations. There is often a striking contrast between the size of these large development projects and the relatively small host communities, especially during the construction phase; the project work force is often 10 to 20 times larger than the indigenous population. Community residents have little, if anything, to say about the appearance of these forms of new industry on their village green. Although environmental protection legislation requires impact assessments and mitigation strategies, projects are rarely cancelled because of objections by host community residents. Local—and sometimes state—officials are unable to cope effectively with the exigencies of such projects. This paper is an attempt to extract and synthesize some of what has been learned from studies of rural industrialization and resource-based communities.

RURAL INDUSTRIALIZATION²

Since 1790 when 95% of our population lived outside urban areas, we have come to the point where three fourths of our people are urbanites. This transformation is a product of the movement of people into cities—especially in

¹These figures were computed by Claude Haren (US Department of Agriculture) and reported in Smith & Deaton (1980).

²This section quotes extensively from Summers (1977), and sections are reproduced with the permission of the editor of the *Journal of the Community Development Society*.

the years since the Great Depression. The result is a heavy concentration of population in existing metropolitan areas, which are burdened with economic and social problems that some people characterize as an "urban crisis." At the same time, many of the people left behind in rural areas find themselves in pockets of poverty that are plagued by economic stagnation and social decay.

Some architects of public policy view locating industry in small towns, cities, and rural areas as an important tool in our efforts to solve these twin problems of rural poverty and urban crisis. In fact, industrial relocation is regarded as a primary instrument for achieving the policy goals set forth in recent federal legislation. For example, its use was explicitly mandated in the Economic Opportunity Act of 1964, the Public Works and Economic Development Act of 1965, the Appalachian Regional Act of 1965, and the Rural Development Act of 1972.

The apparent logic behind this interventionist strategy is fairly simple. Rural poverty and urban problems are seen as products of a geographic mismatch between labor supply and demand generated by declining economic opportunities in rural areas and growing possibilities in urban areas. To correct this imbalance, it is asserted, it is necessary to stimulate economic activity in rural areas and thereby increase both the number and types of employment opportunities. It is presumed that job creation will lead to higher incomes, population redistribution, housing improvements, better community services and facilities, and other amenities. In order to achieve this economic stimulation, capital investment in nonmetropolitan areas and in those sectors of the economy with the strongest multiplier effects is needed. Economic theory would suggest that these development objectives can be achieved by expanding "export" industries in nonmetropolitan communities.

To assess the empirical validity of this view, documents on 186 case studies conducted between 1945 and 1973 were reviewed (Summers et al 1976). In all, 728 manufacturing plants in 245 locations in 34 states were studied. The majority of the study sites were in the Midwest and the Southeast, although all sections of the nation were represented.

Employment and Income

Establishing rural industries is expected to have substantial positive effects on employment opportunities in two ways: first, through the direct hiring of workers from the indigenous labor force, and second, through the indirect, or multiplier, effects on employment in other sectors of the local economy.

Obviously, opening a plant creates new employment opportunities. The important questions are (a) Who gets the new jobs? (b) How is unemployment affected? (c) What are the local multiplier effects? (d) How is real individual and family income altered by the creation of these new jobs? (e) How is

population distribution affected? and (f) How are local government finances affected?

THE DISADVANTAGED UNEMPLOYED As a policy objective, one would hope that new workers would be recruited from the ranks of the local, disadvantaged residents—i.e. the unemployed, the poor, and members of racial minorities—but this seldom happens. In the majority of cases examined, only a small proportion of the jobs were filled by previously unemployed persons. The proportion was above 14% in only 3 instances (Wadsworth & Conrad 1966, Miernyk 1971, Paden et al 1972) and over half the studies report hiring rates below 10% (Arkansas Department of Labor 1958, Miernyk 1971, Paden et al 1972, Shaffer 1972).

We found only one study that examined the hiring of workers from the poverty ranks: John Kuehn and Associates studied 26 new plants in development areas of Arizona, southern Appalachia, the Mississippi Delta, and the Ozarks (Kuehn et al 1972). In southern Appalachia and the Ozarks, nearly 20% of the jobs were filled by persons previously below the poverty level. In the Mississippi Delta and in Arizona, almost 50% of the new hires were from the ranks of the poor.

Considerable evidence shows that nonwhites are underrepresented in the labor forces of new nonmetropolitan industrial plants (Bertrand & Osborne 1959, McElveen 1970, Wilber & Maitland 1963, Till 1972, Walker 1973, Abt Associates, Inc. 1968). When they are hired, they are concentrated in unskilled and semiskilled jobs. This pattern may indicate that local nonwhites do not have the necessary skills, that hiring practices are discriminatory, or a combination of the two. The high-skill, high-wage industries that are most likely to increase a community's aggregate income are least likely to hire the local disadvantaged; low-skill, low-wage industries are more likely to employ them.

REASONS WHY THE DISADVANTAGED ARE NOT HIRED The reasons behind the low number of new jobs filled by the unemployed, the poor, and members of racial minorities are not difficult to discover, for they are mentioned repeatedly in the case studies and background literature. First, the new employment opportunities created by the establishment of a plant often benefit workers from outside the immediate area—they either commute or move into the community. Second, jobs are also occupied by new entrants into the labor force from within the community, primarily women. We have seen that many rural industries, particularly in textiles and electronics assembly, use female labor. The income from these jobs may go toward replacing that of an unemployed or underemployed male within the same family, but this employment does not eliminate the number of unemployed persons in the area. In general, the studies show that local labor markets operate in ways that often work against the

employment of the very people who were supposed to benefit from rural industrial location (Abt Associates Inc. 1968; Bryant 1969; L. Bender et al 1971, 1973; Jordan 1967; Miernyk 1971).

The rate of unemployment declined in approximately two thirds of the case studies examining this variable (Brady 1974, Brann 1964, Crecink 1970, Davis 1963, Funk 1964, Garrison 1967, Jordan 1967, MacArthur & Coppedge 1969, Shaffer 1972, Stevens & Wallace 1964, Walraven 1962, Yantis 1972). The decreases were quite small, however, relative to the magnitude of the unemployment rates. The most positive effects on unemployment were found where multiple plant locations were involved (Garrison 1967, Pray 1965, Shaffer 1972, Yantis 1972).

The creation of manufacturing jobs does generate employment in other sectors of the local economy. But the local multiplier effect is considerably smaller than one would expect based on the literature published by promoters of "industrial development" (Chamber of Commerce of the United States 1960, 1968, 1973). The small increases in secondary employment result from three factors: the presence of considerable underemployment, the underutilization of existing facilities, and the dispersion of direct effects through commuting and area-wide trade patterns (cf. 14 studies cited in Summers et al 1976:54-59). It also may be due to the forward and backward linkages of many plants locating in nonmetropolitan areas (W. H. Andrews & Bauder 1968, Davis 1963, Garth 1953, I. Gray 1969, Hoover (n.d.), Johnson 1960, Klimasewski 1974, McArthur & Coppedge 1969).

For the most part, these case studies support the expectation that the arrival of new industry will have a positive impact on real income by increasing per capita or median family income (cf. 18 studies cited in Summers et al 1976:62-68). If one examines the distribution of the increment among local residents, however, the evidence of positive effects is less clear. Industrial location may raise the aggregate or average income in an area, while simultaneously depressing the relative economic status of certain segments of the population in the community—the elderly or minority groups, for example (Abt Associates, Inc. 1968, Beck, Personal communication, 1975, Beck & Madans 1975, Shaffer 1974, Summers & Clemente 1973, Till 1972).

Nevertheless, some of the increase in income is expected to flow through local market sectors—real estate, retail sales, utilities, and other consumer- and service-oriented markets (Isard 1960, Palmer et al 1958, Pfouts 1960). The studies certainly support this expectation. Additional manufacturing jobs in a community clearly do lead to new home construction (W. H. Andrews & Bauder 1968, Daoust 1954, Davis 1963, Debes 1973, Garth 1953, Merrill & Rayther 1961, Miller 1967, Uhrich 1974). But it is equally apparent that the number of new homes a community may expect for a given number of new jobs cannot be predicted with any degree of certainty. Expansion of commercial and

industrial property in the host community, in contrast, seems to have been minimal. This is probably due to underutilization of existing facilities, income leakages in consumer markets, and backward and forward industrial linkages (R. B. Andrews et al 1959, Daoust 1954, Davis 1963, Garrison 1972, Garth 1953, Helgeson & Zink 1973, Miller 1967, Wadsworth & Conrad 1966). If one turns from the actual physical growth of real estate inventory to its market value, the impact of industrial development is greater and more consistent—at least in the short run. No less than 11 studies found increases in the assessed valuation of real estate, while none report decreases.

In retail markets, sales volume clearly increased after new industries opened in the area. The 9 relevant studies do not identify precisely what portion of the increase can be directly attributed to the outputs of new industry, however. That is to say, direct, indirect, and induced sales are not disaggregated to permit a careful assessment of the mechanism through which new industry affects retail markets. Nevertheless, it is apparent that gains in sales activity are associated with industrial plant location (Andrews et al 1959, Andrews & Bauder 1968, Daoust 1954, Hagerman & Braschler 1966, Merrill & Rayther 1961, Miller 1967, Stevens & Wallace 1964, Wadsworth & Conrad 1966, Wilson 1965). These indications of increased activity in the private sector are consistent with the expectations of growth in aggregate income and of money flows into the local economy.

Population

One of the common predictions about the introduction of industry into small towns is that it will counter the decline in population that many rural areas have experienced. Population in the host community grew in a clear majority of the 58 studies documenting demographic changes in towns, counties, and regions after industry became established (Summers et al 1976 Chap. 4). In all others, the population at least stabilized; no reports showed further population decline after a new plant location.

The initial source of population growth appears to be increased in-migration coupled with unchanged or declining out-migration. Contrary to the popularly held belief that having more industry will eliminate the need for people—especially the young—to leave their hometown in search of work, new plant location has only a minor impact on out-migration. It is also important to note that the majority of people who moved in came no further than 50 miles; those who did come from greater distances were often managerial or technical personnel. These findings are significant because they indicate the effectiveness of industrial location as a technique for achieving a better balance between urban and rural populations.

As one might expect, the amount of population growth is a function of the size of the new plants' work force. The growth potential of the new work force

in the host community is often weakened, however, by the commuting behavior of nonmetropolitan industrial workers. Home-to-work trips in excess of 50 miles are not uncommon among these workers, and intercounty commuting is the rule in many cases. In the long run, though, many workers either move closer to their work or change jobs (cf. Summers et al 1976:33-37).

Employers prefer younger workers, although in some instances skill gained through experience may be competitive with youth. This fact has a direct bearing on the finding that nonmetropolitan industrial workers have larger households than the local area residents generally (W. H. Andrews & Bauder 1968, Beck et al 1973, Christiansen et al 1959, Kaldor et al 1964, Osborne 1959, Sizer & Clifford 1966). Being younger, they are more likely to be in the child-bearing and child-rearing stages of the family cycle. The implications of this pattern for future population growth are quite important but generally ignored.

There is virtually no evidence showing that new manufacturing industry increases the level of educational attainment in the host community. Where such an increase does occur, it appears to be caused by changes in the age structure; younger adults have generally completed more years of schooling. Thus, the presence of industrial employment opportunities does not seem to motivate more than a few persons to return to school and further their education, even though educational opportunities are available locally in many instances (cf. Summers et al 1976:44-46).

The Public Sector

Many public officials want manufacturing plants to move into their areas because they believe it will ease the fiscal crisis in smaller communities. Their enthusiasm rests on the notion that new industries will enlarge the existing tax base; growth in the aggregate real value of property is seen as the key to the hoped for relief. Moreover, it is believed that industry will generate public revenues through other routes as well (Hirsch 1961, 1967, 1969).

The case studies show, however, that increases in the fiscal base of the local community are often outweighed by the higher costs of providing services to both the new industry and the expanding community (Garrison 1967, 1970, 1971; Shaffer 1972; Shaffer & Tweeten 1972, 1974; Uhrich 1974). Local governments do experience net fiscal gains in some cases, usually when (a) no local subsidy is offered to the industry, (b) a high proportion of the plant work force is hired locally, and/or (c) large proportions of the plant work force continue to live outside the host community and commute to work. Where the arrival of industry has been accompanied by population growth, it has often strained existing basic-service delivery systems. These findings suggest that population growth may be viewed as a cost to the public sector, whereas increases in disposable income are properly seen as benefits. Thus, from the

public sector perspective, net gains can be maximized by attracting industries that have a minimal impact on the population while contributing to the local disposable income or where the property value of the plant per worker is very high—e.g. nuclear generating facilities have had very positive effects on fiscal balances in many places.

Summary

These studies generally lend support to the belief that industrial location in rural communities can generate employment, population growth, and economic prosperity in the area. They also show, however, that the benefits neither come automatically nor apply to all communities. Moreover, there are costs associated with growth, and their distribution is not always matched with the distribution of benefits. More often, both the new industry and local businesses gain, while the local public sector and economically disadvantaged citizens receive small or even negative benefits. Industrial development is not a panacea for all rural communities.

RESOURCE DEVELOPMENT³

The changes occurring in resource-based communities result from the rapid and massive introduction of economic activities that are often alien to the social and cultural organization of the host communities and their residents. Mineral exploitation is a typical example. It introduces organizational forms, interpersonal styles, and general attitudes and values that are uncommon, even unknown, in some localities and that "require" substantial changes in the existing social organization.

While in some ways the development of resource-based communities is another example of the diffusion of industrialism into the countryside, there are important differences. First, exploitation of the energy or mineral resource often requires the development of scientific knowledge and economically feasible technology. Second, the location of these industries is determined by a combination of historical happenstance, geological evolution, and market and/or governmental decisions to exploit the resource. Consequently, the magnitude of capital inputs and the size and diffusion of the biophysical and socioeconomic changes that result are often many times greater than those associated with locating a small to moderately sized manufacturing plant in a rural community. Furthermore, rural towns created for the purpose of (or heavily modified by) resource exploitation are dependent on decision-making organizations outside the community. They may also be more isolated than rural

³This section draws heavily on previous summaries by Murdock & Leistriz (1979) Summers & Selvik (1982), Branch & Thompson (1982), and Detomasi & Gartrell (1984).

areas with manufacturing plants because the latter must locate in areas where they can obtain raw materials and ship their products easily.

The Work Force

The economic and social changes associated with resource development depend in large measure on the nature of the work force that accompanies these projects. Several studies have been conducted in recent years to determine the characteristics of the work force involved in energy development in the western United States (Dobbs & Kiner 1974; Leholm et al 1975, 1976; Mountain West Research, Inc. 1975; Wieland et al 1977; Hooper & Branch 1983), and others have estimated the indirect employment effects of proposed energy projects (Auger et al 1976; Gilmore et al 1975; Toman et al 1976b). Moreover, a few have attempted to measure the magnitude, timing, and composition of indirect employment (Thompson et al 1978; Chalmers et al 1977; Conopask 1978; Mountain West Research, Inc. 1975).

It is clear from these analyses that the proportion of local residents hired is substantially lower during the construction phase than after normal operations begin. The rate of local hiring for both construction and permanent employment is influenced by a number of factors, including the size both of the project (i.e. the number of workers) and the local labor pool. The local labor supply tends to be more elastic with respect to permanent employment, at least in part because most firms use on-the-job training to upgrade worker skills. To balance this, local workers are often willing to commute long distances (frequently up to 60 miles and occasionally more) for temporary construction work. As with manufacturing employment, local hiring is usually greatest in the less-skilled job categories and least in the professional/technical and supervisory areas.

The construction work forces are dominated by craftsmen with highly specialized skills who are geographically mobile in response to new job opportunities. Wages are high, but employment is transitory. While construction workers expressed an interest in becoming employed at another construction site in the same geographic area, few were willing to seek permanent employment in plant or mine operations (Hooper & Branch 1973). Both the construction and operation work forces are predominantly male.

Factors affecting the magnitude of the secondary employment effects include project employees' wage and salary levels, residential distribution, and propensity to purchase goods and services from local firms, as well as the extent to which the resource project company or companies purchase supplies and services from other local firms. Indirect employment multipliers per dollar of wages will typically be smaller during the project construction phase than during the subsequent operational period because of the number of construction workers who maintain homes or households elsewhere and thus spend less of their income in the local economy. Empirical evidence concerning the timing,

location, and occupational/industrial composition of energy-related indirect employment is limited, as is information on the origins and characteristics of these workers.

Population Changes

Among the most significant effects that resource development and the new work forces accompanying such projects have are related to population changes. Several detailed analyses of these trends in communities in the western United States have been completed in recent years (Mountain West Research, Inc. 1975, Thompson et al 1978, Murdock 1977, Murdock et al 1978, Leholm et al 1975, Wieland et al 1977, New Mexico Department of Finance and Administration 1982a,b); they permit us to draw the following tentative conclusions (cf. Murdock & Leistriz 1979).

First, resource development projects have stimulated substantial population increases. Rapid rates of growth have appeared in resource communities throughout the western United States. In many instances, these growth rates are high enough to cause severe management problems, in part because the large population influx must be accommodated within a few small, widely scattered communities. Due to the sparse population of the region, large-scale projects may be located within commuting distance of only two or three communities, none of which may have more than several thousand inhabitants.

Second, the factors determining population growth include: total direct and indirect project related employment; levels of local employment at the project; wage levels; provisions for worker housing; workers' marital status; family settlement patterns; and employment patterns among dependents in worker households. All of these factors vary with the phase of the project.

Third, we do not adequately understand how new populations choose the communities where they will settle or how far they are willing to commute. Tentative evidence suggests, however, that areas close to the project site, communities with more than 1000 persons, and particularly towns with developed service structures are likely to receive a large proportion of the population growth. Thus, population changes are not uniformly distributed throughout the region and are unlikely to revive numerous small communities with inadequate service structures.

Finally, the newcomers attracted by resource development are typically young, well educated, and highly skilled. More importantly, they are younger, better educated, more skilled, and become better paid than long-time residents. Even though their presence may create stresses on social structures and redirect certain dimensions of community life, one probable, long-term effect of the influx of these new migrants is the renewal and revival of the demographic structures of the receiving areas.

Agriculture and Local Businesses

Resource development often removes land from agricultural production. Some will be returned to production following reclamation, but the success of restoration in particularly arid regions is uncertain. Development, especially large-scale strip mining, will have substantial effects on some farms and ranches, and a few may cease to exist. The overall impact on regional agricultural production will be negligible, however (Murdock & Leistriz 1979). Existing patterns of surface and mineral ownership, as well as spillover effects from mining enterprises onto adjacent lands, can lead to conflicts between surface owners and leasees, mineral owners, and developers—a point that is sometimes overlooked (cf. National Academy of Sciences 1974, Omodt et al 1975, Hodder 1975, Power 1975, Skelly & Loy, Engineers-Consultants 1975, Thilenius & Glass 1974, Watts 1975, Leathers 1977) but that has resulted in substantial modifications in federal policies since the mid-1970s.

Throughout the West, water is a limiting resource and a major issue in mineral development. The amount of water required by energy projects and the probable effects that a reduced supply will have on agriculture have been examined in several studies (Northern Great Plains Resources Program 1974, Anderson & Keith 1977, Radosevich et al 1977, and Trelease 1976). Large transfers of water from irrigation to the energy industry could have a major impact on agricultural operations, especially because irrigated lands are an important feed base for livestock production. It may lead to an increase in the prices of water rights, and thus market forces may have a ripple effect on agricultural production (Albrecht & Bergmann 1982, Branch & Bergmann 1982). Given the value of water in energy conversion, it is possible that the energy industry could adequately compensate irrigators. Also, with the adoption of more efficient irrigation techniques, farmers could maintain present levels of agricultural production while using substantially smaller amounts of water. Existing water allocation systems, however, include a number of legal and institutional restrictions that could constrain the transfer of water between users.

The work of Leistriz & Hertsgaard (1973) and the Great Plains Agricultural Council (1975) indicates that high levels of energy development will affect the supply of agricultural labor. National trends toward mechanization, however, have already substantially reduced agricultural employment in the Western region. The few farms and ranches that still depend heavily on hired labor may be forced to pay substantially higher wages. Thus, the increased demand for labor associated with energy resource exploitation may also lead to a continued increase in the mechanization of agricultural operations.

It is rather surprising that there are very few studies of the effects of resource development on local businesses (Gilmore & Duff 1974; Gilmore et al 1976,

Thompson et al 1978, Chalmers et al 1977, Branch & Thompson 1982). Nevertheless, several speculative statements can be made (Murdock & Leistriz 1979). Local businesses can expect to receive greater revenues, although these increases will probably be accompanied by the establishment of new firms. Even so, the revenues of the typical established firm will rise. However, this increase will be accompanied by increased costs, particularly in the form of higher municipal taxes. Whether local wage inflation will increase costs also is not clear (Meale et al 1983). Most firms will respond to rising costs by increasing the price of their products and services.

Local business owners and operators face substantial uncertainties when planning their response to large-scale projects. Doubts regarding the future of the project and its probable impact at the community level may cause them to postpone major investments until the project is a reality and its actual effects can be assessed. Thus, the local private sector's provision of goods and services may lag behind the increases in demand during the early years of a new project. This lag is particularly likely in housing-related activities—e.g. provision of housing itself, of telephones, and of cable TV; it seldom occurs in the retail sector.

Local Public Sector Costs and Revenues

During the early years of a project, the characteristics of the project itself and of the site area often combine to produce severe cash-flow problems for the affected communities in the short run. Special measures can be taken to address this problem, such as revising tax programs or permit requirements. Energy projects often require a labor force considerably larger than the local supply, which leads to substantial migration into the community. The immigrants' needs typically exceed the excess capacity of local, public service delivery systems and they often reach high temporary peaks that place additional, short-term demands on communities. Thus, communities need to make substantial capital expenditures for new and expanded facilities *before* the project has added significantly to the local tax base. Local governments' fiscal problems during the early years are sometimes magnified further as rapid population growth creates demands for a type or level of service that was not provided previously.

Once the project is in operation and fully reflected in the tax rolls, the fiscal outlook improves substantially. Resource projects typically have a high capital-labor ratio and consequently generate considerable tax revenues. Moreover, wages are relatively high, permitting employees to purchase moderate to expensive housing and thus contributing to the local tax base.

Procedures for taxing mineral extraction and processing facilities vary substantially across states, and differences in taxation systems lead to substantial variance both in communities' fiscal outlook and in the tax burden placed on resource developers. Most states now levy a severance tax on resource extrac-

tion, and some also impose production taxes on processing facilities. In some cases, these taxes are added on top of other state and local taxes. Several states have initiated programs whereby a portion of the severance tax is placed in an "impact fund," which is used as a source of grants for the resource communities that are affected. In addition, it is becoming more common for the state, the local government, and the developer to work together to devise programs to prevent fiscal problems. According to Murdock & Leistritz (1979), these programs are a promising mechanism for alleviating the front-end financing problems of the affected communities.

Stinson (1978) has summarized the nature and level of the special mineral taxes imposed by some states. Bronder has compared the total state and local tax revenues that would be collected from a typical new coal mine in each of seven states, while Stinson & Voelker have made a similar comparison for four northern Great Plains' states (Bronder 1976, Stinson & Voelker 1978). Allen & Hansen (1975) and Gilmore et al (1976) discuss the factors affecting local public sector costs.

Case studies have examined the potential effects of new energy development on local revenues over time. Studies for Wyoming have been done by Hayen & Watts (1975) and Gilmore et al (1976). Fiscal effects on Montana communities were analyzed by the Institute for Applied Research (1976) and Krutilla & Fisher (1976). North Dakota studies were performed by Leholm et al (1976), Dalsted et al (1976), and Toman et al (1976b). Utah and Colorado communities were studied by Gilmore et al (1976), while J. Gray et al (1977) and the New Mexico Department of Finance and Administration (1982a,b) studied communities in New Mexico.

Problems with the distribution of revenues and costs among local jurisdictions are also common. Administrative units often differ in their abilities to obtain revenues from a resource project. For example, municipal governments usually cannot obtain property taxes from the projects, which are almost always located outside city boundaries. Moreover, interjurisdictional commuting by workers can create severe inequities in the cost and revenue distributions. State laws permitting, some communities have addressed these problems by instituting sales and use taxes, which tend to benefit the municipalities.

Two factors complicating community planning and the financing of infrastructure are (a) bonding limits and restrictions on the taxing authority or mechanisms available to local governments and (b) uncertainty regarding the future of the project and its impact on community growth. States generally require political subdivisions to limit their bonded indebtedness to a fixed percentage of their tax base. Revenue bonds are often excepted, but they are limited to financing revenue-producing facilities. Statutory limitations on local government's abilities to impose additional taxes can also pose problems. Municipalities and counties in Montana, for example, are prohibited from imposing sales or use taxes. Such limits are understandable, but they often

severely restrict communities' ability to finance essential new infrastructure during the crucial period before and during the project construction phase. Following the high growth period of the mid-1970s, many Western states have modified their tax structures to address these problems. Uncertainty regarding a project's future can further complicate local decision-making and cause officials to be hesitant to implement any new measures.

The Boomtown Syndrome

Although "boomtowns" are not new in the lexicon of community studies (Chambers 1933, Havighurst & Morgan 1951, Carr & Stermer 1952), the recent concern with the exploitation of minerals and energy resources and with the construction of missile bases in the western United States has rejuvenated an interest in the phenomena. During the early 1970s, two Wyoming communities received considerable publicity that portrayed life in Gillette and Rock Springs as a rather dismal kind of existence (Kohrs 1974, Gilmore & Duff 1975). Subsequent examinations of changes in Page, Arizona; Forsyth and Colstrip, Montana; Craig, Colorado; and Fairbanks, Alaska continued to characterize rapid growth communities as debilitating (Cortese & Jones 1977; Dixon 1978; Freudenburg et al 1977; Freudenburg 1978a,b; 1979a,b; Gilmore 1976; Gold 1974, 1976; Lantz & McKeown 1979; Lantz et al 1980; Little & Lovejoy 1977; McKeown & Lantz 1977; Weisz 1979).

The basic theme of the boomtown literature is that the rapid population growth associated with energy and other resource development creates social disruptions, cultural conflicts, and pathological behaviors. Several researchers have provided data that they argue confirm this thesis. Kohrs (1974) claims to have evidence of increases in depression, school drop-out rates, juvenile delinquency, criminal activity, welfare caseloads, drunkenness, suicide attempts, child abuse, and teenage rebellion. Gilmore (1976) blames the aberrant behaviors of boomtown residents on these communities' inability to absorb the greatly increased demand for goods and services. Failures in the delivery of basic goods and services are a source of both organizational and personal strain. Bacigalupi & Freudenburg have examined local mental health care data, documenting an increased rate of mental health problems among both longtime residents and newcomers (1983).

Following researchers' initial reaction to resource development and its potential consequences for host communities, a more cautious analytic stance is emerging. The boomtown literature is being appraised and its weaknesses and limitations are being recognized.

In 1979 Thompson questioned the adequacy of the data base from which Kohrs & Gilmore drew their conclusions (Thompson 1979). Similarly, Wilkinson et al (1980, 1982) allege that the boomtown literature conceals an implicit antigrowth bias derived from classical sociological theories of urbanization and

its impact on individuals. Using data from 292 counties in the Old West Region (i.e. Montana, Nebraska, North Dakota, South Dakota, and Wyoming), they discovered a positive relationship between growth and divorce rates, but only when the effects of other variables are not controlled. Significantly, none of the control variables are related to development, which leads them to conclude that the previous evidence linking population growth and divorce to energy exploitation may have been spurious.

Freudenburg (1980b) cautions against careless interpretations of boomtown statistics. "Spectacular increases in percentages generally need to be interpreted with caution, particularly if the 'base' for computations is quite small. An increase of 500% in a given type of crime may mean an actual increase of only a few cases—for example, from two to twelve" (Freudenburg 1980b: 4–5). McKeown & Lantz's (1977) publication is a clear case in point. They report a 900% increase in crimes against persons and a 1000% increase in child behavior problems in Craig, Colorado during a time when the population doubled. These percentages are based, however, on small initial numbers—two crimes against persons and three child behavior complaints (Wilkinson et al 1980).

There is a recognition that the problems of living in boomtowns may be produced by the size of the community and/or the rate of growth. These two potentially causal forces must be separated. Using data from 36 cities in Western states, Brookshire & D'Arge examined the relation of size and growth rate to various crime statistics and conclude "that the 'classical' descriptions of boom towns is not statistically verifiable" (1980:539).

Double counting often inflates the appearance of pervasive social disruptions and personal distress. Most of the reports of personal crises come from the clinical records of local service agencies (Kohrs 1974, Lantz & McKeown 1979, McKeown & Lantz 1977, Lantz et al 1980). As a result, the number of crisis events or criminal acts, rather than the number of individuals in the community who are involved in them, is counted. Thus, one family may receive social services from several agencies such as a "crisis center," a family counseling service, and a mental health clinic. Because of the manner in which crisis assistance is administered in American communities, it is highly probable that multiple counting of "cases" does occur, consequently exaggerating the appearance of personal and social disruption. This fact may help to account for the puzzling finding that surveys of boomtown residents reveal little evidence of massive personal and social disintegration (Freudenburg 1980a,b; Gartrell et al 1980). Official crime statistics, of course, have the same weakness as indicators of social disruption because it is quite probable that one felon will create multiple "statistics." In their detailed examination of critical data from the files of the mental health center in Craig, Colorado, Bacigalupi & Freudenburg take a substantial step toward addressing these methodological problems (1983).

Changes in the organization of mutual support and social control also tend to generate a "paper trail" that gives the appearance of rapidly rising rates of social and personal disruption. In small, stable communities, including some urban neighborhoods, these functions are performed primarily through informal mechanisms involving family, kin, and neighbors (Wellman 1979, Wellman & Leighton 1979, Pilisuk & Froland 1978, Stein 1960, Nisbet 1962, Castells 1976, T. Bender 1978, Popenoe 1977, Van Dyke & Loberg 1978, Gartrell et al 1980). With increased population mobility, these functions begin to shift to more formally organized structures, even though family, kin, and neighbors continue to complement the formal mechanisms (Fischer et al 1977, Hunter 1975, Gans 1962, Liebow 1967). The agencies that provide these services must keep records to be able to justify their funding and maintain public accountability; it is these same "case load" records that provide unobtrusive indicators of social and personal disruption. Unfortunately, it is difficult to tell, therefore, whether the observed changes represent "true" changes in the incidence of distress or alterations in the social organization of response to distress.

There are additional limitations that have not been corrected. The boomtown literature appears to be based on a very small number of cases: namely, Fairbanks, Gillette, Rock Springs, Colstrip-Forsyth, Craig, and Page. Each of these communities has experienced rapid growth and may be legitimately regarded as a boomtown. But they have been studied in virtual isolation from each other. Researchers have used different conceptualizations to guide their observations, collected data from distinct vantage points, and used a wide variety of research techniques to assess sets of variables that have either no or only a few common elements. The resulting data base is small and noncomparable, and it can only support tenuous generalizations.

A carefully designed, comparative analysis of boomtowns is probably not what is needed. Rather, we should examine the community changes associated with energy resource exploitation, allowing for the possibility of slow growth. Little (1977) explicitly states the dubious assumption underlying the boomtown literature when he says, "it is assumed for convenience that major energy projects imply boom conditions in a rural atmosphere" (Little 1977:407). The related literature that reports the consequences of industrial development makes one skeptical of this assumption (Summers et al 1976). It seems altogether reasonable to expect that coal leases by the Bureau of Land Management, for example, will generate economic and population change along a broad spectrum of growth rates. Boomtowns may be a "worst-case" scenario, but they cannot inform us properly about the range of likely consequences.⁴

⁴Almost the entire July 1982 issue of the *Pacific Sociological Review* is devoted to a debate regarding the veracity of the data and interpretations in studies on the "boomtown syndrome."

CONCLUSION

One of the longstanding premises of social science is that social structures are a major determinant of behavior and personality. An important corollary states that social change produces personality and behavioral changes. Moreover, where structural changes are signs of disorganization and disintegration, they threaten the well-being of the individual (Durkheim 1951). Since well-being, happiness, security, dignity, and related human conditions are highly valued and since, by definition, social change disrupts some existing social structures, it is reasonable to expect the social sciences to have an anti-change or status quo bias. Indeed, this is a central theme of social thinkers who have attempted to analyze and interpret the rise of urban, industrial capitalism. The emergence of the self-actualization/human potential literature appears to be a reaction to this emphasis on and praise of static conditions.

The origin of such a belief can be found in nineteenth century Romanticism. It permeated the thinking of many social commentators who contrasted preindustrial and industrial Europe and concluded that the changes associated with the rise of urbanization, industrialization, and capitalism were detrimental to the well-being of humanity (Newby 1980). The founding fathers of sociology were convinced of the truth of this idea. Durkheim, Simmel, Toennies, and Marx all accepted the fundamental validity of the Rousseauian argument.

The portrayal of urbanism as a debilitating and dehumanizing way of life grew from this early reaction to urbanization and industrialization. Life in the city was said to be an anonymous existence, produced by the segmentation of human relations, the rational pursuit of self-interests, instability and insecurity, the disruption of a clear and uniformly understood normative order, and the massing of people unknown to each other. By implied contrast, rural life was portrayed as one of bucolic contentment, where people lived a happy Arcadian existence in the mainly agricultural villages and small market towns (cf. Sorokin & Zimmerman 1929; Wirth 1938; Redfield 1947, 1968). This tendency to identify a "sense of community" with particular patterns of settlement and specific geographical locations has been an especially enduring one. Even today there is a strong tendency to regard only rural villages and towns as "real communities." Indeed, it appears that many of the fears expressed in anticipation of industrial and/or energy developments stem from this tradition (cf. Bell & Newby 1972; Williams 1961, 1973).

The idea that where people live determines how they live is a compellingly simple notion that formed the centerpiece of social scientists' conceptualizations of the rural-urban continuum. It dominated community studies until the mid-twentieth century when Oscar Lewis made the first serious attempt to expose the concept's ideological bias. In 1949 Lewis published the results of

his reexamination of Tepoztlan, which Redfield had studied during the 1930s and which had been a primary source for his idea of the "folk society" (Redfield 1947). The extreme discrepancies between the two reports were significant because they demonstrated how different theoretical and ideological orientations influence the interpretation of empirical realities. Other studies continued to question the basic assumptions of the rural-urban continuum (Avila 1969; Gusfield 1967; Littlejohn 1963; Pahl 1965, 1966). The evidence clearly made it difficult to maintain the claim that rural villages are necessarily Arcadian heavens of harmony and tranquility.

At the same time, community studies were appearing that raised doubts about the validity of talking about "urbanism as a way of life." Herbert Gans (1962) published the findings of his study of an Italian neighborhood in the heart of Boston and reported finding a way of life closely resembling the rural villages of the rural-urban continuum. In Britain, Young & Willmott (1957) studied Bethnal Green, which is a neighborhood in East London, and found a way of life totally at variance with Wirth's characterization of urban life. One must begin to wonder why Wirth chose to ignore the village-like neighborhoods that existed in Chicago and were well-known because of the field work done by Park, Burgess, and their students.

By the 1970s, it was quite clear that both ends of the rural-urban continuum had come unglued. One could no longer claim that the life-styles characteristic in a given area were determined by its rural-urban location. Yet it remains indisputable that territorially bounded populations do manifest measurably different life-styles. What is needed, therefore, is a theoretical scheme that can account for spatial unevenness (both qualitative and quantitative) without depending on the mythology of the rural-urban continuum.

Albrecht (1982) offers one alternative that identifies the phase of change as a crucial determinant.

In terms of the classic characteristics of *gesellschaft*, urbanized and industrialized areas may not be particularly different from more rural communities *once they have become stabilized*. . . Thus, areas of cities like Chicago that were experiencing rapid social change, including growth, changing ethnic character resulting from the influx of European immigrants, southern blacks and so on, were characterized by high rates of juvenile delinquency, crime and other important social pathologies. On the other hand, areas characterized by less social change had the time to stabilize; individuals reestablished important primary ties with kin and neighbors, came to identify with community, and developed an overall more stable character that, in turn, was reflected in much lower rates of crime and related social problems (Albrecht 1982:301-2; italics in the original).

Rapid community growth is, in this view, disruptive, but the resulting structural strains, personal stresses, and aberrant behaviors are seen as transitory. Given "time to catch up," the community social organization will stabilize and the pathologies subside. While this interpretation appears to be descriptive-

ly accurate and to reject explicitly the rural-urban determinancy thesis, it does not deal with questions relating community instability—i.e. rapid qualitative change, growth, or decline—to the processes of economic development.

In the years since World War II, the extractive and goods producing industries have ceased to be the growth nodes of the economies of the advanced industrial nations, whether one is considering sources of jobs or of personal income. Certainly they continue to be critical components of the economy, contributing significantly to the gross national product. But the source of growth in employment and income has shifted to the other sectors. This pattern holds true in every industrially developed nation, regardless of its system of political economy. Thus, a key element of economic development in post-industrial nations is massive capital migration, especially of finance capital, from one industrial sector to another, from one region to another, and from one nation to another.

The growth of boomtowns and plant shutdowns are predictable consequences of capital mobility; both cases are accompanied by hardships for some workers and communities. There is an underlying tension between the free movement of capital, on the one hand, and community stability and worker welfare, on the other. While this issue is only now threatening to become a matter of public debate in the United States, it already commands widespread attention among European and Japanese policy analysts and social scientists, and it has been a concern in developing countries for many years.

There is a growing recognition that economic development generates spatially uneven growth and that the resulting inequality among communities and regions is intricately related to other forms of structural inequalities—e.g. in terms of class, ethnicity, gender, race, and occupation. [For a further development of this point, see McGranahan 1980, 1982 (unpublished manuscript entitled “Class, space, and community structure”), 1983; Newby 1982a,b; Bloomquist & Summers 1982.] Attention is being focused on these spatial manifestations of social, economic, and political inequality and on the mechanisms through which the economic development process generates uneven growth. It is usually assumed that economic development involves a continual process of opening up new spatial and/or sectoral areas, while abandoning others. A number of analysts have asserted that class interests direct this process of restructuring and transformation, which affects local social structures and has profound human consequences (e.g. Molotch 1976, Castells 1976, Bluestone & Harrison 1982). While the “class-interest” thesis has been strongly criticized (e.g. Harloe 1978, Aronowitz 1981), it has sensitized sociologists to the uneven patterns of development, to nation-state and local-state relationships, to the roles the state and the economy play in society, and to the need for viewing local social changes as integral elements of external processes that affect structured inequalities.

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