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ABSTRACT

Boom towns appear to have greater problems of substance abuse associated with economic change indicators than communities suffering from sudden economic declines. A study of 14 communities experiencing sudden economic dislocations revealed a lack of consistent trends, although some depressed communities experienced increases in alcohol abuse. In response to the serious alcohol problems of boom towns, some companies, concerned about absenteeism rates and liability for workers' safety, have begun to develop alcohol treatment programs. In general, agency treatment services are limited. More knowledge about the relationship between substance abuse and economic conditions should enhance the development of appropriate treatment programs. (JAC)

National Institute on Drug Abuse

SERVICES RESEARCH REPORT

Drug and Alcohol Abuse in Booming and Depressed Communities

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Alcohol, Drug Abuse, and Mental Health Administration

The Services Research Reports and Monograph Series are issued by the Services Research Branch, Division of Resource Development, National Institute on Drug Abuse. Their primary purpose is to provide reports to the drug abuse treatment community on the service delivery and policy-oriented findings from Branch-sponsored studies. These will include state-of-the-art studies, innovative service delivery models for different client populations, innovative treatment management and financing techniques, and treatment-outcome studies.

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Drug and Alcohol Abuse in Booming and Depressed Communities

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Highlights

BACKGROUND AND STUDY SCOPE

The major focus of this study has been to identify and analyze patterns of drug and alcohol abuse in 14 communities which have experienced sudden and severe economic dislocations (7 boom and 7 suddenly depressed). This project is an outgrowth of research directed toward expanding the state of knowledge about economic dislocations, which began under the auspices of the U.S. Department of Commerce in 1976. Utilizing economic data collected previously under Commerce auspices, the drug and alcohol findings were analyzed to attempt to determine whether relationships exist between levels of substance abuse and sudden economic change.

The drug abuse data collection portion of the study had the following dimensions:

- Drug-related arrest data were collected and analyzed. When possible, drug-related arrests were classified by drug of abuse.
- Data from such sources as drug treatment programs were gathered.
- When available, overdose data collected from hospital emergency rooms were analyzed.

The alcohol portion of the research focused on the following:

- Aggregate per capita consumption as measured by an analysis of tax revenues, when such data were available;
- Use estimates, made by gathering data from treatment programs and hospitals; and
- An analysis of arrest records for driving while intoxicated (DWI) and public drunkenness (if it was a local offense).

Although other economic data were gathered, four conventional and easily obtainable measures of economic change were emphasized in the analysis: population, total employment, per capita income, and in declining communities, the unemployment rate.

STUDY FINDINGS

The analytic and case study evidence indicates that boom towns appear to have a more serious problem of substance abuse associated with economic change indicators than do communities suffering sudden economic declines. Although some depressed communities experienced increases in substance abuse (primarily alcohol), there were no consistent trends in

those areas. Boom communities, on the other hand, clearly have a serious abuse problem to contend with (particularly with regard to alcohol) and an expanded Federal assistance role may be warranted.

Analysis of economic and substance abuse indicators shows a clear relationship between boom town growth and increased alcohol abuse, such that in boom towns alcohol abuse increased at a rate faster than population growth. Anecdotal evidence gathered in the case studies suggests that drug abuse is also a serious problem in boom communities; however, the hard data gathered in this study do not show it to be increasing at a rate faster than population is increasing.

In many cases, the anecdotal evidence gathered in boom towns is more telling than ~~hard quantitative data which were gathered~~. Police and prosecutors estimate that significant proportions of their total arrests and case loads are alcohol related, a circumstance echoed by probation officers, mental health counselors, and other providers of services.

Despite the lack of hard data, abuse of other drugs such as heroin and barbiturates is also indicated by anecdotal evidence. There also appears to be a trend toward polydrug use in which substances are combined. Marijuana use is widespread among all age groups and accounts for the majority of nonalcohol-related drug arrests. The use of heroin and other hard drugs does not appear to be a serious problem, although it does exist in some of the boom communities studied.

In response to these drug and alcohol problems, some companies have instituted steps aimed at solving them. Because of absenteeism and concern for their liability with regard to the safety of workers who drink, companies are beginning to develop and pay for alcohol treatment programs.

Where drug abuse and treatment services through public or nonprofit private agencies exist, they are limited. In most communities, they are understaffed. Funding is limited and there appears to be a lack of coordination among human service providers.

As indicated above, the quantitative analysis and the anecdotal evidence for bust towns are less conclusive. Nonetheless, both suggest that problems exist, particularly in the area of alcohol abuse. Again, although the ~~data are not as straightforward as in the case~~ of boom communities, in some of the places examined, there was at least the suggestion that sudden economic declines were tied to rises in alcohol abuse.

Policy suggestions and recommendations which result from the findings focus on developing more knowledge about the relationship between economic conditions and drug and alcohol use. Such knowledge will allow for the development of appropriate treatment on the local level, and may lead to increased emphasis on economic variables in allocating treatment funds.

Part 1. Study Approach and Study Findings

1. Background

INTRODUCTION

A study to explore the phenomenon of sudden economic dislocations was sponsored by the Economic Development Administration (EDA), Department of Commerce, in 1976. Research focused on the EDA's title IX program Special Economic Development and Adjustment Assistance. This program was structured to assist communities experiencing or threatened with severe economic dislocations within very short time periods: that is, "boom or sudden depression" situations. Such dislocations are caused by a variety of factors, including the opening and closing of military installations, the relocation or failure of major plants, curtailment of operations by large employers due to environmental restrictions, increase in natural resource (energy) demands, and natural disasters. Title IX aid assists areas affected or threatened by such dislocations and attempts to "soften or avert the blow" by providing a wide variety of planning, research, public works, and business loan assistance.

Although sufficient time has not elapsed to permit a comprehensive evaluation of the impact of title IX, a preliminary program assessment has been conducted and case studies have been prepared on a nationwide sample of 45 areas assisted. The case studies focus on analyses of EDA's activities, but they also include two economic analyses. These are:

- Area Profile--A review of the area's past development and growth, and analysis of the present status of the area, and an assessment of the area's potential for achieving successful economic adjustment. Employment and unemployment, industry location quotients, income indices, retail sales, capital expenditures, and housing prices exemplify the factors included in this portion of each baseline study.
- Economic Dislocation Analysis--Includes factors such as the type of dislocation (e.g., defense base closing), the extent of warning before the dislocation, the number and types of jobs involved, and the probable long-term effects of the dislocation. Analytic indicators such as unemployment and employment trend indices, a capital investment trend index, and a government debt interest-expenditures ratio to support this portion of the project were developed. Traditional shift and share analysis is also performed.

A bank of economic data and analyses of places experiencing or threatened by the boom or sudden depression syndrome has been developed.[1] In 1977, the research program was expanded to include an analysis of drug and alcohol abuse patterns in a subsample of 14 areas. Seven of the analyses were of communities experiencing boom conditions because of rapid energy resource development and related rapid population growth; the other seven case studies focused on places experiencing declines due to local plant closings or cutbacks.

Substance abuse data and selected economic data were collected by field staff in the sample communities over the period October to June, 1978; economic data were already available from the title IX evaluation. The drug and alcohol abuse data were analyzed in conjunction with a portion of the economic data to attempt to determine whether relationships exist between the two phenomena.

The boom communities, located in New Mexico and Colorado, were:

- Grants/Milan, Valencia County, New Mexico;
- Farmington, San Juan County, New Mexico;
- Gallup, McKinley County, New Mexico;

[1] See R.H. Milkman, M.A. Toborg, A.M.J. Yezer, R. Aikman et al., EDA's Title IX Program: Baseline Assessment and Policy Analysis (Washington, D.C.: Lazar, 1977).

- Hayden, Routt County, Colorado;
- Carbondale, Garfield County, Colorado;
- Craig, Moffat County, Colorado; and
- Rangely, Rio Blanco County, Colorado.

The suddenly depressed communities were located in New Jersey, Virginia, and Maine. They included:

- Florence Township, Burlington County, New Jersey (pilot test);
- Buena Vista, Rockbridge County, Virginia;
- Staunton, Augusta County, Virginia;
- Waynesboro, Augusta County, Virginia;
- Dover-Foxcroft, Piscataquis County, Maine;
- Eastport, Washington County, Maine; and
- Lewiston, Androscoggin County, Maine.

These sample communities were selected for several reasons. Boom communities selected were clustered close together and had been previously studied as boom towns during the title IX evaluation. This appoach was used to avoid having such a heterogeneous set of case studies that it would be difficult to draw general conclusions.

The sample of economically depressed communities was more difficult to choose because the sample was to be limited to two States or similar subregions. Furthermore, there were few suitable "bust" communities included in the title IX evaluation. The most serious problem in this regard emerged during the pilot test. Originally, the New Jersey corridor between Philadelphia and New York City was to be studied because of a large number of plant closings, which produced acute downturns during the last recession and generally declining economic conditions. However, this region of New Jersey is so densely populated that communities are in very close proximity to one another. This proximity allowed substance abusers to seek treatment in places other than their place of residence, in order to preserve their anonymity. Hospital emergency admissions data, criminal justice statistics, and alcohol sales tax data are also affected by population density and mobility.

In order to study substance abuse in any particular community, it is necessary to gather data from a wide radius surrounding the community. In the case of the New Jersey communities, there was no basis available to determine what the appropriate radius should be. This situation led to the abandonment of the New Jersey sites after the pilot test, and the addition of "community isolation" as a selection criterion. (Boom communities satisfied the criterion of isolation quite easily.)

Satisfying the similar subregion and isolated community criteria was quite difficult in selecting a sample of bust communities; since the heavily populated areas presented a number of research problems, less populous regions of the country that had suffered severe downturns during the 1974-75 recession, seemed appropriate. The Shenandoah Valley of Virginia and three depressed towns in Maine met these criteria.

THE BOOM AND BUST PHENOMENON

Sudden changes in the fortunes of areas are as old as civilization itself. In preindustrial societies, such changes were often due to outbreaks of fatal contagious diseases, crop failures, or to war as opposed to decisions by business or government to expand or contract activity. Natural resource development has been linked to booms and busts in the United States for over a century, with gold and silver rushes and oil discoveries causing rapid expansions in selected areas which, in short periods, often left ghost towns behind as evidence that no long-term economic base was ever built. The chaos caused by such phenomena is legend, with food and other staples often selling for hundreds of times their normal worth, disease and crime rampant, and generally abominable living conditions being the norm. Economic conditions, however, were the other side of the coin; wages in boom towns were generally quite high, and many people were able to increase their incomes substantially. Large numbers did not profit from boom town conditions, however, and in times past often died of starvation or disease. In modern times, unemployment and bloated welfare rolls tend to be associated with rapid economic expansion.

Sudden economic declines in America during the last half-century have also had devastating human consequences. Although the nationwide impact of the Great Depression was atypical, the types of problems associated with that period exemplify on a larger scale the often tragic effects of any substantial economic dislocation. The national volume of salaries dwindled by 40 percent, and 9 million savings accounts were lost.

There is ample evidence to illustrate that booms and busts are not new phenomena emerging as a result of the peculiar economic conditions in America in the 1970s. On the contrary, economic dislocations have plagued nations and peoples for centuries. What is different about boom and bust situations in America in the 1970s are individual and institutional reactions to such sudden economic changes. The purpose of this research program was to examine the extent to which individual reactions to such boom/bust phenomena find expression in alcohol and drug abuse.

STUDY APPROACH

The major focus of this study has been to identify and analyze the patterns of drug and alcohol abuse in selected communitites which have experienced sudden and severe economic dislocations. Employing the approach outlined below, information was collected about the types of drugs which appear to be used and the extent of drug and alcohol abuse. Data drawn from past economic data collection efforts were already available for some areas. For all case studies, the economic analysis portion of the research involved two dimensions: a profile of the area and an analysis of the area's economic dislocation.

After all economic, drug, and alcohol data were gathered, appropriate analyses were undertaken to gain an understanding of the relationship between changes in economic conditions and changes in drug and alcohol abuse. Information about these relationships as well as a discussion of the limitations of the research findings is covered in subsequent sections of this report.

2. Analytic Issues

STUDY LIMITATIONS

While it is usually apparent that the economies of certain communities are either growing rapidly or that others are static or declining, it is often not obvious which indices of "booms" or "busts" are relevant to increases in drug or alcohol abuse. Four conventional and easily obtainable measures of economic change have been emphasized in the analysis:

- Population;
- Total employment;
- Per capita income; and
- Unemployment rate (declining communities only).

However, these are typically aggregate data, which may not yield very specific information about a particular interest. Consider population, for example. Areas of economic growth generally show rapid increases in population, presumably resulting from the inmigration of productive workers, while declining economies should have static or decreasing populations caused by outmigration of the same group. Young males are a prominent component of growing work forces, and they are also one of the chief groups vulnerable to substance abuse. Therefore, one might expect that areas of economic growth would show an increase in abuse, while declining areas would have less.

In fact, this simple hypothesis cannot accommodate the complexities of the research question. In urban areas, workers do not necessarily emigrate when the local economy declines. Thanks to automation, they are mobile and may drive considerable distances to work.[2] Therefore, the economy of their city of residence may not be as relevant as the regional economy within commuting range.

At the same time, though most young males are workers, many are not. Locally, large segments of young male subpopulations may never have been part of the work force. These nonparticipants have less incentive to emigrate during times of economic distress, than do active workers, and it is precisely these groups which figure prominently in many types of substance abuse.

Apart from these questions of the relevance of aggregate economic measures to the subpopulations of drug and alcohol abusers, there is a second set of problems concerning abuse itself: How is abuse to be measured? Two accessible, though incomplete and biased indicators of abuse have been chosen:

- Drug- and alcohol-related arrests; and
- Drug- and alcohol-related hospital admissions.

These are not particularly desirable indicators of abuse because they sample abuser populations unevenly, concentrating on some groups and ignoring others. For instance, in many communities public drunkenness remains a crime, and a handful of skid-row alcoholics may constitute a large portion of all alcohol-related arrests. Because of this, drunken-driving arrest data were analyzed, but they are biased in other ways (e.g., through nonuniform distribution of automobile ownership). Unfortunately, attempts to collect more detailed data on the characteristics of individuals in treatment proved unsuccessful because of regulations relating to client

[2] In fact, the pilot case study in Florence Township, New Jersey, revealed just this problem. That is, the proximity of Florence to so many other communities contaminated both employment and substance abuse data, for residents commuted to a large number of other areas for employment, recreation (including alcohol consumption), and drug and alcohol treatment services.

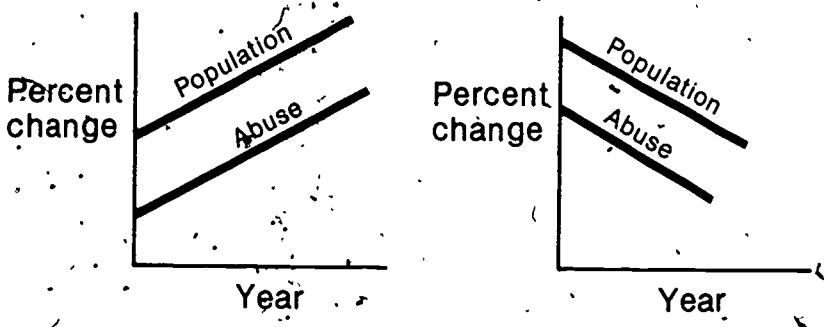


Figure 1.— Constant abuse rate; fixed age structure

confidentiality. This placed severe limitations on the study methodology.

ANALYTICAL APPROACH

Given these limitations, how may available data be treated to answer the basic question: Is economic change related to drug and alcohol abuse? Statistical techniques, such as regression analysis, are inappropriate because the two sets of indicators--economy and substance abuse--clearly refer to different populations. The safest course is to examine overall patterns of change to see if there are general tendencies present in the data. This approach will not provide any definite conclusions, of course, but it will avoid spurious results caused by the application of improper mathematical methods, and it may suggest hypotheses for further study.

Consider the simplest possible model relating an aspect of economic change and abuse. Suppose the rate of abuse (prevalence) is constant in a population of fixed age structure. If such a population increases or decreases, then measured abuse should change in the same fashion.

In figure 1, it is assumed that the rate of abuse (cases per thousand of population) is constant. For example, if the rate of abuse was 1 percent, there would be 10 cases in a population of 1,000. If the population doubles, the observed cases would double (2,000 x 0.01=20); if it halved, cases would drop by half (500 x 0.01=5). In other words, percentage change in both population and abuse would be equal.

This model is, of course, simplistic. It is not expected that the observed rate of abuse will remain constant when population changes for several reasons. Rate of abuse is a function of age, and most population changes are accompanied by a change in age structure. For example, if young males have a higher rate of active substance abuse than other groups, then a relative increase in their subpopulation will yield a new population with a higher composite rate, and vice versa (see figure 2).

Here percentage change in population is not equal to percentage change in abuse.

Furthermore, true substance abuse rates are not known, but only observed numbers of arrests and hospital cases. Even if the true abuse rate were constant, it is doubtful that the apparent rate, as seen in arrests and hospital admissions, would remain so under sharp population increases, because of the finite capacities of police forces and hospital facilities, which might be saturated. However, saturation is unlikely to occur because substance abuse cases constitute only a part of all arrests, and a very small part of all hospital admissions. The net result is that it is not known whether or not observed rates are constantly related to true rates under conditions of population change.

Despite these limitations, this is the most appropriate model which can be utilized. When applied to the 14 communities which were studied, the data in table 1 were obtained.

Boom and bust communities are clearly distinguished by changes in population and total employment. The first group (Gallup, Farmington, etc.) has grown rapidly since 1970. Their populations and total employment have increased by an average of about 10 percent annually. (Per capita income, adjusted for inflation by the Consumer Price

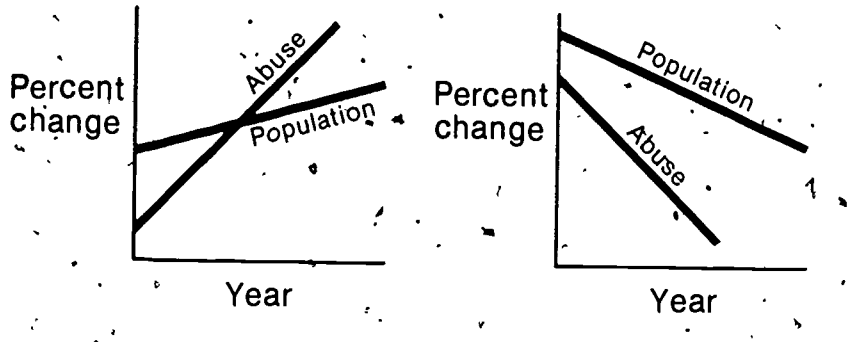


Figure 2.— Age-dependent population change; age-dependent abuse rate

Index, has grown more slowly.) These cities are strikingly different from the second group (Florence Township, Dover-Foxcroft, etc.) which have had virtually no change in population and little change in total employment during the same period. (The increase in per capita income, in constant dollars, is also negligible for this second group.) Thus these communities fall into two distinct classes, one with rapidly growing populations and work forces, the other with static populations.

In the growing cities, alcohol abuse, as measured by arrests, has typically increased at a rate much higher than population. That is, the situation matches the left-hand side of figure 2. The relationship is less clear for hospital admissions. For drug abuse, there is no clear pattern at all.

In the static cities; there are also some increases in alcohol abuse--according to both hospital admissions and arrests--but they are smaller, the patterns are less consistent, and there is one clear decrease in alcohol cases. For drug abuse, there is again an ambiguous pattern, but in one case drug-related hospital admissions peaked following the declines.

These data; in their present form, are too crude for a more sophisticated quantitative interpretation. Ideally, it would be possible to show whether alcohol abuse depends on population change in a precise way. For instance, that total rate R, is a function of the individual age-dependent rates, r_i for each in the age category:

$$R_m = \Sigma_i r_i p_{im}$$

where p_{im} is the fraction of the population in age group i during year m.

To test such a hypothesis it would be necessary to both estimate the value of the r_i, and to measure not only aggregate changes in population, but also the changes in the age structure (p_i) over a series of years. The qualitative relationships in table 1 invite such an analysis, but it obviously requires much more detailed data than has been possible to obtain in this study.

In general, then, these results suggest that economic growth produces alcohol abuse that increases at a rate higher than population growth. On the other hand, economic stagnation may or may not be associated with changing alcohol abuse. Very little can be said about drug abuse under these changes, because of limitations in currently available data.

ALTERNATIVE MODEL FOR DECLINING ECONOMIES

The preceding analysis is hinged on demographic shifts which accompany economic growth, but it was not useful for declining economies, in which aggregate population changes little (though the age structure may shift even in these). What happens to substance abuse in these static populations?

One notion has been that substance abuse might follow the short-term changes in unemployment. It is known, for example, that the manifestations of certain diseases, social security disability claims, etc., are correlated with unemployment.

The data for Burlington County, New Jersey (containing Florence Township), presented in figure 3, suggest this sort of correlation.

TABLE 1.

	Economy				Alcohol abuse		Drug abuse	
	Population[1]	Total employment[2]	Per capita income (adjusted)[3]	Unemployment[4]	Hospital admissions[5]	Total arrests (DWI only)[6]	Hospital admissions[7]	Arrests[8]
Boom towns								
Grants/Milan, N.Mex.	[9]+8.0	+7.0	+3.6	X	+130	(+125)	--	--
Farmington, N.Mex.	+4.3	+10.0	+5.2	X	+27	(+5)	+22	--
Gallup, N.Mex.	+2.7	+6.7	+3.0	X	+43	+26	i	+65
Hayden, Colo.	+14.7	+21.0	-.4	X	--	+29	--	i
Carbondale, Colo.	+26.0	+5.0	+2.4	X	--	+48	--	--
Craig, Colo.	+8.0	+5.0	+3.6	X	--	--	--	--
Rangely, Colo.	+2.6	NA	-2.4	X	--	(+59)	NA	NA
Averages	+10.0	+9.0	+2.5					
Suddenly depressed communities								
Florence Twp., N.J.	*	*	-.2	+8.0	--	--	--	--
Buena Vista, Va.	*	+4.7	+2.0	+7.0	--	+10	--	i
Staunton, Va.	*	+1.7	+1.7	+4.6	+50	--	i	+50
Waynesboro, Va.	*	+1.7	+1.7	+7.5	-10	--	i	--
Dover-Foxcroft, Me.	*	NA	+2.7	+10.4	+56	(+49)	--	-30
Eastport, Me.	*	NA	+2.1	+4.0	+17	--	NA	--
Lewistown, Me.	*	*	-4.0	+3.4	--	(+11)	--	-20
Averages			+1.5					

[1]Average percent change per year for the period 1970-76 (usually).
[2]Average percent change per year for the period 1970-76 (usually).
[3]Average percent change per year for the period 1970-76 (usually).
[4]Difference in maximum and minimum unemployment rate, 1970-77 (usually).
[5]Average percent change per year for the period 1970-76 (usually).
[6]Average percent change per year for the period during which there are data, usually 1972-73 to 1976-77.
[7]Average percent change per year for the period during which there are data, usually 1972-73 to 1976-77.
[8]Average percent change per year for the period during which there are data, usually 1972-73 to 1976-77.
[9]Figure for Grants only.

Symbols: i = Statistically insignificant sample
-- = No significant trend over period of data
X = Not utilized as a boom town indicator
NA = No data available
* = Less than 1 percent change

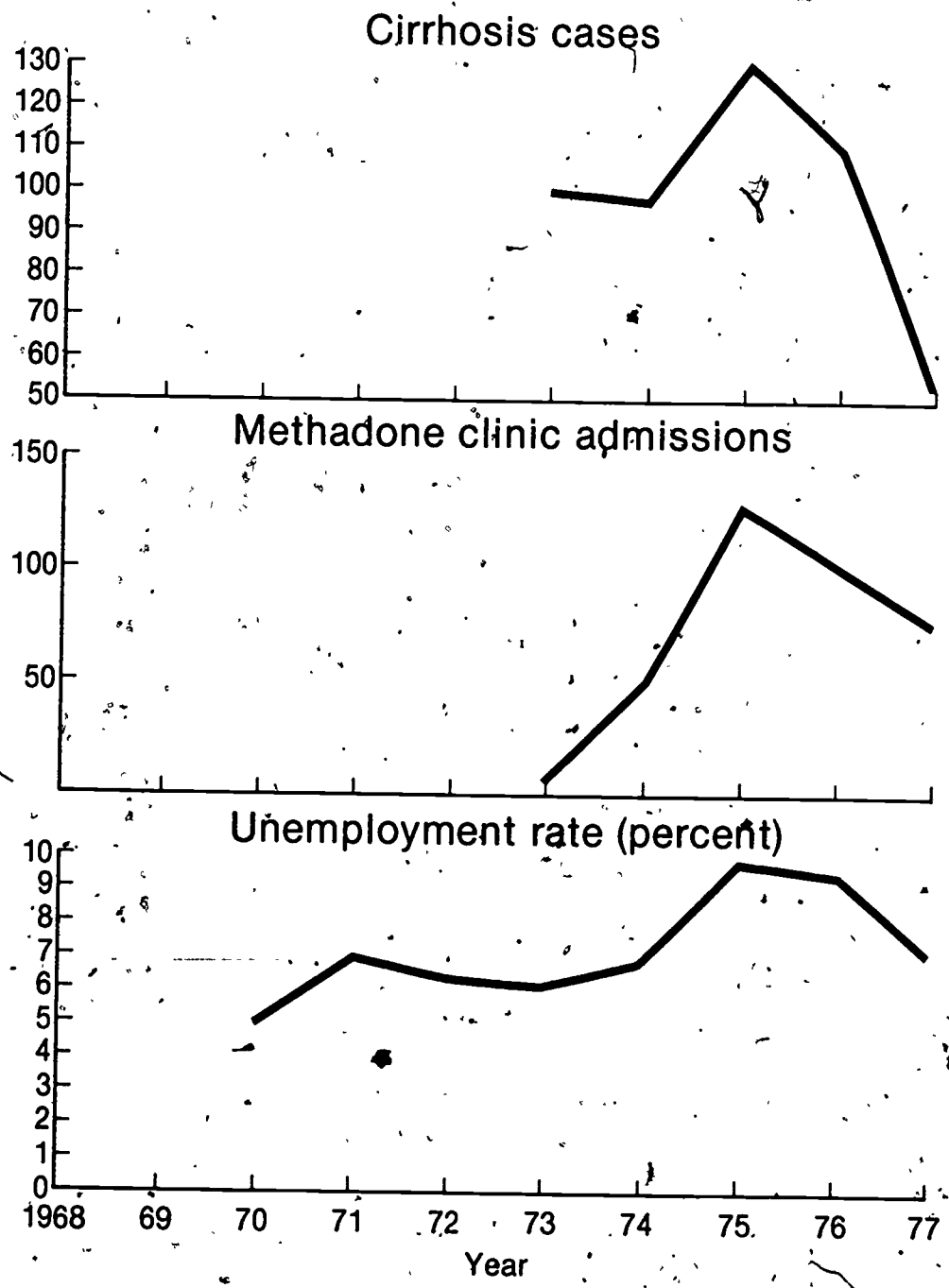


Figure 3.— *Burlington County, New Jersey*

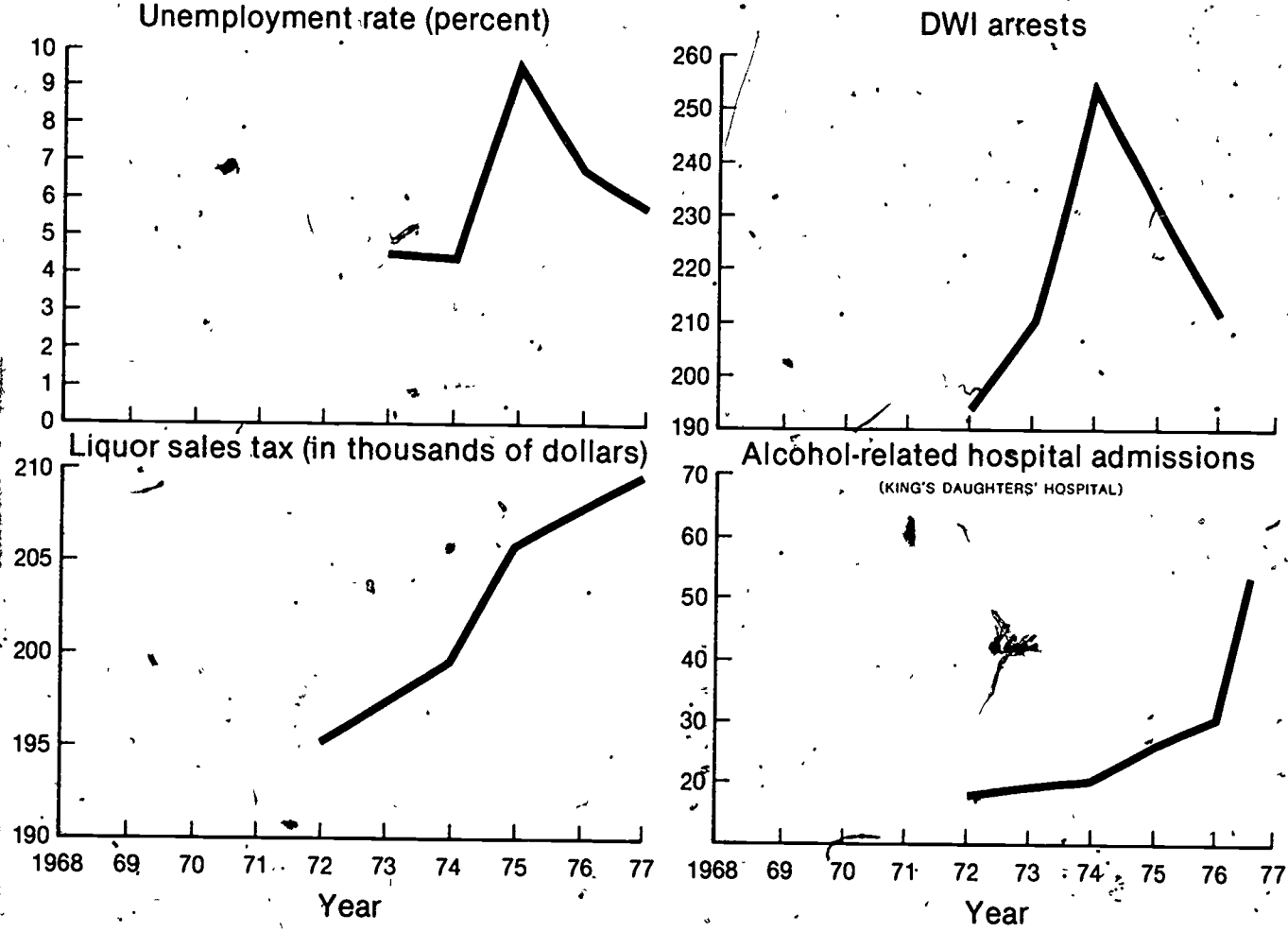


Figure 4.— *Staunton, Virginia*

Here county unemployment rate, cirrhosis cases[3] in the large county general hospital, and admissions to a drug treatment program all have superficially similar time histories. Closer analysis shows, however, that apparent cirrhosis cases changed in response to a new diagnostic policy and that the origin of the drug cases (heroin addicts) was 6 to 8 years earlier, as measured by incidence of first use. Therefore the 1975-76 rise in unemployment cannot have caused the rise in heroin use, because the origins of the heroin abuse problem were years before, though conceivably unemployment might have exacerbated the addicts' plight and forced them to enter treatment.

In general, though, there are not even superficial correlations between abuse and unemployment rate. The data for Staunton, Virginia, presented in figure 4 illustrate the typical situation: gradual increase in alcohol consumption, as measured by DWI arrests or hospital admissions which are not correlated to unemployment trends.

No obvious connection between unemployment and substance abuse could be identified by the crude indices employed here.

[3] Cirrhosis rate is widely recognized as being correlated with per capita consumption of alcohol. See, for instance, V. deLint and W. Schmidt, The epidemiology of alcohol, in Y. Israel and J. Mardones, eds., Biological Basis of Alcoholism (New York: Wiley, 1971), p. 423.

3. Study Findings

INTRODUCTION

The analytic and anecdotal evidence indicates that boom towns appear to have a more serious problem of substance abuse associated with economic change indicators than do communities suffering sudden economic declines. Although some depressed communities experienced increases in substance abuse (primarily alcohol), there were no consistent trends in those areas. Boom communities, on the other hand, clearly have a serious abuse problem to contend with (particularly with regard to alcohol), and an expanded Federal assistance role may be warranted.

FINDINGS BASED ON QUANTITATIVE ANALYSIS

As described in chapter 2, aggregate analysis of analytic economic and substance abuse indicators shows a clear relationship between boom town growth and increased alcohol abuse, for in boom towns alcohol abuse increased at a rate higher than population growth. The anecdotal evidence presented below suggests that drug abuse is also a serious problem in boom communities; however, the hard data gathered in this study do not show it to be increasing at a rate faster than population is increasing. As indicated above, the quantitative analysis and the anecdotal evidence for bust towns are less conclusive. Nonetheless, both suggest that problems exist, particularly in the area of alcohol abuse. Again, although the data are not as straightforward as in the case of boom communities, in some of the places examined, there was at least the suggestion that the sudden economic declines were tied to rises in alcohol abuse.

CASE FINDINGS ON BOOM TOWNS

In varying degrees, the energy-rich communities examined as a part of this study exhibited the typical boom town conditions outlined in chapter 1. Generally, the cost of living is high; infrastructure, particularly housing, is not sufficient to meet the demand; transiency is the norm; and single young persons, primarily men, predominate. A direct outgrowth of these characteristics is the absence of a stable family life for many of the residents of these communities, particularly those recently attracted by the area's economic prospects. Even in cases where families are complete, spouses face problems of lack of appropriate employment opportunities, insufficient recreational facilities, inadequate living quarters, and the abnormal working hours of mates resulting from the "shift scheduling" used by many employers. Children of workers, including susceptible juveniles, also suffer from such problems. In addition, many of the energy-related jobs, although extremely remunerative, involve considerable risk, creating an atmosphere of tension that affects the worker, his or her spouse, and their children.

These communities in Colorado and New Mexico possess many of the ingredients that traditionally have led individuals to seek escape through abuse of alcohol and other drugs. They are also inhabited by a population with a high proportion of young males who are extremely susceptible to drug abuse. In the case of alcohol, the situation is exacerbated by the longstanding acceptance of drinking of hard liquor as a part of the "frontier way of life" and a tradition of heavy social drinking. Moreover, the prevention of substance abuse in such rapidly growing areas is hampered by the very transiency of the population, which facilitates drug trafficking and makes enforcement of drug laws difficult.

Given these conditions, substantial overuse of alcohol and other drugs can be expected. As indicated previously, the available quantitative data indicate that alcohol is indeed a major problem in such communities, and that DWI arrests and alcohol-related hospital diagnoses are increasing at a rate even faster than population growth. This phenomenon reflects the national trend toward increased consumption of alcohol; but it cannot be explained by that factor alone.[4]

Anecdotal evidence is even more revealing. Police and prosecutors estimate that significant proportions of their total arrests and case loads are alcohol related, a circumstance echoed by probation officers, mental health counselors, and others who provide similar human services. Those engaged in alcohol treatment cite cases of miners whose fear of being killed or trapped in a collapse is so great that they can work only while intoxicated and must avoid the mines in order to stay sober. Although documentation is too limited to establish a causal relationship, many counselors and hospitals report that increases in suicide attempts, child abuse, wife-beating, and other domestic violence have coincided with the growing rate of alcohol abuse.

Abuse of other drugs such as heroin and barbiturates is also confirmed by anecdotal evidence, despite the lack of hard data in this regard. There is also an increase in the abuse of other substances with a trend toward polydrug use in which alcohol is usually combined with other drugs. This is particularly true of marijuana and prescription drugs, such as barbiturates, tranquilizers, and amphetamines. Many drug problems have come to light as a result of alcohol-related arrests or treatment. Marijuana use is widespread among all age groups and accounts for the majority of nonalcohol related drug arrests. Use of heroin and other hard drugs is not too serious a problem, although it does exist in some of the communities. Affluent energy workers can afford to buy such drugs without creating the visible criminal justice problems that occur in urban areas. In the resort and tourist community of Steamboat Springs, Colorado, cocaine and PCP are among the substances abused. Prescription drug abuse is believed to be a problem, but it remains relatively hidden.

Although the problem is not accurately reflected in available data, an increasing number of women appear to be abusing prescription drugs, according to doctors and mental health professionals. Power plant workers are also reported to abuse such substances. Inhalant abuse is characteristic of juveniles and Native Americans, who presumably cannot afford other drugs.

Firms, local and State authorities, hospitals and other treatment centers are aware that alcohol particularly, but other drugs as well, are presenting a variety of difficulties. Because of absenteeism and concern for their liability with regard to the safety of workers who drink, companies are beginning to develop and pay for alcoholism treatment through employee assistance programs. The Laguna Service Center, near Grants/Milan, New Mexico, provides clinical services and substance abuse treatment to Anaconda mining employees, whose treatment costs are covered by company insurance. In addition, Anaconda has altered shift schedules to discourage binge drinking. Energy Fuels Corporation recently funded a team of occupational health doctors in Steamboat Springs (near Hayden, Colorado) to sample at random 10 percent of its employees as a pilot project for an occupational health program. Energy Life, as the project is called, would provide health education, financial and family counseling, and a full range of occupational health services, including those related to substance abuse problems. Energy Fuels hopes to reduce absenteeism, turnover (it costs the company approximately $20,000 to train each new worker), and the resultant decreases in productivity. In Carbondale, Colorado, there has been a reduction in DWI arrests since Mid-Continent Coal Company started bus service to mines at the insistence of the miners' union. Other companies have attempted to upgrade living conditions by helping to finance infrastructure and housing (trailer parks) projects, as well as comprehensive plans to deal with energy impacts.

Prevention and treatment services for alcohol and other drug abusers through public or private agencies are limited. Funding is scarce; there is a lack of coordination with other services and referral networks; counseling centers are overcrowded and understaffed; and those staff who are available share the tendency to transience exhibited by the rest of the community's population. In addition, treatment facilities are in some cases many miles removed from potential clients, and human services often receive less priority than housing, public works, and other basic infrastructure needs. Finally, even when an individual receives treatment

[4] See, for example, Public Health Service, Alcohol and Health. New Knowledge, Second Special Report to the Congress (Washington, D.C.: U.S. Department of Health, Education, and Welfare, June 1974).

and returns to the community as a productive worker, there are often no support services to prevent a relapse.

CASE STUDY FINDINGS ON SUDDENLY-DEPRESSED COMMUNITIES

The suddenly depressed communities, i.e., bust towns, examined emerge as being very different demographically from the energy boom towns. All are characterized by populations that have remained approximately the same size. The median age tends to be higher (late twenties or early thirties), and the proportion of younger people has been declining over time in these communities. The populations are not especially mobile or subject to much in- or out-migration. Although the communities may have better access to health and social services than boom towns, the older age of the population and lack of awareness about the problems caused by alcohol and drug abuse mean that much preventive education is needed.

Economically, the bust communities are characterized by a lack of diversification and dependence upon traditional manufacturing industries that are vulnerable to foreign competition and to relocation in sunbelt or nonunion areas. These industries include primary metals, shoes, textiles, and wood processing. Many of them are especially vulnerable to a recession since they are tied to automobile manufacturing and to construction. Some of the areas analyzed also suffer from long-term decline in nonmanufacturing industries, such as fishing in the case of Eastport and Lewiston, Maine. The Maine and New Jersey areas are also characterized by low wages, high unemployment rates, little opportunity for young people, deterioration of housing stock, and a declining per capita income.

As discussed previously, analysis of the quantitative data available did not reveal a correlation between the sudden decline in the communities studied and drug abuse patterns, although in the case of alcohol, some of the data suggested such a correlation. However, it should be noted that the reliability of this finding is not only rendered suspect by the data limitations described in chapter 2, but also by the fact that several of the communities studied--Staunton, Waynesboro, and Buena Vista, Virginia--are not bust towns in the same sense as other communities considered. Although these communities were hard hit by the recession of 1974-75, they recovered quickly, and unlike the Maine and New Jersey communities, their economies today are relatively healthy.

Anecdotal evidence also failed to fully substantiate the hypothesis that individuals in bust communities turn increasingly to alcohol and other drugs as economic conditions worsen. Although this finding may also be influenced by the inclusion of several "non-bust" communities, the data, even for those places that warrant categorization as bust towns, generally fail to show consistently that substantial increases in substance abuse took place during the period following the major decline of 1974-1975.

Those increases that were noted primarily involved alcohol abuse and took place in the communities of Lewiston, Eastport, and Dover-Foxcroft, Maine; and Staunton, Virginia. In Lewiston and Eastport, alcohol-related hospital admissions peaked during the 1974-75 recession period. In Dover-Foxcroft, alcohol-related arrests reached an all-time high when unemployment tripled. Alcohol-related arrests also peaked in Eastport during the recession. Staunton witnessed the biggest per year increase in tax receipts for alcoholic beverages excluding wine during the 1974-75 recession, and alcohol-related arrests also peaked. Eastport, whose residents' per capita consumption of alcohol is much higher than most of the State, experienced a substantial rise in mental health admissions for alcohol problems in 1974-75.

Viewed in isolation, these data suggest a direct correlation between the economic declines and increases in alcohol abuse. However, other data for these same communities limit their significance. For example, in Staunton, one hospital's data showed no increase in alcohol admissions, while a second hospital's data indicated a clear upward trend over the period 1972-76. The level of alcohol purchases has remained relatively constant since the large upturn in 1974-75. In Lewiston, alcohol arrests began increasing in 1972, prior to the major decline in 1974-75; although the arrest rate continues to rise, there was no peak coincident with the decline. Data for Eastport and Dover-Foxcroft also reveal inconsistencies. Cirrhosis admissions have remained level in Eastport, while in Dover-Foxcroft DWI arrests started to increase before the decline, and alcohol-related hospital admissions show no discernible trends.

In addition, it must be considered that the other three bust communities evinced no trends toward increased alcohol abuse related to their economic declines. The situation in Florence Township, New Jersey, is difficult

to determine because of inadequate data; in fact, available information reveals little. For example, alcohol-related hospital admissions appear to have peaked in 1974-75, but this peak is probably attributable to a change in diagnostic reporting procedures. In the Virginia communities of Waynesboro and Buena Vista, data on alcohol arrests are characterized by considerable fluctuation in the first town and by steady increases, along with all other arrests, since before the decline in the latter area.

Drug abuse arrest data were generally available, and increases in such arrests occurred in Staunton, Eastport, and Waynesboro during the 1974-75 decline. However, this rise was caused not in response to problems associated with the recession, but as a result of stricter enforcement of marijuana laws. The impact of such local attitudes toward marijuana use on drug arrest statistics is revealed in the diametrically opposed trend in Lewiston and Dover-Foxcroft, where arrests decreased because of community pressure against enforcement of marijuana laws. There are cases where drug abuse data are correlated with the economic decline in Lewiston, where hospital admissions for abuse of prescription drugs and other drug-related problems peaked in 1975.

The lack of any conclusive evidence suggesting a link between the economic declines and increases in alcohol and other drug abuse should not be interpreted as meaning that such communities have relatively few substance abuse problems. On the contrary, the field work turned up substantial evidence that abuse of alcohol and other drugs is common in such areas. In Buena Vista, for example, the number of alcohol arrests doubled from 1970 to 1976, and an estimated 80 percent of the area's felony crimes are estimated to be related to alcohol. There were large increases in sales of prescription and over-the-counter drugs between 1972 and 1976 in Lewiston. DWI arrests increased 80 percent a year in Dover-Foxcroft between 1972 and 1977.

Prevention and treatment facilities were available in these communities, although staffing and funding levels were not always adequate. In Lewiston, some firms provide alcohol assistance programs for employees, but generally companies are unaware of the problem of alcoholism, which is estimated by one regional alcoholism council to cost the community $6 million a year. The Dover-Foxcroft case study suggested a lack of awareness about alcohol problems in the community. Treatment for abusers of prescription drugs was lacking in these areas, as is generally the case throughout the country.

Part 2. Highlights of Case Studies

Boom Towns

Grants/Milan/Valencia County, New Mexico

Economic Environment

Grants is the largest city in Valencia County. Milan is nearby, and both are close to large uranium mines. A decrease in uranium purchases by the Atomic Energy Commission in 1966 caused a decline in the population. That trend has been reversed since 1970, and the area has experienced significant growth since then. This can be shown by the following:

- Grants population increased 52 percent from 1970 to 1976, and it is projected that it will rise 88 percent by 1980.
- Valencia County employment has risen 44 percent from 1970 to 1976, with the number of mining jobs rising 119 percent in the same period.
- Total bank deposits increased by 180 percent from 1970 to 1975.
- Labor and proprietor's income increased by 77 percent from 1970 to 1975.
- Assessed valuation rose by 73 percent from 1970 to 1975.

Despite this rapid growth, however, unemployment has risen to 8.87 percent. This is because many new jobs require skilled workers and are taken by outsiders. No training has been provided for the local population.

Alcohol and Drug Abuse

Programs to deal with alcohol abuse in Grants are usually understaffed. The following demonstrate the magnitude of the alcohol problems:

- Alcohol-related arrests rose 400 percent from 1973 to 1977.
- DWI arrests rose 500 percent from 1973 to 1977.
- Protective custody arrests rose 5,000 percent from 1973 to 1977.

These figures all underestimate the extent of abuse, because they do not include similar arrests made in the Grants area by other agencies.

Drug arrests have increased since 1973 by 53 percent. After 1975, approximately 95 percent of those arrests were marijuana related. Drug-related hospital admissions have risen steadily since 1975.

Figure 5 depicts economic and substance abuse indicators for Grants/Milan/Valencia County for the period 1970-77.

Farmington/San Juan County, New Mexico

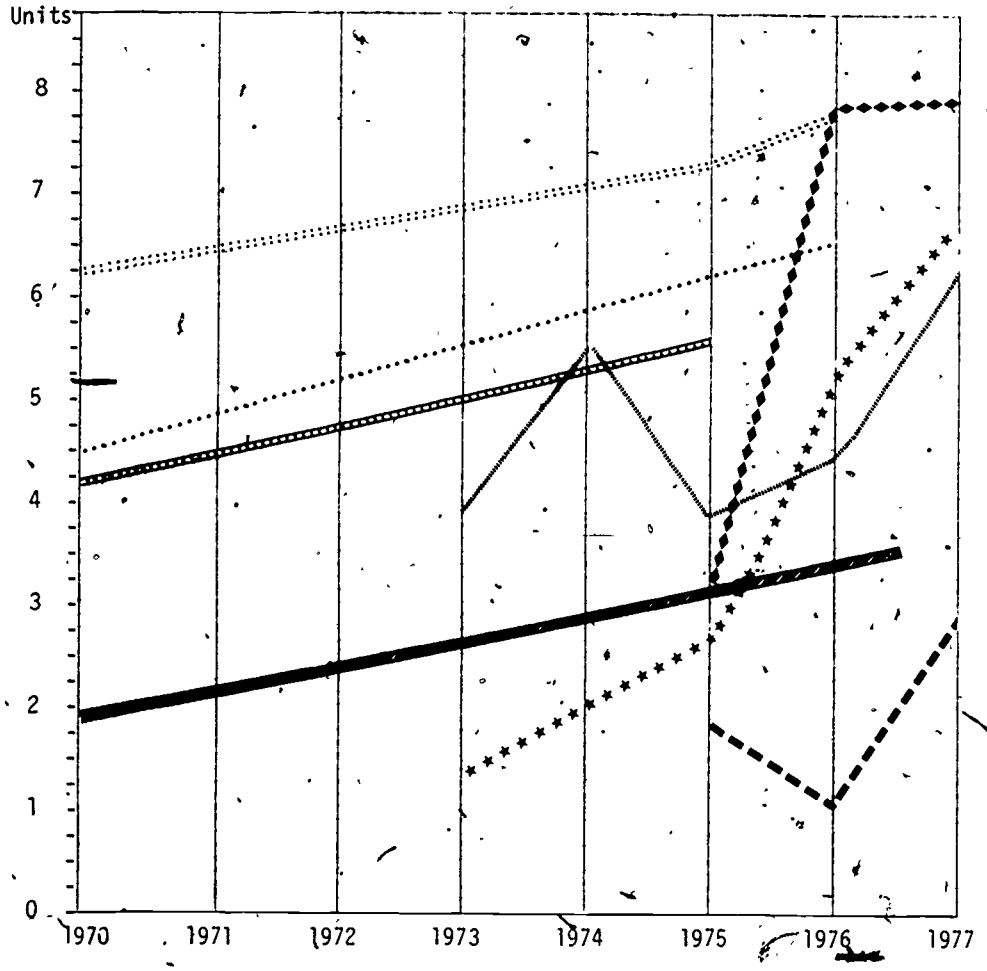
Economic Environment

Farmington, the major city in San Juan County, is familiar with the boom-bust economic cycle. Population and industry started to decline in the 1960s, but that trend was reversed in 1972 as extraction industries expanded. Indicators of the growth are:

- Farmington's population increased from 21,979 in 1970 to 27,892 in 1976, a 26 percent increase.
- County employment increased by 62 percent from 1970 to 1976.
- Total bank deposits (adjusted for inflation) increased by 81 percent from 1970 to 1976.
- Total adjusted labor and proprietors' income increased by 56 percent from 1970 to 1976.

A major problem is that Native Americans have not shared in the job boom. In 1970, the unemployment rate was 15.9 percent for Native American males and 5.7 percent for

FIGURE 5. ***Grants/Milan/Valencia County, New Mexico***
Economic and substance abuse indicators



LEGEND

..... Population, 1 unit=2,000

——— Drug arrests, 1 unit=20

- - - - Drug diagnoses, 1 unit=10

* * * * Alcohol arrests, 1 unit=200

◆◆◆◆ Alcohol diagnoses, 1 unit=10

▰▰▰▰ Total bank deposits, 1 unit=$10,000,000 (adjusted to 1972 dollars by the Gross National Product Deflator)

Assessed valuation, 1 unit=$10,000,000 (adjusted to 1967 dollars by the housing component of the Consumer Price Index)

Labor and proprietors' income, 1 unit=$10,000,000 (adjusted to 1967 dollars by the Consumer Price Index)

NOTE.--Not all data were available for all years.

non-Native Americans. Navajo per capita income remains about 20 percent of the U.S. average per capita income.

Like other boom communities, Farmington is plagued by a scarcity of quality housing. Sixty-eight percent of reservation housing is substandard. Other services, such as medical services and the public school system, are understaffed.

Alcohol and Drug Abuse

Alcohol is a very serious problem for the Farmington community. Although alcohol arrests have declined overall since 1975, the problem is still significant, as the following facts indicate:

- Arrests for illegal sale or possession of alcohol by minors have increased by 1,343 percent since 1972.
- The county has the third highest DWI rate in the State and the second highest automobile fatality rate.
- Farmington detectives estimate that 65 percent of all violent crimes are due to alcohol.
- Alcohol diagnoses at the county hospital increased 138 percent from 1972 to 1977.

Drug arrests rose steadily until 1977, when Farmington police eased their policy toward enforcement of drug laws. Approximately 83 percent of all arrests are marijuana related. Hospital data indicate a growing abuse of amphetamines and barbiturates. Clearly, both alcohol and drug abuse are significant problems in the Farmington community.

Figure 6 depicts available economic indicators and substance abuse indicators for Farmington/San Juan County for the period 1970-77.

Gallup/McKinley County, New Mexico

Economic Environment

McKinley County includes most of the Grants Uranium Belt, a mineral-rich geological band that extends from Gallup eastward to the Rio Riverla and is estimated to contain almost half of all U.S. uranium resources. In 1974, 43 percent of all U.S. uranium production (valued at slightly more than $100 million) came from this region. Coal fields in the area are also being exploited. With the surge in the development of these minerals, the county has been growing rapidly. Specifically:

- Mining employment rose 125 percent between 1974 and 1977, and is expected to rise another 100 percent by 1980.
- Total labor and proprietor's income (adjusted for inflation) has increased by 34 percent from 1970 to 1976.
- Total adjusted bank deposits increased by 32 percent from 1970 to 1976.

The benefits of the boom have not been distributed equally, however. No significant efforts are being made to train the Native American labor surplus, and immigrants are expected to take 90 percent of the jobs by the early 1980s. The county's public services are also put under great strain.

Alcohol and Drug Abuse

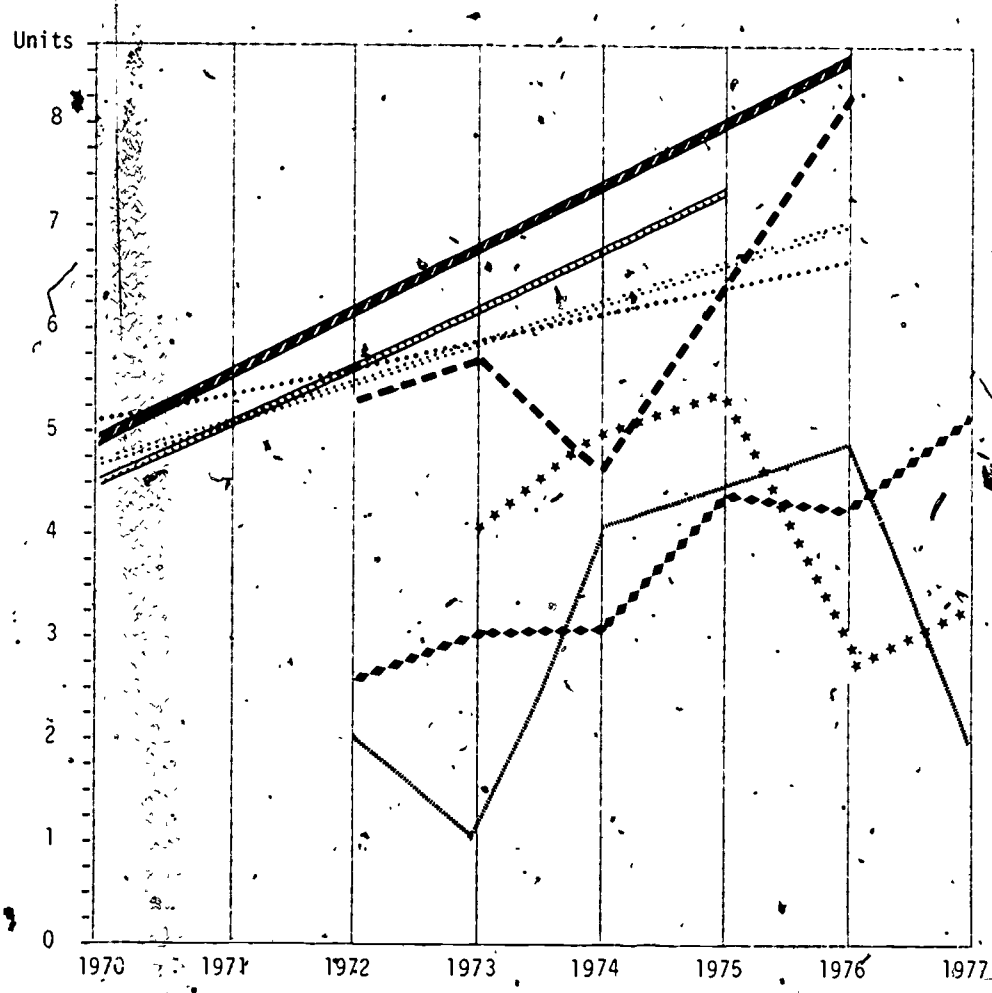
Alcohol abuse is a very serious problem in Gallup, especially for the Native American community. Probation officers estimated that 75 percent of all Gallup arrests were alcohol related, and 65 percent of juvenile probations involved alcohol. Other indicators of substance abuse include:

- Police estimate that 50 percent of their budget is spent on protective custody cases, which have increased 38 percent since 1974.
- DWI arrests have increased by 50 percent (1974-76), despite the easing of enforcement by local police.
- McKinley County has the highest level of DWI arrests and traffic fatalities in the State.

Although the Native American drinking problem has remained relatively stable, hospital data reveal that alcohol-related admissions for non-Native-Americans increased 173 percent from 1973 to 1977. The area has several well-organized treatment centers.

Drug arrests have increased since 1972, with almost all the drug abusers being non-Native-American. Eighty percent of those arrests have been marijuana related. Hospital data reveal no real trends for the non-Native-Americans. The Indian Hospital has a higher rate of drug admissions; many of them are poisonings and analgesic misuse. The data indicate that both drug and alcohol abuse are steadily increasing and will probably grow worse with the continuing boom.

FIGURE 6. ***Farmington/San Juan County, New Mexico***
Economic and substance abuse indicators



LEGEND

..... Population, 1 unit=10,000

——— Drug arrests, 1 unit=50

- - - - Drug diagnoses, 1 unit=10

★ ★ ★ ★ Alcohol arrests, 1 unit=1,000

◆◆◆◆ Alcohol diagnoses, 1 unit=50

Total bank deposits, 1 unit=$20,000,000 (adjusted to 1972 dollars by the Gross National Product Deflator)

Assessed valuation, 1 unit=$30,000,000 (adjusted to 1967 dollars by the housing component of the Consumer Price Index)

Labor and proprietors' income, 1 unit=$20,000,000 (adjusted to 1967 dollars by the Consumer Price Index)

NOTE.--Not all data were available for all years.

Figure 7 depicts economic indicators and substance abuse indicators for Gallup/McKinley County for the period 1970-77.

Hayden/Routt County, Colorado

Economic Environment

Hayden, in Routt County, was primarily an agricultural community in earlier years. However, its proximity to the Yampa coal field has tied it to energy-related industries. Coal production has increased steadily since the early 1960s, and is expected to continue this trend in the future. The extent of this economic boom is shown by the following indicators:

- Hayden population increased 103 percent from 1970 to 1977 with Routt County population increasing 94 percent in the same period.
- Routt County employment rose by 144 percent from 1970 to 1977.
- Routt County assessed valuation (adjusted for inflation) rose by 87 percent from 1972 to 1977.

Hayden, like most other boom communities, suffers from severe housing shortages, accompanied by skyrocketing housing and land prices.

Alcohol and Drug Abuse

Alcohol use in Hayden is common and is often the major form of recreation. Total alcohol-related arrests doubled from 1973 to 1977, although DWI rates remained relatively stable. The alcohol-related diagnoses at the county hospital vary yearly and show no steady trends.

Drug abuse appears to be much less of a problem than does alcohol. Between 1972 and 1977 there were only five drug-related arrests. Records at the county hospital show that the number of drug diagnoses varies from year to year, but still remains relatively small.

Figure 8 depicts economic indicators and substance abuse indicators for Hayden/Routt County for the period 1970-77.

Carbondale/Garfield County, Colorado

Economic Environment

Carbondale, located in Garfield County, has traditionally relied on coal mining and farming for employment ever since it was settled in the 1880s. Since 1970, the economy has been strongly influenced by tourism, especially the popularity of nearby Aspen, and even more so by mining. The extent of the boom is shown by the following.

- Carbondale's population increased 180 percent from 1970 to 1977. In the same period county employment rose 34 percent.
- Assessed valuation (adjusted) rose 98 percent from 1972 to 1977.

Public services have expanded because of this growth, and Carbondale has also begun to diversify its economic base. One serious problem with the boom has been the severe shortage of housing. Consequently, property and housing values have skyrocketed.

Alcohol and Drug Abuse

Drinking is an accepted and common form of recreation in Carbondale. Alcohol arrests have risen significantly along with the economic prosperity. Specifically,

- DWI arrests tripled between 1972 and 1977.
- Alcohol-related arrests for Garfield County increased 238 percent from 1972 to 1977.

However, alcohol-related hospital diagnoses remained relatively stable from 1974 to 1977.

Drug use does not appear to be a significant problem. Carbondale has only two or three drug arrests each year. Hospital diagnoses indicate a prevalence of barbiturate and tranquilizer abuse, but there are no apparent trends from the available records.

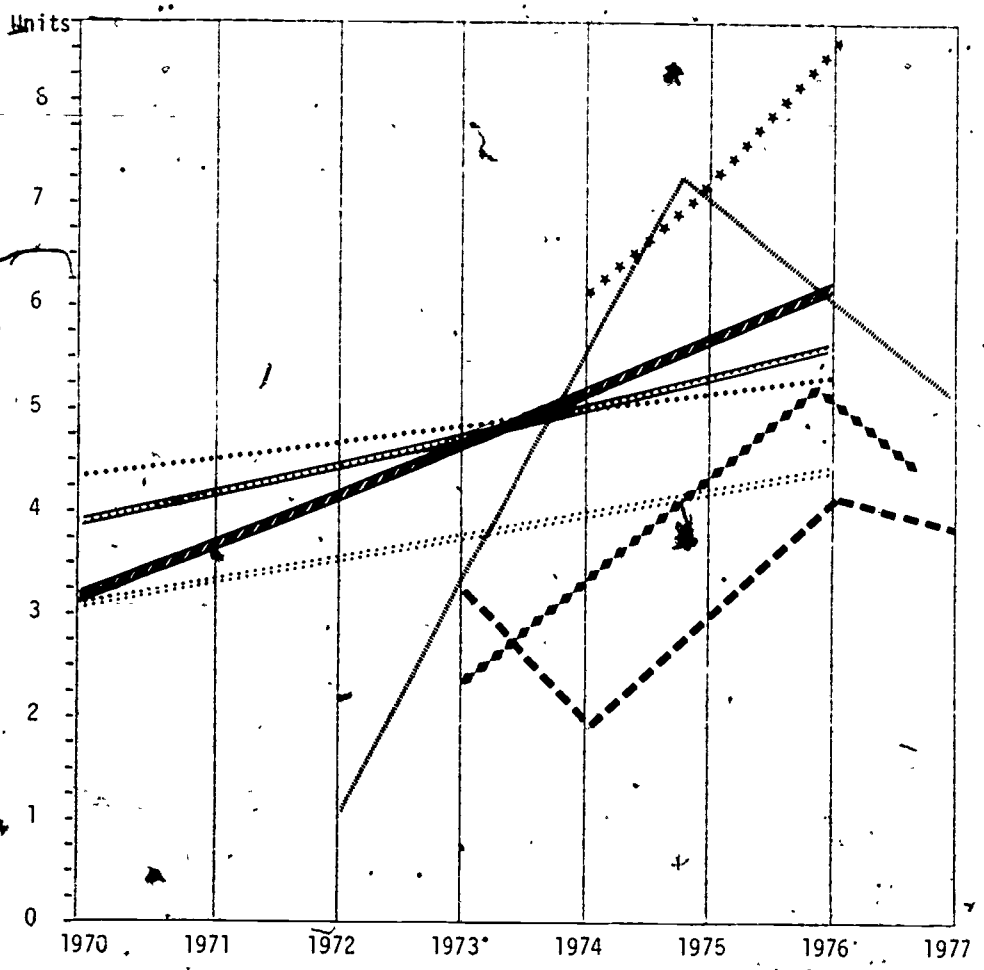
Figure 9 depicts economic and substance abuse indicators for Carbondale and Garfield County for the period 1970-77.

Craig/Moffat County, Colorado

Economic Environment

Located in Moffat County, Craig has been the traditional service center of the

FIGURE 7. *Gallup/McKinley County, New Mexico*
Economic and substance abuse indicators

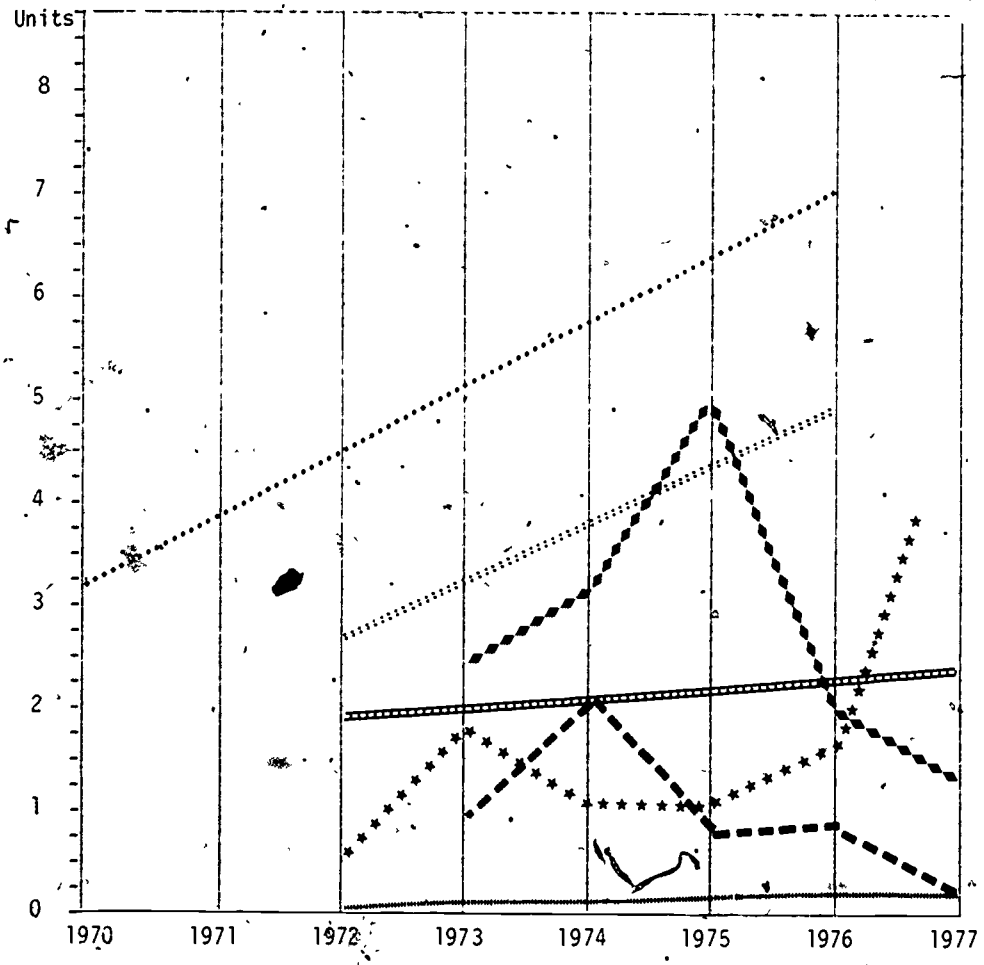


LEGEND

- ..... Population, 1 unit=10,000
- ——— Drug arrests, 1 unit=10
- - - - Drug diagnoses, 1 unit=10
- ★★★★ Alcohol arrests, 1 unit=100
- ◆◆◆◆ Alcohol diagnoses, 1 unit=100
- ▨▨▨ Total bank deposits, 1 unit=$20,000,000 (adjusted to 1972 dollars by the Gross National Product Deflator)
- ⋯⋯ Assessed valuation, 1 unit=$20,000,000 (adjusted to 1967 dollars by the housing component of the Consumer Price Index)
- ═══ Labor and proprietors' income, 1 unit=$20,000,000 (adjusted to 1967 dollars by the Consumer Price Index)

NOTE.--Not all data were available for all years.

FIGURE 8. ***Hayden/Routt County, Colorado***
Economic and substance abuse indicators



LEGEND

..... Population, 1 unit=2,000

——— Drug arrests, 1 unit=1

– – – – Drug diagnoses, 1 unit=10

★ ★ ★ ★ ★ Alcohol arrests, 1 unit=10

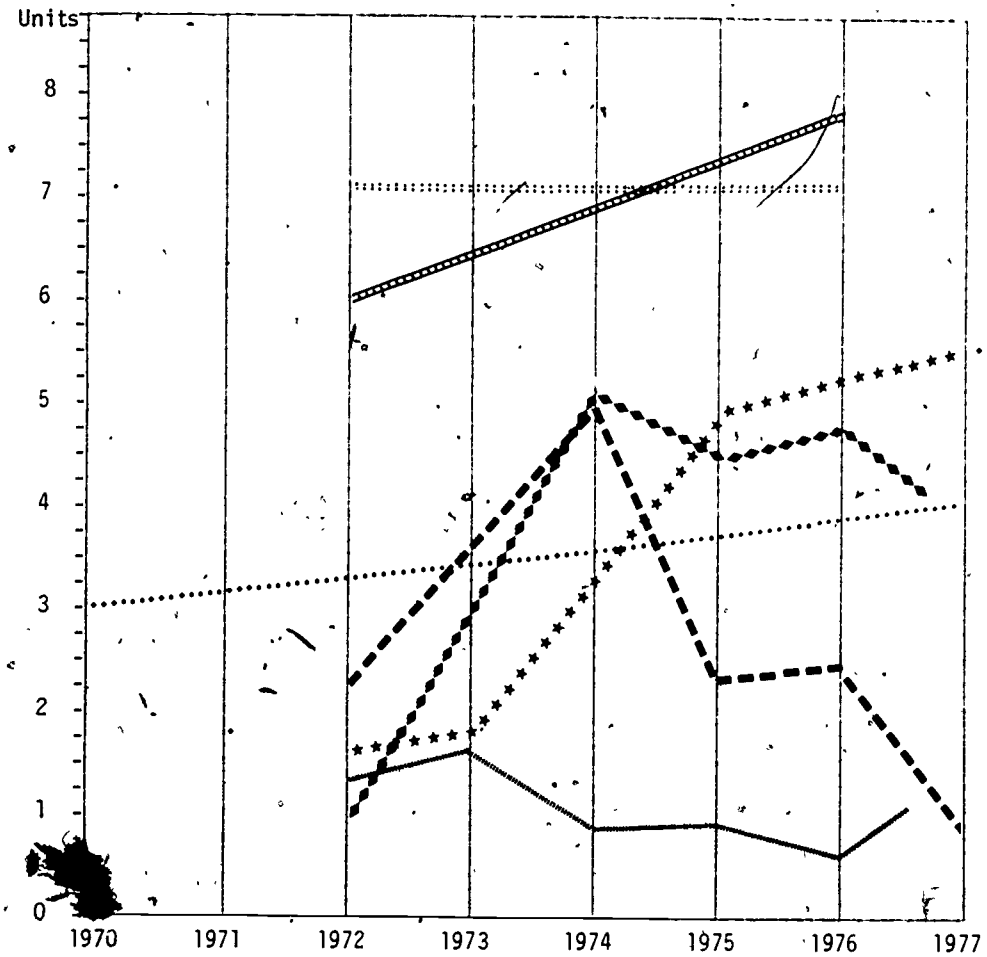
◆ ◆ ◆ ◆ ◆ Alcohol diagnoses, 1 unit=10

:::::: Assessed valuation, 1 unit=$10,000,000 (adjusted to 1967 dollars by the housing component of the Consumer Price Index)

═══ Labor and proprietors' income, 1 unit=$10,000,000 (adjusted to 1967 dollars by the Consumer Price Index)

NOTE.--Not all data were available for all years.

FIGURE 9. ***Carbondale/Garfield County, Colorado***
Economic and substance abuse indicators



LEGEND

..... Population, 1 unit=5,000

——— Drug arrests, 1 unit=10

– – – – Drug diagnoses, 1 unit=10

* * * * * Alcohol arrests, 1 unit=100

◆ ◆ ◆ ◆ ◆ Alcohol diagnoses, 1 unit=25

Assessed valuation, 1 unit=$5,000,000 (adjusted to 1967 dollars by the housing component of the Consumer Price Index)

Labor and proprietors' income, 1 unit=$5,000,000 (adjusted to 1967 dollars by the Consumer Price Index)

NOTE.--Not all data were available for all years.

agricultural and ranching area in northwest Colorado for 100 years. Responding to the changes in national energy policy, major corporations began expanding existing energy industries in northwest Colorado in the early 1970s, affecting Craig's economic situation. Specifically,

- Moffat County population increased more than 100 percent from 1970 to 1977, from 6,525 to 13,300.
- Bank deposits in Moffat County State and national banks increased by 73 percent (adjusted for inflation) during the period 1970-76.
- Assessed valuation (adjusted) increased by 62 percent during the period 1970-76.

Problems caused by Craig's rapid growth include a shortage of adequate housing and other services.

Alcohol and Drug Abuse

Craig has been an isolated, self-sufficient town for many years, where heavy drinking has always been a part of the frontier life of cowboys and ranchers. Data collected and interviews conducted in Craig show alcohol abuse to be a major problem, as illustrated by the following:

- The district attorney reported that 70 percent of all crimes dealt with involve alcohol.
- Alcohol-related admissions to the hospital in Craig increased 100 percent between 1972 and 1976 (but, as expected, dropped back in 1977 when a separate detoxification center opened).

Drug abuse trends are more difficult to document than alcohol abuse. As illustrated by figure 10, drug-related arrests show no definite trend. Hospital data, however, show that a problem does exist, with drug-related hospital admissions increasing 100 percent since 1972.

Figure 10 depicts economic and substance abuse indicators for Craig/Moffat County for the period 1970-77.

Rangely/Rio Blanco County, Colorado

Economic Environment

Rangely, in Rio Blanco County, is located near the Rangely-Weber oil field, the largest in the State of Colorado. The town was created from nothing to serve the oil and gas boom in the area immediately after World War II. Its population is primarily young, male, and transient. Development of an oil shale field will probably increase Rangely's rate of growth. One indicator of the boom is that Rangely's assessed valuation (adjusted) increased 52 percent from 1970 to 1977, with Rio Blanco County assessed valuation (adjusted) increasing 124 percent in the same period. Despite this, per capita income still dropped 12 percent from 1970 to 1977; and total labor and proprietor's income fell 5 percent in the same period. The development of oil shale tracts in the area will probably reverse this trend.

The housing situation in Rangely is already extremely poor. Overcrowding and lack of privacy are major problems for the community's mental health. This is compounded by the fact that provision of human services has been almost completely ignored.

Alcohol and Drug Abuse

Rangely has a reputation as a hard drinking, rough community. Drinking is the chief recreation and has always been a part of the town's values. Consequently, alcohol abuse is a significant problem in Rangely, as documented by the following:

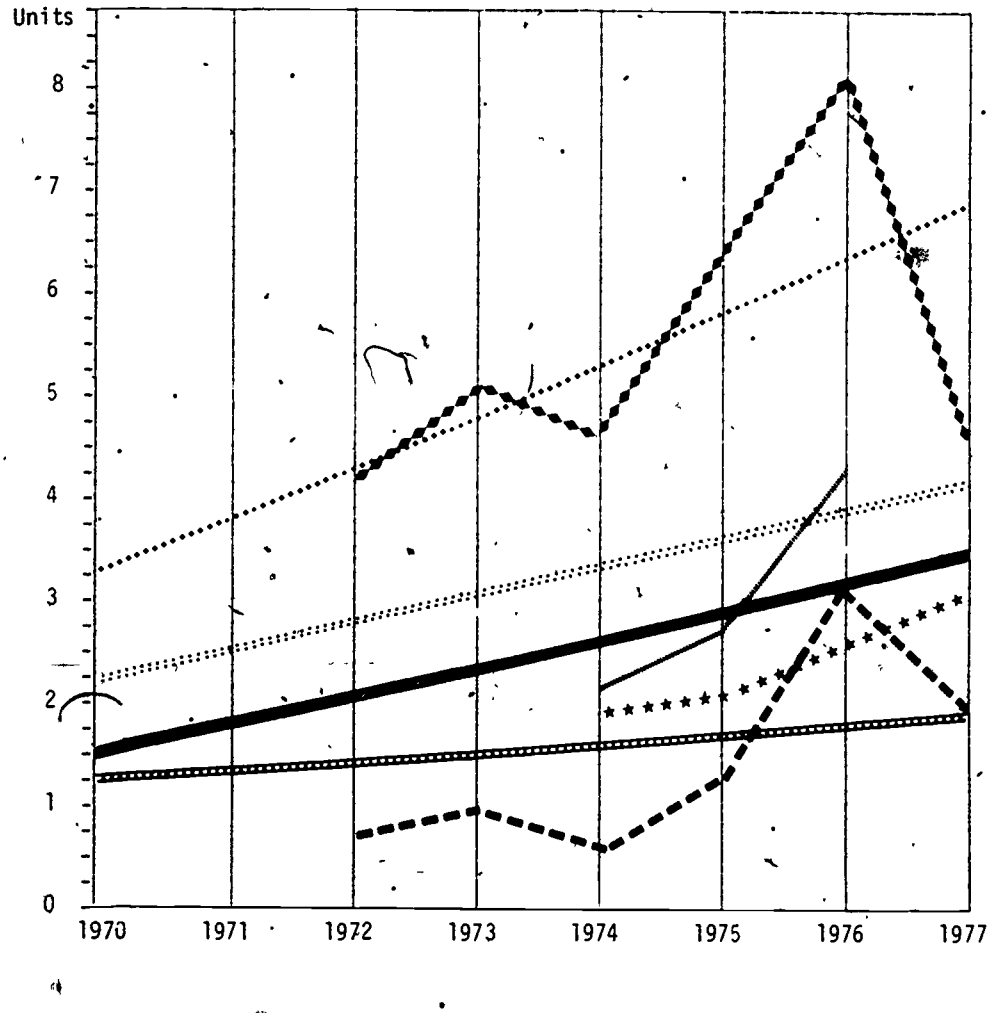
- Fifty percent of all crimes recorded in Rangely in 1977 were alcohol offenses.
- Driving-while-intoxicated arrests for Rio Blanco County doubled from 1973 to 1977.

The data on alcohol-related diagnoses is inconclusive. Hospital staff estimate that 25 percent of emergency room admissions are alcohol-related.

Drug abuse does not appear to be a significant problem in Rangely. Police records of drug arrests are practically nonexistent, and hospital records are not adequate enough to draw any conclusions. Apparently, alcohol abuse is a much more significant problem in this community.

Figure 11 depicts economic and substance abuse indicators for Rangely/Rio Blanco County for the period 1970-77.

FIGURE 10. ***Craig/Moffat County, Colorado***
Economic and substance abuse indicators



LEGEND

..... Population, 1 unit=2,000

——— Drug arrests, 1 unit=10

• — • — Drug diagnoses, 1 unit=10

* * * * Alcohol arrests, 1 unit=100

◆◆◆◆ Alcohol diagnoses, 1 unit=10

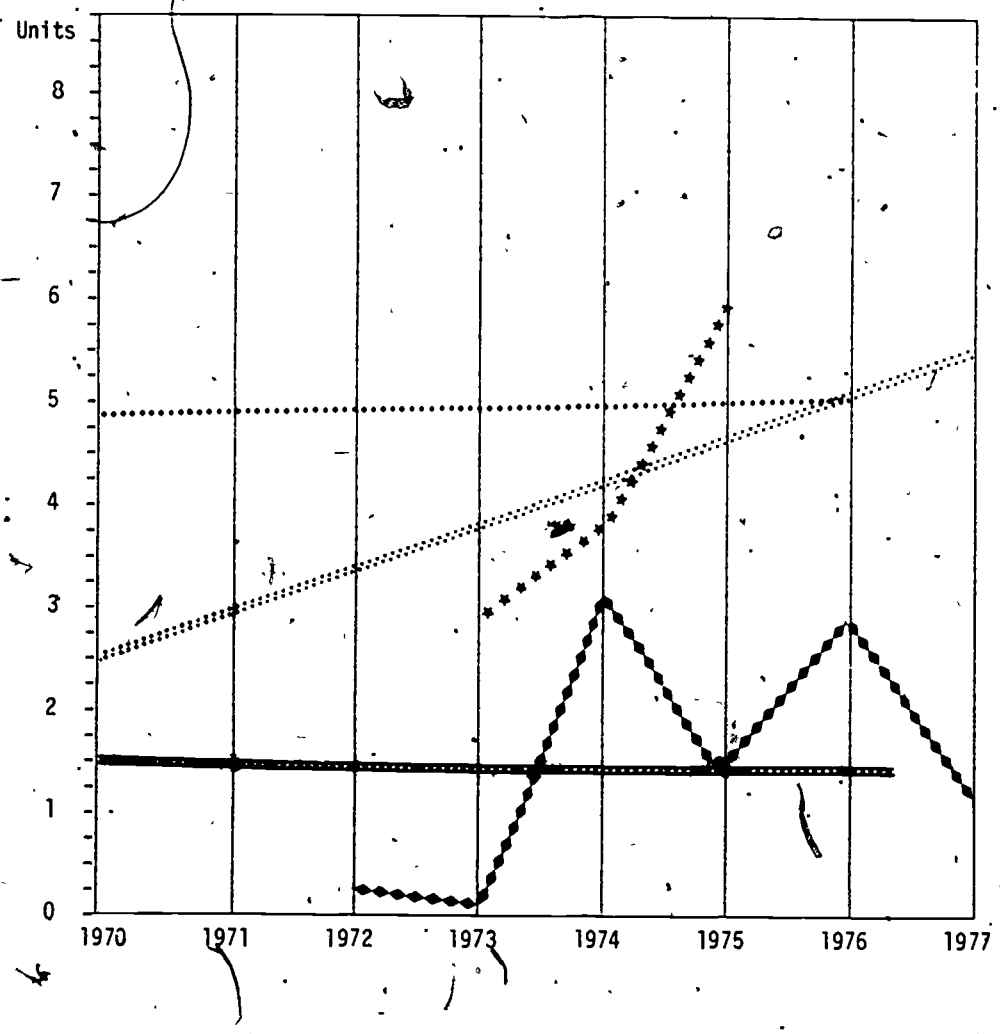
▰▰▰▰ Total bank deposits, 1 unit=$10,000,000 (adjusted to 1972 dollars by the Gross National Product Deflator)

..... Assessed valuation, 1 unit=$10,000,000 (adjusted to 1967 dollars by the housing component of the Consumer Price Index)

═══ Labor and proprietors' income, 1 unit=$10,000,000 (adjusted to 1967 dollars by the Consumer Price Index).

NOTE.--Not all data were available for all years.

FIGURE 11. ***Rangely/Rio Blanco County, Colorado***
Economic and substance abuse indicators



LEGEND

..... Population, 1 unit=10,000

——— Drug arrests, not available

- - - - Drug diagnoses, not available

* * * * Alcohol arrests (DWI only), 1 unit=10

●●●● Alcohol diagnoses, 1 unit=5

,,,,,,,,,, Assessed valuation, 1 unit=$20,000,000 (adjusted to 1967 dollars by the housing component of the Consumer Price Index)

▬▬▬ Labor and proprietors' income, 1 unit=$10,000,000 (adjusted to 1967 dollars by the Consumer Price Index)

NOTE.--Not all data were available for all years.

Suddenly Depressed Communities

Florence Township/Burlington County, New Jersey

Economic Environment

Florence Township, located in the Delaware River Valley, has a large commitment to farming and dairy production. Industry, retail trade, services, and government are other major sources of employment. Paralleling the 1974 recession, Burlington County suffered a major slowdown in economic activity. Between October 1974 and September 1975, upwards of 1,500 jobs were terminated in the county. The recession had its most severe impact on the primary metals industry, where factory employment levels fell an estimated 35 percent since 1972. Slack demand, coupled with increasing market penetration by foreign producers, compounded the already existing structural problems of the steel industry. The shutdown of the Colorado Fuel and Iron plant in Roebling, New Jersey (Florence Township), in June 1974 idled approximately 1,400 workers and accounted for 25 percent of the total decline in manufacturing employment in the Camden Labor Market Area, of which Burlington County is a part.

Further indicators of the downturn include the following:

- Unemployment rose from 5 percent in 1970 to 9.9 percent in 1975 in Burlington County. Florence Township had 14 percent unemployment in 1976.
- Building permits issued declined by 69 percent from 1972 to 1975 partly as a result of a housing moratorium declared by the township.

Alcohol and Drug Abuse

Drug arrests rose steadily from 1974 to 1977. Overall, however, the total number of drug arrests is small and does not appear to be a significant problem.

Alcohol-related hospital diagnoses have remained relatively stable, except for a rise in 1975-76. The data seem to indicate that alcohol abuse in the township is not increasing very much, nor is it an exceptionally serious problem.

Figure 12 depicts economic and substance abuse indicators for Florence Township/Burlington County for the period 1970-77.

Buena Vista/Rockbridge County, Virginia

Economic Environment

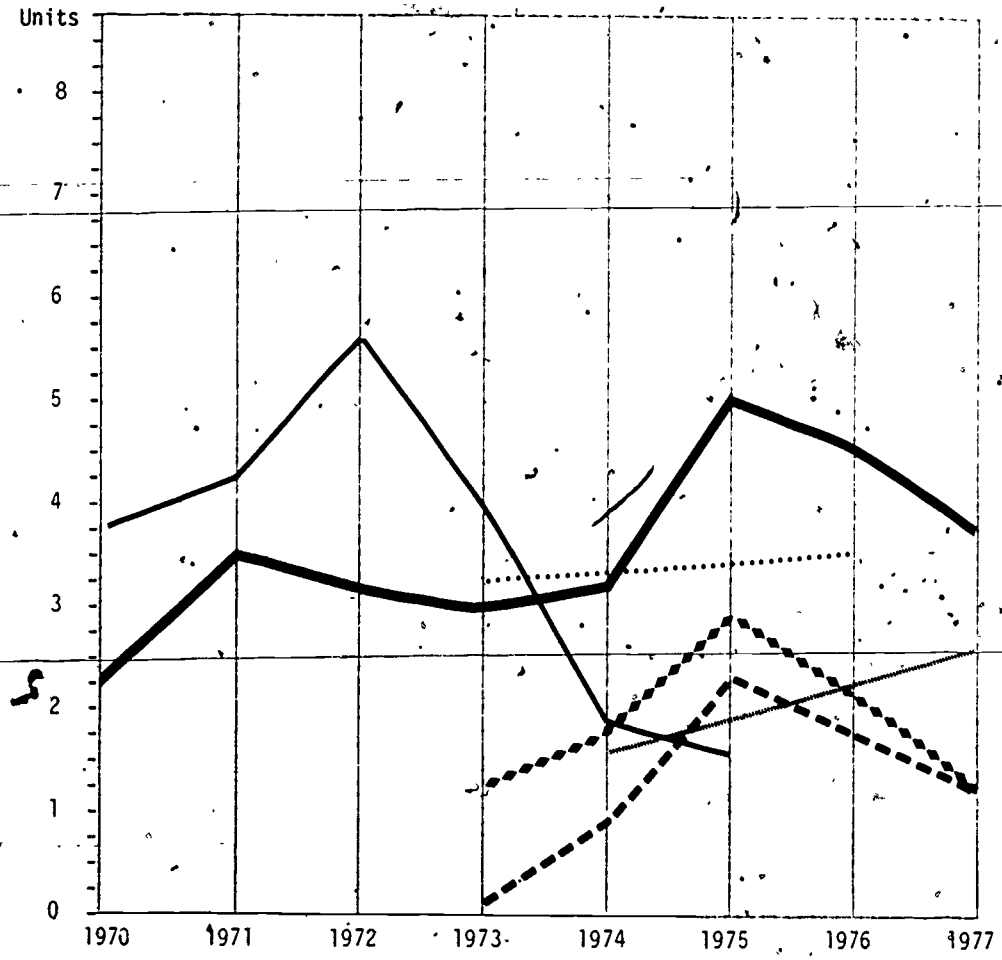
Buena Vista is one of two independent cities located within the boundaries of Rockbridge County, and has a relatively stable population. Unlike neighboring areas which rely on seasonal tourism, most of Buena Vista's employment stems from manufacturing. When manufacturing declined in the 1974-75 recession, Buena Vista was particularly hard hit. This was compounded by the lack of diversification in its manufacturing activity. The effects of this slump are demonstrated by the following:

- Building permits issued in 1977-78 dropped a dramatic 92 percent from the 1973-74 high.
- Unemployment rose 290 percent from 3.1 percent in 1973 to 12.1 percent in 1975, nearly 4 percent above the national rate.
- Adjusted total labor and proprietors' income for Rockbridge County declined by 8 percent from 1969 to 1974.

Alcohol and Drug Abuse

Due to the small size of the city and the police department, there are extensive police-community ties. This often lowers the recorded number of arrests. However, enforcement policies relative to alcohol use in Buena Vista have not changed over the years, so the available statistics can accurately reflect trends in the city's alcohol abuse.

FIGURE 12. ***Florence Township/Burlington County, New Jersey Economic and substance abuse indicators***



LEGEND

- ..... Population, 1 unit=100,000
- ▬▬▬ Unemployment rate, 1 unit=2 percent
- ——— Building permits, 1 unit=1,000
- ——— Drug arrests, 1 unit=10
- ▬ ▬ ▬ Drug program intake, 1 unit=50
- ★★★★★ Alcohol arrests, inadequate data
- ◆◆◆◆◆ Alcohol diagnoses, 1 unit=100

NOTE.--Not all data were available for all years.

The data collected show that alcohol abuse is a major problem in Buena Vista. Specifically,

- Between 40 and 56 percent of the arrests in the last 6 years have been alcohol related;
- Alcohol-related arrests increased 99 percent between 1972 and 1976, and public drunkenness arrests have increased 106 percent in the same period;
- Disorderly conduct arrests increased 156 percent from 1972 to 1976.

Drug abuse appears to be a much less serious problem in Buena Vista. Yearly arrest figures are very low and almost all involved the possession of marijuana. Although erratic, drug overdose hospital admissions have increased from 1972 to 1977.

Figure 13 depicts economic and substance abuse indicators for Buena Vista/Rockbridge County for the period 1970-77.

Staunton/Augusta County, Virginia

Economic Environment

Located in Augusta County, Staunton represents the highly industrial and urbanized section of the Shenandoah Valley Region. The community as a whole is stable and mature; the diversity of its employment made Staunton the last of the neighboring cities to be hit by the recession. However, local cutbacks were severe. American Safety Razor Company, 50 percent of whose personnel reside in Staunton, cut back some 50 percent of its work force between 1973 and 1975. A Westinghouse plant, 30 percent of whose employees resided in Staunton, cut back its work force nearly 50 percent because of the recession. Finally, Stanley-Mead Furniture, which had a plant in Staunton and a plant in Waynesboro, shut down the Staunton plant in 1974 due to a decrease in home furniture needs related to the housing slumps. This was seen as a particularly important loss to the Staunton community, as 60 percent of the plant's employees resided in Staunton; many had little education. While the Waynesboro plant absorbed some workers, many others who were already in their late fifties filtered into Staunton's unemployed ranks. Additional effects of the recession are shown by the following phenomena:

- The number of building permits issued declined by 32 percent from 1974 to 1975.
- Unemployment rose from 4.7 percent in 1973 to 9.2 percent in 1975.

One significant problem resulting from this is a scarcity of lower income publicly subsidized housing.

Alcohol and Drug Abuse

Staunton exhibits high arrest rates for substance abuse. However, these figures are characterized by a high degree of fluctuation. Alcohol arrests reached a high in 1974, and climbed almost as high in 1977. Alcohol-related hospital admissions have steadily declined since 1974.

Drug arrests rose 266 percent from 1972 to 1977. However, most of the arrests were for marijuana, and may be explained by more detailed enforcement of drug laws. Drug-related admissions at area hospitals are almost nonexistent.

Figure 14 depicts economic and substance abuse indicators for Staunton/Augusta County for the period 1970-77.

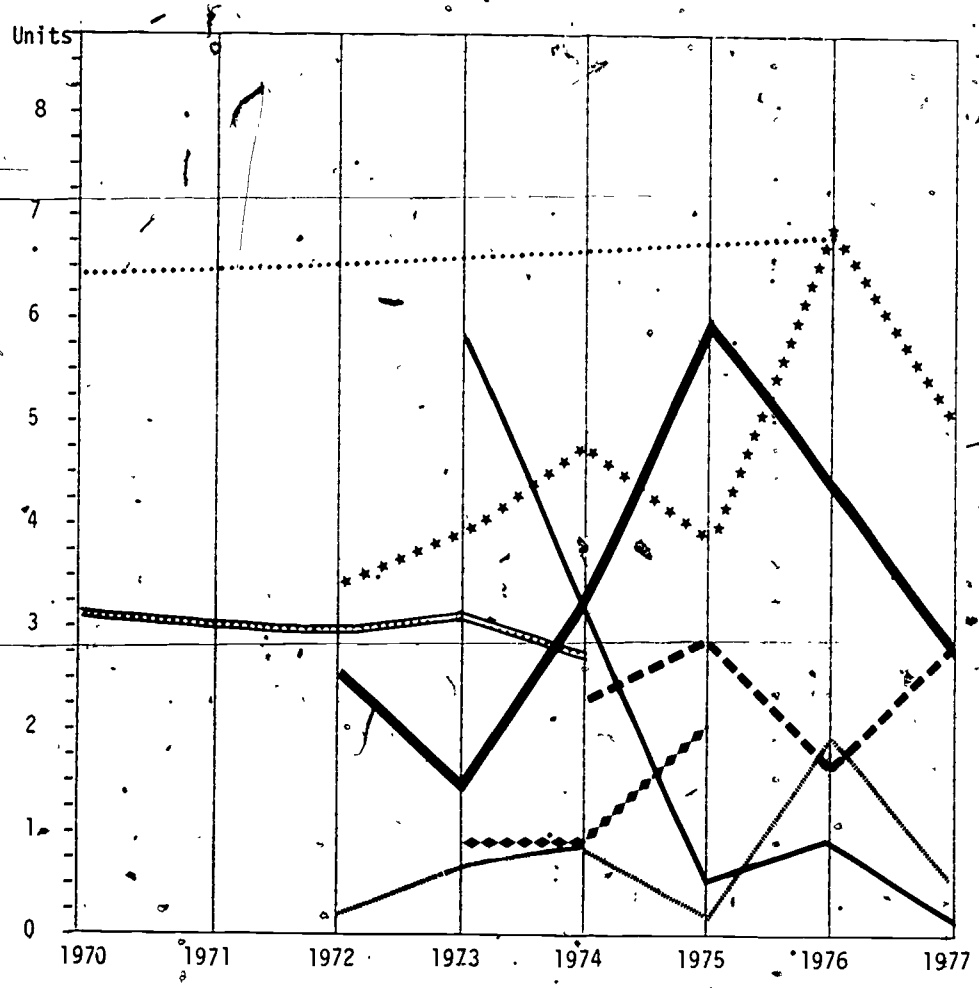
Waynesboro/Augusta County, Virginia

Economic Environment

Waynesboro, Augusta County, is located in the Shenandoah Valley region in Virginia. Its population is relatively stable and represents one of the more urbanized sections of the valley region. Despite the diversification of its industries, Waynesboro was hard hit by the 1974-75 recession. Thiokol Corporation, a plant producing polypropylene fiber used for LD ribbons, cigarette ripoff ribbons, and carpet backings suffered significant losses in 1975 and 1976, primarily due to a decrease in carpeting needs as a result of the decline in new construction activity. Stanley-Mead, a case goods furniture producer, was similarly affected by the housing construction slump; in 1974, they cut back approximately 20 percent of their work force. In addition:

- Unemployment rose to 12.1 percent in 1975, a 95 percent increase over the 6.2 percent rate for 1973.
- The number of building permits issued dropped 37 percent from 89 in 1973 to 56 in 1975.

FIGURE 13. ***Buena Vista/Rockbridge County, Virginia***
Economic and substance abuse indicators

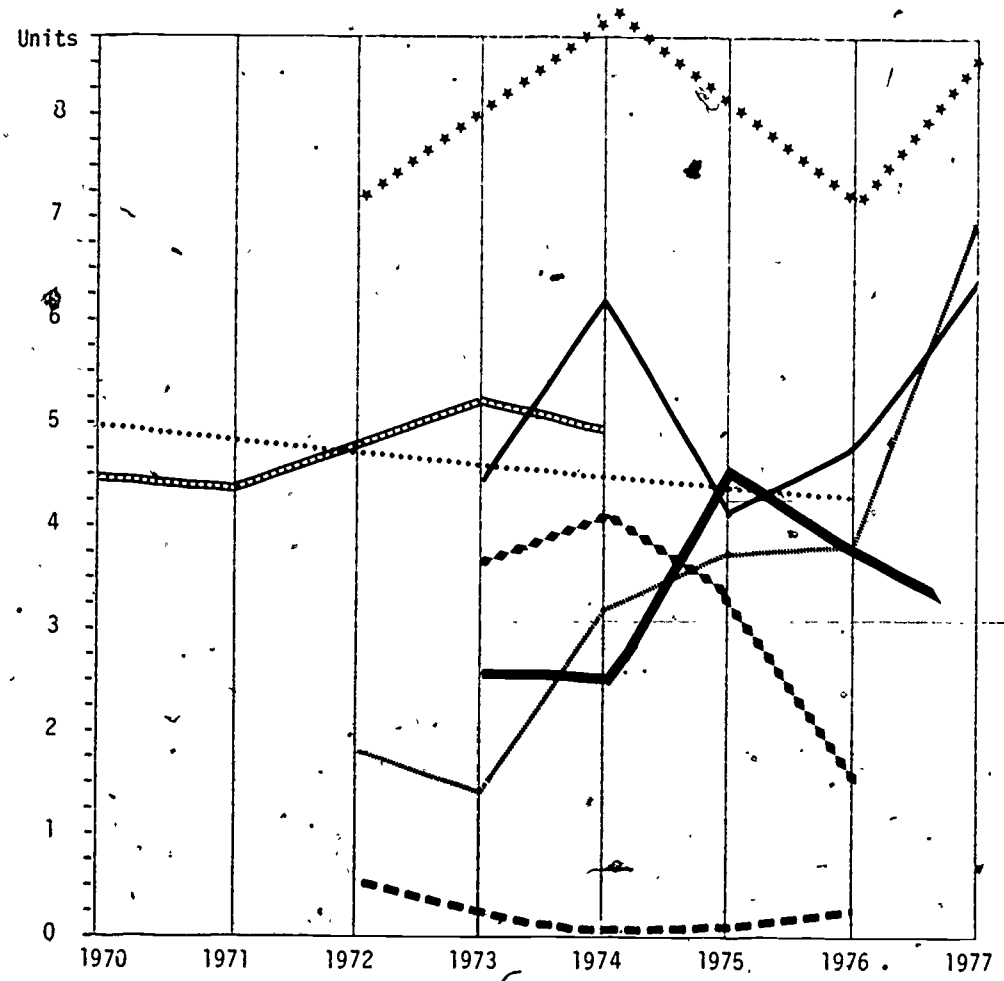


LEGEND

- ..... Population, 1 unit=1,000
- ——— Building permits, 1 unit=10
- ▬▬▬ Unemployment rate, 1 unit=2 percent
- ——— Drug arrests, 1 unit=10
- - - - Drug diagnoses, 1 unit=5
- ★★★★★ Alcohol arrests, 1 unit=50
- ◆◆◆◆◆ Alcohol diagnoses, 1 unit=5
- ——— Labor and proprietors' income, 1 unit=$1,000,000 (adjusted to 1967 dollars by the Consumer Price Index)

NOTE.--All data were not available for all years.

FIGURE 14. ***Staunton/Augusta County, Virginia***
Economic and substance abuse indicators



LEGEND

- ..... Population, 1 unit=5,000
- ▬▬▬ Unemployment rate, 1 unit=2 percent
- ——— Building permits, 1 unit=10
- ——— Drug arrests, 1 unit=10
- ▪▬▪▬▪ Drug diagnoses, 1 unit=5
- ★★★★★ Alcohol arrests, 1 unit=100
- ●●●●● Alcohol diagnoses, 1 unit=10
- ═══ Labor and proprietors' income, 1 unit=$20,000,000 (adjusted to 1967 dollars by the Consumer Price Index)

NOTE.--Not all data were available for all years.

Alcohol and Drug Abuse

The drug and alcohol arrest rates for Waynesboro are highly erratic and do not have any clear explanation.

Although enforcement policies have not changed over the years, the alcohol arrest trends vary. DWI arrests have been on the decline since 1972-73, but have risen sharply in 1977. The 1972 peak for public drunkenness arrests may be explained by the large influx of out-of-state industrial workers that year. Alcohol-related diagnoses have been on the decline at area hospitals since 1973.

Drug arrests in Waynesboro are primarily marijuana related. The 1974-75 peaks were due to an intense enforcement campaign which was discontinued by 1976. Drug-related hospital admissions are almost nonexistent in Waynesboro. In this instance there does not seem to be any correlation between substance abuse and the economic dislocation.

Figure 15 depicts economic and substance abuse indicators for Waynesboro/Augusta County for the period 1970-77.

Alcohol and Drug Abuse

In the environment of Dover-Foxcroft, drinking is often the only affordable recreation and the way to pass the time if a person is unemployed. The extent of the alcohol problem can be demonstrated by the following facts:

- OUI (operating under the influence) arrests have risen 250 percent, from 1972 to 1977.
- Alcohol-related diagnoses at the county hospital have tripled from 1973 to 1977.

Drug arrest trends have been on the decline since 1975. Almost all of the arrests are marijuana related, and public pressure on police has decreased the arrest rate. Drug-related hospital admissions are few and erratic. Clearly, alcohol abuse is a much more serious problem in Dover-Foxcroft today.

Figure 16 depicts economic and substance abuse indicators for Dover-Foxcroft/ Piscataquis County for the period 1970-77.

Dover-Foxcroft/Piscataquis County, Maine

Economic Environment

Dover-Foxcroft, located in Piscataquis County, began losing its traditional sources of wealth and employment in the early 1950s with the closing of area woolen mills. Efforts by local and regional officials helped to expand and diversify the area's economic base throughout the 1960s. The largest employers--the traditional industries--remained vulnerable to economic dislocation, however. The area's economy was devastated in the 1974-75 recession. Specifically,

- 1,240 jobs were lost from primary manufacturing alone.
- Unemployment rose from 6.3 percent in 1974 to 17.7 percent in 1975.

Officials are actively seeking new industries, but there remains serious doubt about whether the area's traditional economic activities can be revived. There are also strong barriers to securing the necessary financing to locate new business operations. Dover-Foxcroft's loss of prosperity has led to a communitywide depression, and its industrial economic future is uncertain.

Eastport/Washington County, Maine

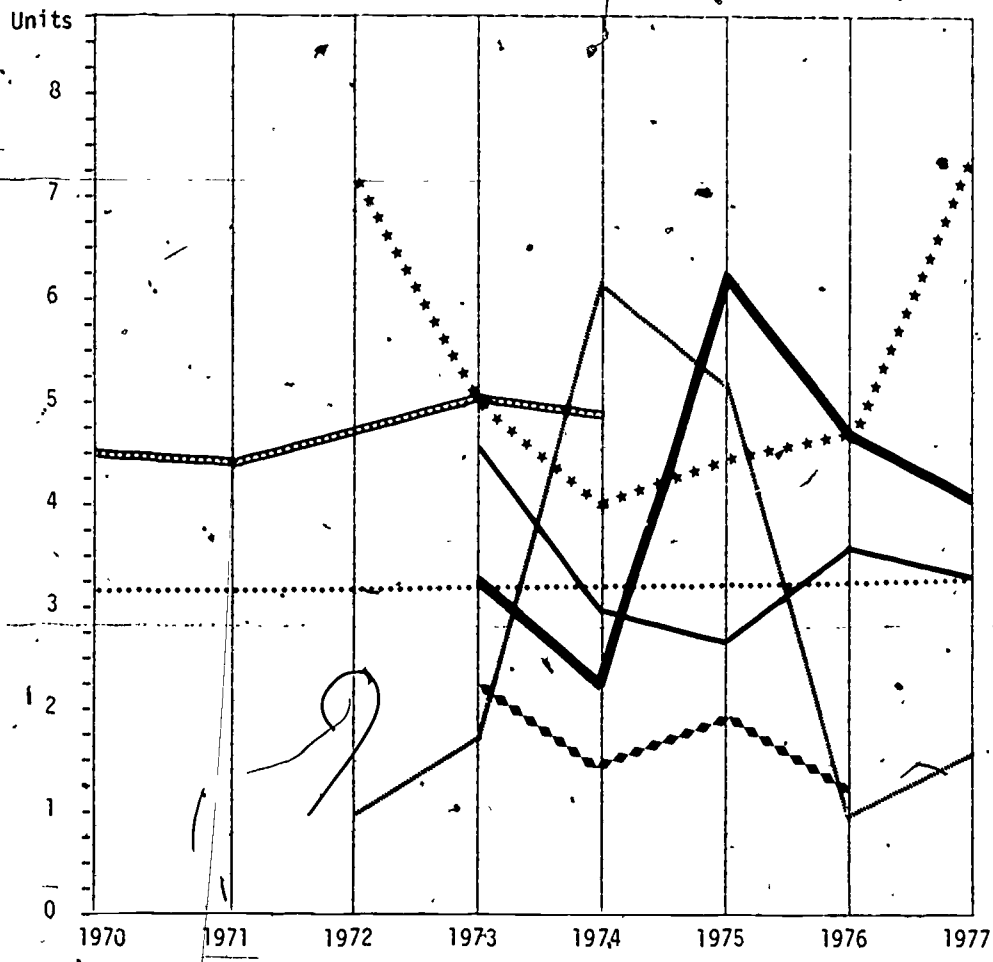
Economic Environment

Washington County's traditional economic base--primarily fishing, shipping, and related industries--has been declining throughout the twentieth century. Eastport population has declined by 63 percent from 1900 to 1970, with modest reversal of this trend by 1977. Local fisheries were unable to compete with foreign fleets and large corporations. Consequently, many of the related industries have also collapsed.

The 1974-75 recession damaged or extinguished most of the remaining industrial sources of employment. The effects of the recession are shown by the following phenomena:

- Unemployment rose from 8.8 percent in 1972 to 12.8 percent in 1975. The monthly unemployment rate in 1975 went as high as 17 percent.
- Eastport's median household buying income was $6,998, only 60 percent of the State average, in 1975.
- Almost 20 percent of the housing has deteriorated and is considered substandard.

FIGURE 15. ***Waynesboro/Augusta County, Virginia***
Economic and substance abuse indicators

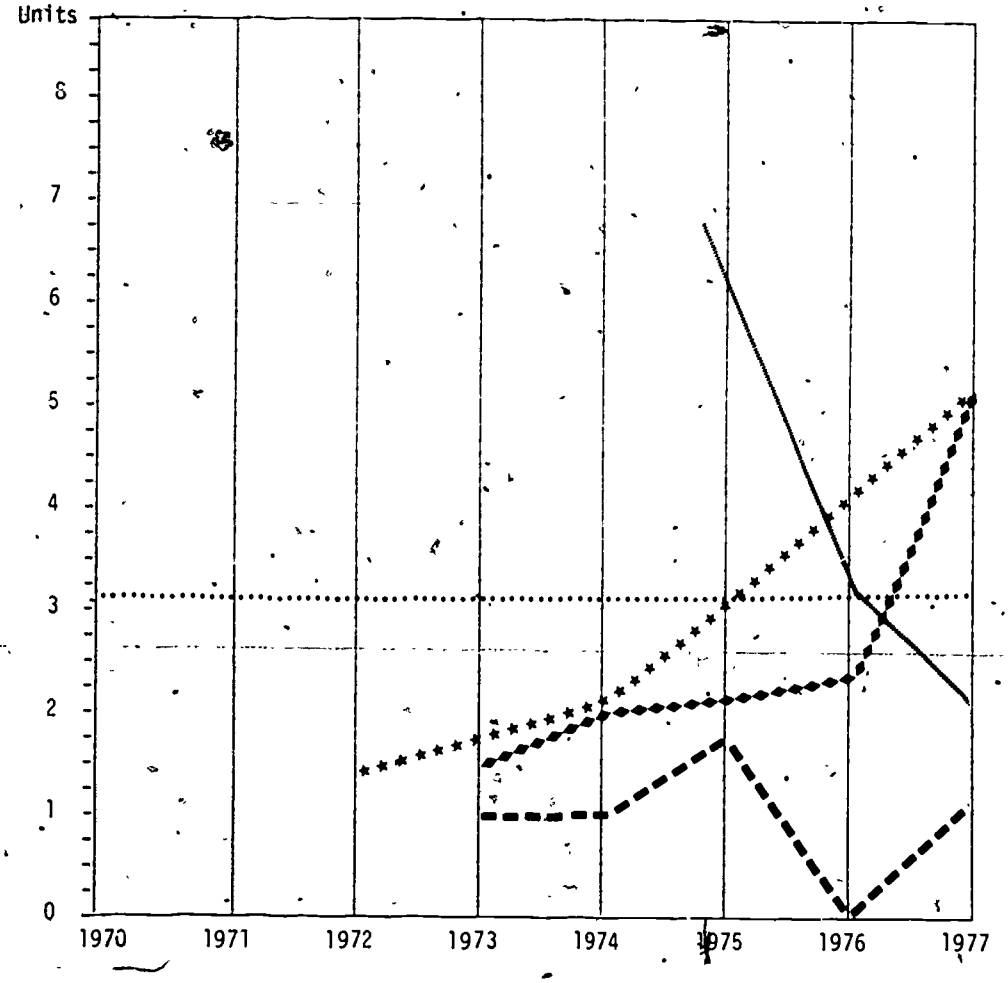


LEGEND

- Population, 1 unit=5,000
- Unemployment rate, 1 unit=2 percent
- Building permits, 1 unit=20
- Drug arrests, 1 unit=10
- Drug diagnoses, not available
- Alcohol arrests, 1 unit=50
- Alcohol diagnoses, 1 unit=10
- Labor and proprietors' income, 1 unit=$20,000,000 (adjusted to 1967 dollars by the Consumer Price Index)

NOTE.--Not all data were available for all years.

FIGURE 16. *Dover-Foxcroft/Piscataquis County, Maine*
Economic and substance abuse indicators



LEGEND

- ..... Population, 1 unit=5,000
- ——— Drug arrests, 1 unit=10
- - - - Drug diagnoses, 1 unit=5
- ★★★★★ Alcohol arrests, 1 unit=50
- ◆◆◆◆◆ Alcohol diagnoses, 1 unit=5

NOTE: Not all data were available for all years.

Planning has begun recently to eliminate the chronic depression by attracting new industries to the area.

Alcohol and Drug Abuse

There was a definite peak of alcohol abuse in 1974-75, the period in which Eastport's economic situation was at its worst. Also,

- OUI arrests rose 74 percent from 1972 to 1975.
- Assault and battery arrests peaked in 1975, at a level almost 40 percent higher than in 1972.
- Alcohol-related hospital admissions doubled from 1973 to 1975.

Drug use has been increasing in Eastport, but it appears to be unrelated to the economic decline. The increase in drug arrests, which are almost exclusively for possession of marijuana, is primarily the result of stricter enforcement procedures.

Figure 17 depicts economic and substance abuse indicators for Eastport/Washington County for the period 1970-77.

Lewiston/Androscoggin County, Maine

Economic Environment

Located in Androscoggin County, Lewiston is an old industrial city which prospered throughout the last century because industry was attracted by the water power potential of the Great Falls of the Androscoggin River. The decline in dependence on water for direct power and the shift of the textile and shoe industries to other areas have caused a vast dislocation of the area's traditional economic base. Lewiston has attempted to moderate the effects of the long-term decline in employment by diversifying its economic base, but the recession of 1974-75 caused a rapid and extensive economic dislocation in Lewiston. Its effects are demonstrated by the following:

- Unemployment rose from 7.4 percent in 1972 to 10.8 percent in 1975.
- Per capita income declined from $4,443 in 1974 to $3,890 in 1975.

The economic outlook for the majority of Lewiston's residents seems at best only a slow improvement in a situation of extensive poverty.

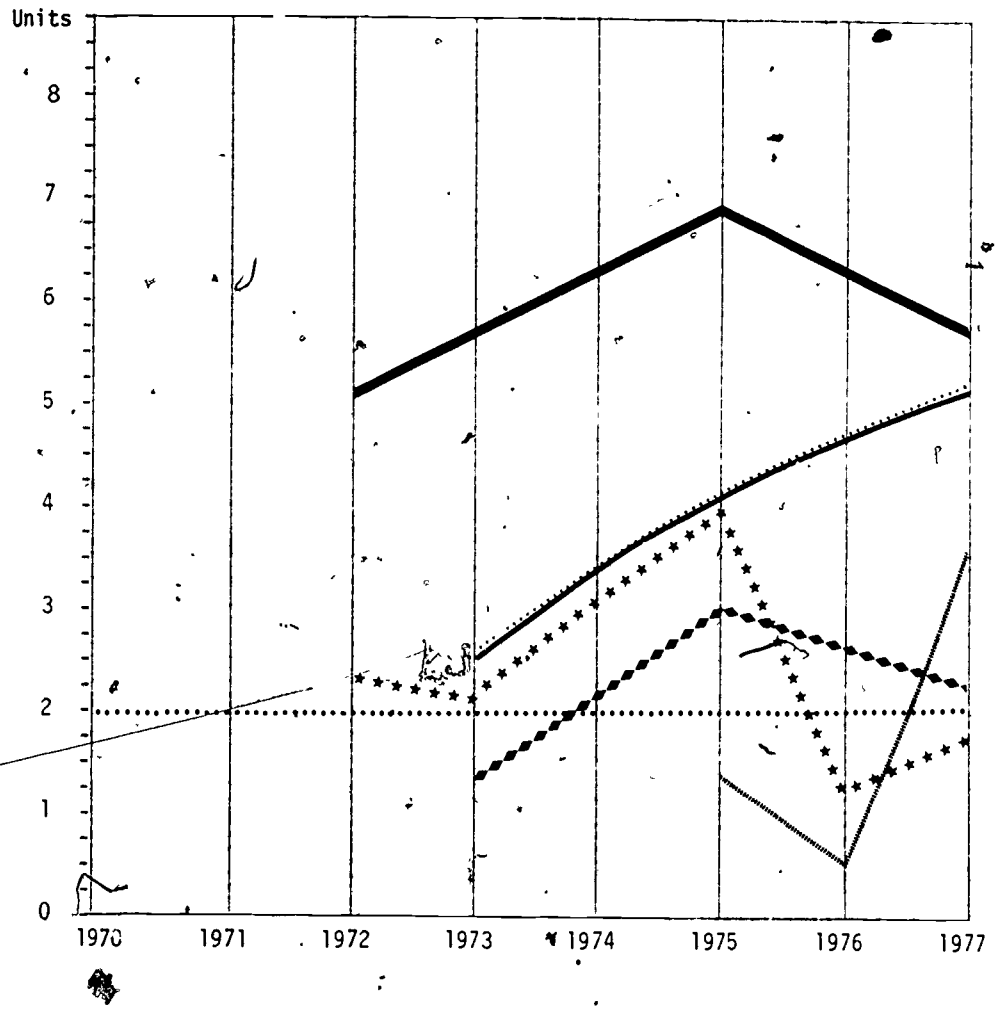
Alcohol and Drug Abuse

Alcohol appears to be a significant problem in Lewiston. Operating under the influence arrests have increased more than 50 percent, and disorderly conduct arrests have risen more than 300 percent since 1972. The data from the two Lewiston hospitals suggest that the 1974-75 recession resulted in even greater alcohol-related health problems.

However, drug abuse does not appear to be a serious problem in Lewiston. Drug arrests peaked in 1975, and declined by 38 percent in 1977. This is due largely to the change in community attitudes toward marijuana. Drug-related hospital admissions have remained relatively stable.

Figure 18 depicts economic and substance abuse indicators for Lewiston/Androscoggin County for the period 1970-77.

FIGURE 17. ***Eastport/Washington County, Maine***
Economic and substance abuse indicators

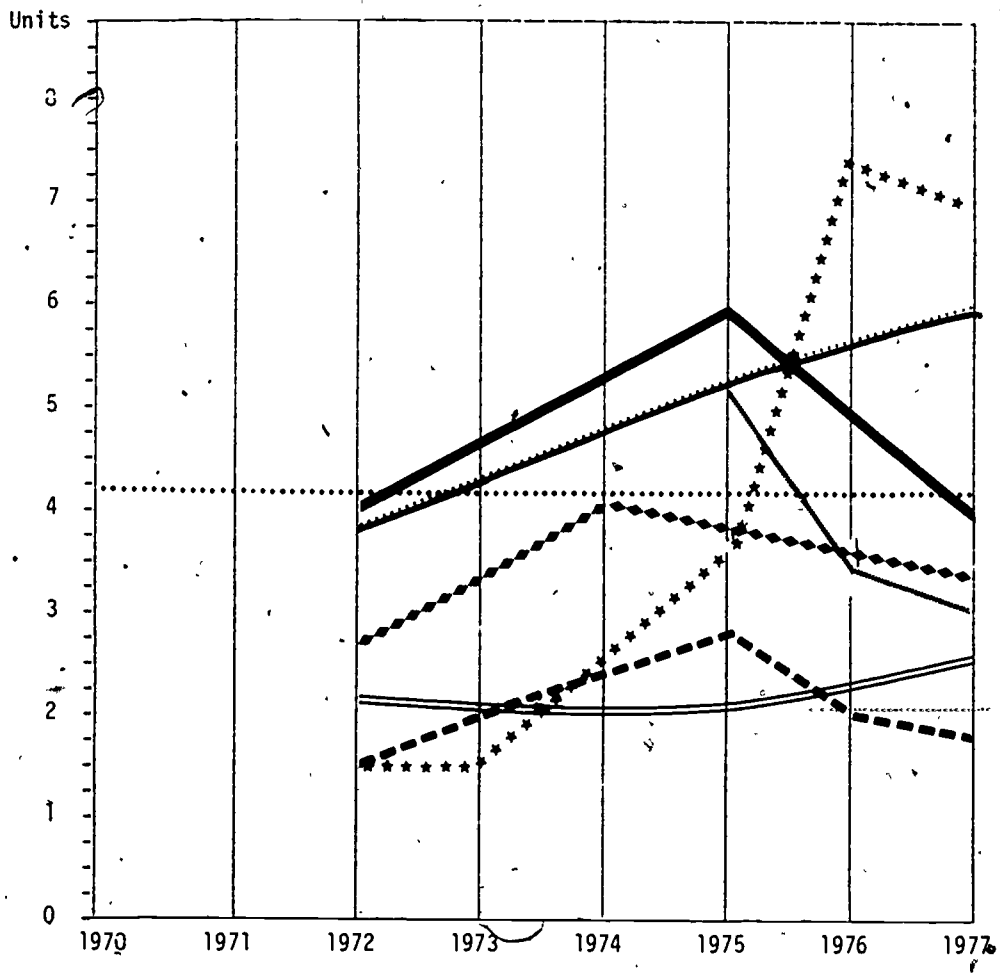


LEGEND

- ..... Population, 1 unit=1,000
- ▬▬▬ Unemployment rate, 1 unit=2,000
- ———— Drug arrests, 1 unit=50
- - - - - Drug diagnoses, not available
- ★ ★ ★ ★ Alcohol arrests, 1 unit=50
- ●●●●● Alcohol diagnoses, 1 unit=50
- ——— Median household effective buying income, 1 unit=$2,000

NOTE.--Not all data were available for all years.

FIGURE 18. ***Lewiston/Androscoggin County, Maine***
Economic and substance abuse indicators



LEGEND

- ..... Population, 1 unit=10,000
- ▬▬▬ Unemployment rate, 1 unit=2 percent
- ═══ Average annual manufacturing jobs, 1 unit=5,000
- ——— Drug arrests, 1 unit=50
- - - - Drug diagnoses, 1 unit=50
- **** Alcohol arrests, 1 unit=100
- ●●●●● Alcohol diagnoses, 1 unit=100
- ——— Median household effective buying income, 1 unit=$2,000

NOTE.--Not all data were available for all years.