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Reduction in Force in a Single Company Town: Who is Selected and How Do They Adapt?

by

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A C K N O W L E D G E M E N T S

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These papers are preliminary draft documents containing tentative results, thoughts, concepts, etc. They are intended for circulation among administrators and working scientists in the region to keep them informed of the Center's work and to stimulate discussion and meaningful exchange, one purpose of which is to assist the authors in developing a more finished manuscript for formal publication in an appropriate journal at some future date.

Responsibility for the views and the editing in this paper is that of the authors only.

REDUCTION IN FORCE IN A SINGLE COMPANY TOWN:

WHO IS SELECTED AND HOW DO THEY ADAPT?

Cluster analysis is used with a large data set on recently unemployed and still employed miners in a single company town. Cluster analysis is appropriate where one wishes to reduce the phenomena in a large domain into a small number of more easily understood dimensions.

Insight is gained into the credentials and characteristics of the individuals who have remained employed, those who are unemployed and rapidly leaving the community, and those who are unemployed and attempting to adapt to the declining community. It appears that a new trend toward favoring the large Mexican-American population of the area in the hiring practices of the major employer of the area is occurring. At the same time, younger employable anglos are tending to leave the area and a new group of lesser employable anglos seem determined to "stick it out" and try to support themselves in the home community.

by

William E. Martin, Dana Deeds, Edwin Carpenter,
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The Setting

Bisbee is a small town of about 8,600 residents located in the Mule Mountains of southeastern Arizona. The town began as a mining camp in 1878 and copper mining remained its major reason to be until late 1974. During this period of time the town evolved into essentially a single company town with some 1,200 persons on the payroll of the company, the Phelps-Dodge Corporation.

A cycle of rapid economic growth, economic maturation, and ultimate economic decline are expected phenomena where an economy is based on the exploitation of a single natural resource such as copper. But, for many years, while rumors of mine shut-down were rampant and discouraged further capital development in this company town, the threatened shut-down did not occur. Finally, on November 28, 1974, the combined forces of low copper prices and the low grade of the remaining ore began a long expected, but largely unplanned for series of major reductions in work force.

In the two months following the announced open pit shut-down, 370 workers were laid off at the Bisbee mine (although about 70 were transferred elsewhere). In June of 1975, underground operations were terminated and the Bisbee work force was reduced by over 500 men. The current (March, 1976) Phelps-Dodge work force in Bisbee is estimated at approximately 100 persons, compared to the previous year's payroll of 1,200.

Our research team was already in the field when the shut-down occurred, conducting in-depth interviews with a small sample of unemployed residents who were adapting to the already stagnating economic environment. Rapport had been established with the local Department of Economic Security, making copies of all unemployment data on the recently unemployed miners available to the research team on a periodic basis. These data are the information contained on the application form ES-511 that a recently unemployed person must file when applying for unemployment compensation, plus a small questionnaire designed by our team and administered on a voluntary basis. (See appendix for samples). Our objective in obtaining these data was to see if particular attributes, attitudes and job classifications of the newly unemployed workers would be associated with the order in which they lost their jobs and the manner and rapidity with which they perhaps returned to work. This paper reports the first results obtained from a planned continuing analysis of these and future data.

The Analysis

These data on 289 recently unemployed individuals provided the input to the multivariate procedure of "cluster analysis." [1/] Cluster analysis is appropriate where one wishes to reduce the phenomena in a large domain into a relatively small number of dimensions or clusters. It allows the researcher to discover interrelationships among variables without making in advance any assumptions as to how they relate to each other. Thus, the procedure is hypothesis generating. Thus, in this study, the clusters extracted should give insights into the credentials and characteristics of the various groups of individuals that have found

themselves unemployed and are rapidly leaving the community for other jobs, or who found themselves unemployed and are attempting to adapt to the declining community.

The sample of 289 is the set of individuals, on whom complete information could be obtained, who filed with the Employment Security Commission Office in Bisbee during the period from December 9, 1974 (when the massive layoffs first began) through May 9, 1975. This 22 week period was arbitrary, and ended only by the necessity to turn from data gathering to data processing and analysis. Further analysis will include a longer time period.

Table 1 presents the means and coefficients of communality for each of the original 68 variables introduced into the program. "The communality of a variable is a number between .00 and 1.00 that measures the generalities of individual differences in the variable." 2/ The fact that the communalities in Table 1 are not 1.00 signifies that the 68 variables sample other kinds of variation besides the common domain they jointly sample. For example, the gap between .8283 and 1.000 represents the "uniqueness" of the variable age, that is, the variation in that variable that is not common to other variables. Variables with high communalities are desired since the objective of cluster analysis is to discover (or affirm) general attributes of the variables, in order to form a lesser number of dimensions of "clusters" containing the basic structural information of the original sample.

The general characteristics of the sample are given in Table 1. The data show that the mean age of the workers is 42 and their mean

Table 1

A Summary of The Basic Data Obtained
Relative to the Workers in The Sample

Variable	Mean	Communality
Socioeconomic Characteristics		
1. Age of Worker[a/]	41.6655	.8238
2. Last Grade in School[a/]	10.5474	.3277
3. Is Mexican-American	0.4014	.8090
Marital Status[b/]		
4. Is Married	0.8235	.3614
5. Is Widowed	0.0035	.0737
6. Is Divorced	0.0311	.2165
7. Is Separated	0.0138	.1350
8. No. Dependents Excluding Head[a/]	3.1943	.1098
Occupation at the Mine[c/]		
9. Miner	0.3460	.2940
10. Mucker	0.1488	.2914
11. Swamper	0.0069	.0775
12. Motorman	0.0104	.0777
13. Technician (Electrician-Mechanic, etc.)	0.1903	.3312
14. Shops	0.0727	.1588
15. Truck Driver	0.1073	.6595
16. Labor General	0.0692	.2225
17. Security	0.0035	.2134
18. Other	0.0450	.3705
Employment History		
19. Number of jobs from other employers last 3 years[a/]	0.2438	.3981
Kind of Work Wanted[d/]		
20. Mining	0.7993	.2177
21. Construction	0.1453	.4852
22. Mechanic	0.1280	.6911
23. Driver	0.1834	.7838
24. Return to School	0.0138	.1128
25. Sales	0.0346	.3157
26. Technician	0.0727	.1292
27. Anything	0.2145	.2866
28. Other	0.2422	.1507

Table 1 (continued)

Variable	Mean [a]	Communality
Where Willing to Work [c]		
29. Only in Bisbee	0.3063	.3973
30. Bisbee/County	0.2188	.3323
31. Bisbee/County/State	0.2535	.2230
32. Anywhere	0.2253	.2560
Special Skills [d]		
33. Bilingual	0.3854	.7561
34. Mechanics	0.1389	.6159
35. Construction	0.1736	.4959
36. Welding	0.0417	.4106
37. Truck License	0.2014	.7616
38. One other skill	0.3646	.1905
39. Two other skills	0.0451	.4525
Union Membership [c]		
40. None	0.5398	.3631
41. United Steel 551	0.2941	.4115
42. Teamsters	0.0519	.5087
43. Operating Engineers 428	0.0381	.1949
44. Boilermakers	0.0208	.4374
45. Machinist	0.0450	.3428
46. Other	0.0138	.1043
Veteran Status [e]		
47. None	0.5744	.2838
48. Vietnam Era	0.1280	.2698
Retirement Status [c]		
49. Not Retired	0.7855	.7804
50. Full Retirement	0.0311	.2890
51. 70/80 Retirement	0.1799	.7387
52. 60/30 Retirement	0.0035	.1874
53. Months Service with the Mine [a]	159.8262	.8217

Table 1 (continued)

Variable	Mean [a]	Communality
Occupation of Spouse [f]		
54. Spouse is working	0.1822	1.0000
55. Housewife	0.6109	.3517
56. Service	0.0937	.3003
57. Teacher	0.0148	.3272
58. Nurse	0.0148	.3263
59. Secretary	0.0343	.2219
60. Sales Clerk	0.0343	.1870
61. Other	0.0297	.1795
Residence Status [e]		
62. Own House	0.4528	.3578
63. Rent House	0.2937	.3975
64. Own Mobile Home	0.0648	.3340
65. Company House	0.1492	.2773
66. Live with Relatives	0.0399	.1754
67. Cost of Housing, Dollars per Month [a]	54.7557	.1825
View of Bisbee		
68. Quality of Life is: [a] 1 = low, 2 = middle, 3 = high	2.7890	.1065

a/ All variables except those footnoted a/ are coded 0, 1 (1=yes; 0=no). The means of variables coded 0, 1 may be interpreted as percentages of the sample.

b/ Sum of means equal 0.8719. Implies that 0.1281 percent were never married.

c/ Sum of means equals 100 percent except for rounding error.

d/ Individual could check more than one type of work. Sum of mean is greater than 100 percent.

e/ Sum of means equal 0.2024. Implies that 0.2976 percent are pre-Vietnam era veterans.

f/ Sum of means is not relevant. Spouse may have an occupation other than housewife and not be working.

schooling was through the 10th grade (variables 1 and 2). Forty percent of the sample are Mexican-American (variable 3); 82 percent are married (variable 5); 45 percent of the workers own their own homes (variable 62); and they had an average of 160 months of service with the mine at the time they were laid off (variable 53).

Thus, in general, workers in the sample appear to be of middle age and to be stable working heads of households. Rather suddenly they are out of work in a small community. They view the quality of life in the community as very high (variable 68). What will they do? Who will leave to find work and who will remain in the community? Which will find it easier to gain reemployment? These are some of the questions to be examined by the following cluster analysis.

The results of the first stage of the cluster analysis, where structured dimensions were developed, is relatively successful in that 63 percent of the mean square of the correlational matrix and all of the estimated communality is explained by six dimensions. (See Table 2.) However, some of the reliabilities of the dimensions do not lead one to have great confidence in the generality of the dimensions for other samples. Tryon and Bailey state that "for psychological measurements one likes to have reliability coefficients well up in the .90's." 3/ However, coefficients in the 70's and 80's are at least "acceptable" in a hypothesis-developing study as here described.

Following the definition of the basic dimensions, all 289 observa-

tions are scored in terms of these dimensions. The procedure is to standardize all the basic variables to a common mean and standard deviation and determine the score on a dimension by summing the values of the definers of the dimension. For example, to determine a score for dimension one -- spouse has service job -- the standardized values of the definers of the dimension -- spouse is working -- and spouse is working in a service job -- are summed. This procedure is repeated for all dimensions and observations. Following this procedure, all scores are restandardized so that the mean score on a dimension is 50 with a standard deviation of 10. Thus, dimensions that have only two definers have equal weight with dimensions composed of several definers. The first step is to equalize the importance of each variable in defining a dimension. The second step is to equalize the scale of each dimension so that they may be easily compared.

Comparisons are made in the next step of the cluster analysis where groups of people with similar characteristics on the structural dimensions are distinguished. (See Table 3.) These groups are labeled "worker types" and are defined as individuals having homogeneous characteristics.

To develop the worker types, scores were computed for each person in the sample on each of the six dimensions. Envision plotting these scores in six-dimensional space. Look in this space for concentrations of scores and draw a fence around these concentrations. People within a concentration are classified as a worker type. (These are the O-types as defined by Tryon and Bailey.) [4/] If the boundary around the concentration of people is very small, the people within this concentration

Table 2

Six Structural Dimensions and Their Reliability Developed from the 68 Variable Sample

Dimension	Description	Defining Variables	Cumulative Proportion of Communality Exhausted	Cumulative Proportion of Mean Square of Correlation Matrix Exhausted	Reliability Coefficient
1	Spouse has service job	Spouse is working, Spouse working in service job	0.1430	0.0553	0.7789
2	Mexican-American	Is a Mexican-American, Is bilingual	0.3053	0.1756	0.9401
3	Truck Driver	Wants work as a driver, Has truck driver license, was a truck driver at the mine, belongs to Teamsters	0.4962	0.2933	0.8724
4	Retired	Retired, 70/80 retirement, months of service with the mine, age	0.7484	0.5403	0.8800
5	Mechanic	Wants work as a mechanic, has special skill as a mechanic, belongs to Machinist Union, was Technician at the mine	0.8986	0.6062	0.7653
6	Construction	Has special skill in construction, wants work in construction	1.0000	0.6340	0.8336

are a very homogeneous type -- measured by the "overall homogeneity coefficient" (Table 3, column 7). All people are not included in a type. These few individuals are unique and are shown as unclassified.

Table 3 shows 14 worker types. The names assigned to each type are based on the scores within each dimension. For example, persons within type 2 (construction anglo) have a mean score on the construction dimension of 75, 2.5 standard deviations away from the standardized mean of 50. Other scores within the construction-anglo type are relatively close to the mean of 50 except for the score of 44 on the Mexican-American dimension. Because this score is considerably below 50, the type is sub-classified as anglo.

One sees that two other types also have scores on the construction dimension that are significantly above the mean of 50. These two types are called the multi-skilled anglo (type 6) and the construction-Mexican-American (type 9). Type 6 is 1.6 standard deviations above the mean on the construction dimension, 2.0 standard deviations above the mean on the truck driver dimension, and 0.8 standard deviations below the mean on the Mexican-American dimension. Type 9 is significantly above the mean on the construction dimension, and is also 1.3 standard deviations above the mean on the Mexican-American dimension, thus obtaining the Mexican-American sub-classification.

Each of the 14 types is sub-classified by ethnicity since none of the types have a mean on the Mexican-American dimension that is relatively close to the overall mean of 50. The other main classification of types turns out to be based in general on the workers' age,

Table 3

Worker Types Defined by Mean Dimension Scores Within a Type[a/]

Worker Type	Dimensions: Spouse has Service Job 1	Mexican-American 2	Truck Driver 3	Retired 4	Mechanic 5	Construction 6	Overall Homogeneity	# in Type in Sample	% in Type in Sample
1. Limited skills (anglo)	47	43[b/]	46	45	46	46[b/]	.9510	56	19.4
2. Construction (anglo)	47	44[b/]	47	47	48[b/]	75[b/]	.9128	16	5.5
3. Mechanic (anglo)	49	43[b/]	47	48[b/]	75[b/]	46	.7908	19	6.6
4. Retired (anglo)	48	42[b/]	46[b/]	68[b/]	47	46	.9555	36	12.5
5. Truck driver (young anglo)	45	43[b/]	71[b/]	46	48	45[b/]	.8733	22	7.6
6. Multi-skill (anglo)	46	42[b/]	70[b/]	50[b/]	50	66[b/]	.8133	7	2.4
7. Truck driver (old anglo)	49	45[b/]	74[b/]	69[b/]	46	45	.8296	7	2.4
8. Limited skills (Mexican-American)	46	63[b/]	46	44	46	45[b/]	.9749	42	14.5
9. Construction (Mexican-American)	46	63[b/]	46	44	46[b/]	71[b/]	.9291	21	7.3
10. Mechanic (Mexican-American)	48	62[b/]	48	46[b/]	69[b/]	46	.8630	14	4.8
11. Retired (Mexican-American)	47	63[b/]	47[b/]	67[b/]	46	45	.9541	11	3.8
12. Truck driver (young Mexican-American)	48[b/]	63[b/]	70[b/]	46	45	45	.8852	7	2.4
13. Working wife (anglo)	73[b/]	42[b/]	48	47[b/]	47	48	.7892	15	5.2
14. Working wife (young Mexican-American)	71[b/]	62[b/]	47	43[b/]	46	47	.8187	10	3.5
Unclassified								6	2.1
Total								289	100.0

a/ All scores are standardized to mean of 50 and standard deviation of 10. Scores above 50 show higher than average correlation with the dimension. Scores below 50 are negatively correlated with the dimension.

b/ Used to define characterization of Type.

aspirations, and special skills. One must refer to the individual variables defining each dimension to interpret each type further.

We see that while everyone in the sample had worked at the mine, and almost 50 percent of the workers were either miners or muckers (variables 9 and 10, Table 1), these two variables are not included in defining the dimensions (Table 2). Of the types based on occupational categories, types 5, 7, and 12 (truck drivers) are based heavily on the desire to be a truck driver and on holding a truck license (more people wanted to be drivers than were previously employed as drivers -- see variables 15 and 23 of Table 1); types 2 and 9 (construction) are based on the desire to be in construction and having those skills (not on being in construction at the mine); type 6 (multi-skilled) has both construction and driver skills and desires; types 3 and 10 (mechanic) basically were mechanics at the mine and are looking for that kind of work.

Types 4 and 11 (retired) are older than the others and generally have a longer record of service at the mine. They are below average in driver, mechanic or construction skills. Types 13 and 14 (working wife) generally have a wife working at a job classified as a service job. Men within these two types score slightly below average in the special skills and the Mexican-American sub-type is considerably younger than any other type.

Finally, types 1 and 8 (limited skills) are those who score below the mean on all of the occupational dimensions. We may surmise that

these men are the "hard core" miners that are not yet old enough or do not have enough time in service even for partial retirement (70/80 or 60/30 retirement). They do not have the skills and/or do not desire jobs in construction or as mechanics or truck drivers. (Note that the retired types also scored below the mean on the occupation dimensions.)

Only six individuals did not fit any of the 14 defined types. An example might be a retired Mexican-American with multiple skills and a working wife or perhaps the unique person is very high (or very low) on all dimensions.

The objective of the analysis is to see if knowledge of the socioeconomic characteristics of the laid-off workers will give us insights about the relative employability of each type of worker within the setting of a declining community. For this purpose, the number and percentage of workers within each type are classified in Table 4 by whether their unemployment file was active or inactive 22 weeks after the first major lay-off at the mine when the first block of claims was filed.

An "active" classification means that the worker is still unemployed and is keeping his file active. Except for those few workers who have had their active files transferred elsewhere (column 5), these workers have remained in Bisbee.

Table 4

Status of Sample of Workers Who Filed Unemployment Claims, 22 Weeks After First Block of Claims Was Filed[a/]

Worker Type	Unemployment File Is: Active[b/] Number	% of Type	Inactive[c/] Number	% of Type	Number of Active Files Transferred to Other Town[b/]	Inactives Rehired in Morenci[c/] Number	% of Inactives
1. Limited skills (anglo)	31	55	25	45	3	10	40
2. Construction (anglo)	4	25	12	75		7	58
3. Mechanic (anglo)	10	53	9	47		6	67
4. Retired (anglo)	32	89	4	11	1	0	0
5. Truck driver (young anglo)	3	14	19	86		1	5
6. Multi-skilled (anglo)	0	0	7	100		2	29
7. Truck driver (old anglo)	5	71	2	29		0	0
8. Limited skills (Mexican-American)	17	40	25	60		13	52
9. Construction (Mexican-American)	11	52	10	48		6	60
10. Mechanic (Mexican-American)	8	57	6	43		4	67
11. Retired (Mexican-American)	9	82	2	18		0	0
12. Truck driver (young Mexican-American)	1	14	6	86		4	67
13. Working wife (anglo)	9	60	6	40		5	83
14. Working wife (young Mexican-American)	3	30	7	70	1	5	71
Unclassified	3	50	3	50		2	67
Total	146	51	143	49	5	65	45
Total anglo[d/]	94	53	84	47	4	31	37
Total Mexican-American[d/]	49	47	56	53	1	32	57
Total anglo, excluding retired[d/]	62	44	80	56		31	39
Total Mexican-American, excluding retired[d/]	40	43	54	57		32	60

a/ Worker may have been laid off and filed his claim at any time during the 22 week period.

b/ Active files indicate the worker is still unemployed and is keeping his file active. Entries in columns 1 and 2 include those active files transferred to other towns out of Bisbee.

c/ Inactive files indicate the worker either has found work or that he has left town with the Bisbee Unemployment Office being requested to transfer the file elsewhere. Entries in columns 3 and 4 include those workers who were rehired in Morenci (columns 6 and 7).

d/ Excluding unclassified.

An "inactive" classification means either that the worker has found work in Bisbee or elsewhere, or that he simply has neglected to keep the Bisbee file active. A possibility is that the worker has left town and not found work, but the Bisbee office has not been asked to transfer his file. Simple administrative slippage is a factor as well. The inactive classification includes those workers who were rehired at the Phelps-Dodge mine in Morenci after they had been laid-off in Bisbee and had filed for unemployment benefits. The Morenci mine is in an adjoining county, within weekly commuting distance to Bisbee, so many of these rehired workers have kept their house in Bisbee.

Of the total number of workers, almost exactly half still have active files. Of the half whose files are inactive 45 percent were rehired in Morenci. Thus, about one-fourth of the workers were rehired, about one-fourth left town and/or found other jobs in the area, and about one-half of the workers remain unemployed in Bisbee. The data are examined by worker type to see who did what.

The largest type is type 1, anglos with limited skills. These men were not old enough or had too little time with the company to be forced into limited retirement. Generally, these were the men formerly employed as miners and truckers. Fifty-five percent of the type remains out of work. Of the 45 percent who have inactive files, 40 percent were rehired by the mine in Morenci.

Type 2, anglos with skills in construction, is a smaller group but much more employable. Seventy-five percent presumably found new jobs,

58 percent of which were rehired by the company.

The anglo mechanic type (type 3) fared about the same as the anglo limited skill type. Most who did find work were those needed at the Morenci mine (67 percent of the inactives).

Most of the "retired" anglos (type 4) remain unemployed and in Bisbee. Recall, however, that these men were employed at the time the mine closed down and took retirement involuntarily. Most would like work if it were available for men of their age. Naturally, none were rehired by the mine. This is the third largest type, after the two limited skill types of anglos and Mexican-Americans.

The young anglo truck drivers (type 5) either immediately obtained new jobs or left town. Only 14 percent remain on the active list and only one of the total of 22 in the type was rehired by the mine. The young Mexican-American truck drivers (type 12) are just as employable -- but 4 out of the 7 in the type were rehired by the company at the Morenci mine.

All of the multi-skilled anglos (type 6) quickly went inactive. Like the anglo truck drivers, they were not generally rehired by the mine. In both cases high residence mobility is implied.

The other anglo truck driver mostly finds himself out of work in Bisbee, some also taking early retirement from the mine. None are rehired.

The results for type 8, Mexican-Americans with limited skills, are somewhat unexpected. Only 40 percent of this group remains with active

files as compared to 55 percent of the anglo type with limited skills -- and a greater percent of the inactives were rehired at Morenci (52 percent versus 40 percent).

Mexican-Americans with construction skills (type 9) fare much worse than their anglo counterparts (type 2). Fifty-two percent remain on the active roles as compared to only 25 percent of the anglo construction type. Yet about an equal absolute number of anglo and Mexican-American construction types were rehired at Morenci.

There appears to be no significant difference between Mexican-American and anglo mechanics (types 10 and 3). Both types have over 50 percent on the active list with equal percentages of the inactives rehired by the mine.

The "retired" Mexican-American (type 11), while mostly remaining on the active list, does seem to fare slightly better than his anglo counterpart (type 4). Only 82 percent of type 11 are "active" versus 89 percent of type 4. However, there are many fewer workers in the retired Mexican-American type. If the Mexican-Americans seem to be doing very well today, there are many fewer of them that currently have had long tenure with the mine.

The last two types (types 13 and 14) are distinguished not only by their occupational skills but by the fact that they have a working wife. Only 18 percent of the entire sample had working wives (although 40 percent said their wives had a vocation other than housewife). These two types are the approximately 9 percent of the entire sample who had wives

in service occupations. Neither type scores high on special skills, but the Mexican-American group retains a lower percent in the active file, with equal absolute numbers being rehired by the mine.

Summary

In summary, one may conclude that the young truck driver types are a great deal more mobile than the other types and find it relatively easy to become reemployed; the anglo construction type seems to have an advantage over his Mexican-American counterpart; and the Mexican-American with limited skills, especially the young man with a working wife, seems to be favored in jobs with the mine.

To focus more specifically on the ethnic issue, the types are condensed to "total anglo" and "total Mexican-American" in the bottom rows of Table 4. When the older men comprising the retired types are included, 53 percent of the anglos and only 47 percent of the Mexican-Americans remain in the active category. Equal numbers of anglos and Mexican-Americans were rehired even though the total number of anglos laid off was considerably larger than for Mexican-Americans. Presumably more anglos than Mexican-Americans had been hired in the past.

When the retired types are excluded, the percentages remaining on the active roles are almost equal between anglos and Mexican-Americans. But the percentages rehired by the mines differ greatly. Only 30 percent of the inactive anglos were rehired by the mines; 60 percent of the

inactive Mexican-Americans were rehired. Thus, while equal percentages of the two ethnic groups were finding new jobs (assuming going "inactive" means a job rather than merely disappearing) the hiring practice of the mine is switching from favoring anglos to favoring Mexican-Americans, and the anglos are finding their jobs in the non-mine economy.

Conclusions

Our analysis is as yet preliminary -- further work will be done with the present cluster analysis and a new block of workers laid off at a later date will be added to the sample. It does, however, appear that a new trend toward favoring the large Mexican-American population of the area in the hiring practices of the major employer of the area is occurring. At the same time, younger employable anglos are tending to leave the area and a new group of lesser employable anglos seem determined to "stick it out" and try to support themselves in Bisbee.

In fact, at this point in time, the Bisbee economy has not yet shown great signs of collapse in the face of lay-offs by its major employer. Indicators such as gas, water and light installations are actually up slightly. School enrollments are only down by 60 students over the previous year and city tax revenues are about the same after making an inflation adjustment. This does not mean that there hasn't been considerable human dislocation. There has been and it has been dramatic for the individuals involved. Much of the economic activity

maintained in the area may be from the still continuing unemployment benefits being drawn by the former miners. The real crunch may not come until 1976 when the year of unemployment payments begin to terminate. It is at that time that a further analysis of our data will really tell us who can withstand the problems of the declining community.

Appendix

The following forms were utilized to gather socioeconomic data from unemployed laborers: (1) Department of Economic Security Form 511 (employment service form), and (2) a "supplemental questionnaire" to obtain additional socioeconomic data.

DES Form 511 (Side 1)

ES-511 (9/73) Application Card
Part I

Please complete this Part I with the last three (3) jobs you have held for six (6) months or longer. Include Military Service. Begin with the most recent.

a. Present or Last Employer | Reason for Leaving

Address | Employer's Business | Date Started | Date Left | Pay $

Name your job. Describe what you did. Tell what machines, materials and equipment you used.

b. Name of Employer | Reason for Leaving

Address | Employer's Business | Date Started | Date Left | Pay $

Name your job. Describe what you did. Tell what machines, materials and equipment you used.

c. Name of Employer | Reason for Leaving

Address | Employer's Business | Date Started | Date Left | Pay $

Name your job. Describe what you did. Tell what machines, materials and equipment you used.

d. Summary of Other Work Experience (Including Military or Manpower Programs)

e. Special Schooling or Training (Give Course Title, Length, Date Ended and Degree Earned)

Part II

Print only items enclosed in heavy black lines.

a. Social Security No. (1-9) : :

b. Action (10) 2☐ New 4☐ Partial 5☐ Ren. A 6☐ Ren. B

c. SumY (11) 4☐ Yes

d. Print Last Name, First & Middle Initial (12-18)

e. DOT Code (19) ent. 1☐ Yes (20-25) base (26-28) suffix

f. Address *(include city and zip code)*

g. Telephone No. [ ]WC [ ]WDM

h. US Citizen [ ]yes [ ]no

j. DOT Title

k. FACTOR BLOCKS CL date FS date MJL

m. Birthdate (29-30) month day year

n. Sex (31) 1 [ ]male 2 [ ]female

o. Circle Highest School Grade Completed (32-33)
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 19
B M D

p. Additional Codes & Titles

q. Visit Dates

r. Ht. & Wt. ft. in. lbs.

s. Marital Status [ ] never married [ ] married [ ] widowed [ ] divorced [ ] separated

t. No. of Dependent Total | Need ch. care

u. If you belong to a union, give: Name _____ Local No. _____

x. Skills, knowledges, abilities

v. Kind of work wanted
1st Choice
2nd Choice

w. If needed for work, do you have:
[ ] auto or truck [ ] transportation
[ ] driver license [ ] work tools
[ ] chauffeur license [ ] other *(specify)*
[ ] occupational license

y. Availability for work
Minimum Salary $_____ Hours _____
Location _____

z. Dates of Military Active Duty
Month | Year
From _____
To _____

aa-LO No. (34-37)	bb-Date (38-39)(40-41)	cc-Coun. (42-44)	dd-EC (45)	ee-SS (46)	ff-Vet. (47)	gg-Poor (48)	hh-Handicap (49)	jj-Welfare (50)	kk-FS (51)	mm-Clmt (52)	Enr. in CETA (53)	Migr. Ag. Wkr. (54)	Re
0	Month Day	0	1-wh 2-neg 4-ai 5-ori 7-oth nec 8-ina	3-ma 4-oth 6-pr	0-rs 1-rsd 2-rss 3-ve 4-ved 5-ves 6-ov 7-ovd 8-ovs	1-dis 4-oth poor	1-001/047 2-060/079 3-140 4-150,151,153,154 5-152 6-155 7-156 8-160 9-other	WIN 1-voluntary 2-vol. cert. 3-required 4-req. cert. NON-WIN 5-other welf.	3-yes	2-state 3-other	1-ES prime 2-ES sub 3-no contract	1-yes	

ES-511 (5-74)

Interviewer Signature

DES Form 511 (Side 2)

Arizona Department of Economic Security (Employment Service)
ES-511 (5-74)

Income Past 12 Months	Income Past 3 Months	
$	$	☐ Farm ☐ Nonag.

Test Date	Family Size	Annual Income	Average Monthly Income	Last Day Employed

Proficiency/SATB Test Results (For SATB, Use H,M,L Only)

Test	Results	Date

GATB Date

Disability

Cause, if pertinent, and date

Condition

Working Conditions to Avoid and Physical Capacities Left

Barriers to Employment

Employability Plan

Comments (Relevant to Placement) and Special Information

VER Review Initials Date

Part IV

Date	By	Act	E	Description	Results/Comments	E

Supplemental Questionnaire

CODE NUMBER_____

DATE_____

Contact Record:_____

_____

A. Occupational Category_____

Years Service_____

Reason Terminated: Quit____ Reduced Force____

Early Retirement____ Offered Transfer____

B. Occupation of Spouse_____ Presently Employed_____

Spouse's Income Past 12 Months_____ Past 3 Months_____

C. Presently own home_____Rent_____Amount of monthly payment or rent_____

Mobile Home_____Company House_____

D. Future Plans:

(1) Stay in Bisbee, look for work_____ What type?_____

(2) Look for work inside county_____ or outside county_____

Where_____ What type? _____

(3) Other?_____

E. Before you became unemployed, how well did you like Bisbee as a place to live?

Did not like 1 2 3 4 5 6 7 8 9 10 Liked very much

NOTES AND REFERENCES

1/ The computer program used is the BC TRY System as described in Tryon, Robert C., and Daniel E. Bailey, Cluster Analysis, McGraw-Hill Book Company, New York, 1970, Chapter 13.

2/ Ibid., p. 61.

3/ Ibid., p. 58.

4/ Ibid., Chapter 8.