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ABSTRACT

The report explores the obstacles to increased occupational mobility for workers at a multiplant manufacturing firm. Analysis of the job histories of workers at two plants found advancement opportunities to be limited and inequitable because narrow departmental units were used as the basis for defining eligibility for promotions. Through the use of task analysis a Career Progression System was designed to redefine the eligibility pools for promotional decisions in accord with common skill requirements. Efforts to implement the CPS were only partially successful due to collective bargaining agreement constraints coupled with the economic downturn. General conclusions were: (1) Collective bargaining agreements are a major instrument for structuring the internal labor markets of large unionized firms and interventions must be designed to confront this reality. (2) Employees in large industrial firms often lack adequate information about promotional opportunities outside their particular department; (3) Implementation of Career Progression systems can be hampered by the employer's desire to utilize only those programmatic elements which affect productivity. (4) Government sponsored intervention should have well-defined objectives beside improved productivity and should avoid partial implementations which do not further these goals. (Author/BP)

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CAREER PROGRESSION SYSTEMS
FOR A MULTI-PLANT
MANUFACTURING CORPORATION

Final Report

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TABLE OF CONTENTS

	<u>Page Number</u>
ABSTRACT	i
ACKNOWLEDGMENTS	ii
CHAPTER 1 Introduction	1
CHAPTER 2 Existing Patterns of Mobility	7
CHAPTER 3 The Career Progression System	16
CHAPTER 4 Policy Implications	29

Abstract for Department of Labor Catalogue

Completed Project: CAREER PROGRESSION SYSTEMS FOR A MULTI-PLANT MANUFACTURING CORPORATION

This project explored the obstacles to increased occupational mobility for workers at a multi-plant manufacturing firm. Analysis of the job histories of workers at two plants found advancement opportunities to be limited and inequitable because narrow departmental units were used as the basis for defining eligibility for promotions. Through the use of task analysis a Career Progression System was designed to redefine the eligibility pools for promotional decisions in accord with common skill requirements. Efforts to implement the Career Progression system were only partially successful due to collective bargaining agreement constraints coupled with the economic downturn.

The following general conclusions emerged from the experience:

1. Collective bargaining agreements are a major instrument for structuring the internal labor markets of large unionized firms and interventions must be designed to confront this reality.
2. Employees in large industrial firms often lack adequate information about promotional opportunities outside their particular department. A well-designed career counseling program can help overcome this information gap.
3. Implementation of Career Progression systems can be hampered by the employer's desire to utilize only those programmatic elements which affect productivity.
4. Finally, it is argued that government sponsored intervention should have well-defined objectives beside improved productivity and should avoid partial implementations which do not further these goals.

ACKNOWLEDGMENTS

This report presents the findings of a three year project sponsored by the Manpower Administration, United States Department of Labor. Dr. Howard Rosen, Director, and Mr. Seymour Brandwein, Deputy Director, of the Manpower Administration's Office of Research and Development, made significant contributions to the design of this effort. Their willingness to explore the problems associated with occupational mobility made this project possible.

The project could not have been executed without the cooperation of the staff of the participating employer, referred to in this report as the ABC Corporation. Although we have agreed to keep their identities anonymous, their essential contribution should be publicly acknowledged.

CHAPTER 1

INTRODUCTION

INTRODUCTION

During the latter half of the 1960's, concern for the poverty population in general, and for the "working poor" in particular, increased within both government and academic circles. One of the programmatic results of this concern was the funding of several research and development (R&D) projects by the Manpower Administration of the U.S. Department of Labor. The purpose of these projects was to determine the extent to which workers holding low wage jobs were "stuck" in these jobs, and, where upward mobility was bound to be limited, to develop programs which improved the chances for advancement.

Humanic Designs Corporation (HDC), with the support of the Manpower Administration, was one of the first groups to undertake research and development activities intended to develop an understanding of the factors which limit occupational mobility and to develop methods to help overcome these obstacles.

Initially HDC was contracted to design and evaluate the effects of short, intensive training and one-step upgrading programs among the "working poor" and their employers.

The hypotheses being examined were:

- That such programs would permit the promotion of individuals, dead-ended in their entry level jobs after many years of low or unskilled employment, into the mainstream of American employment. They would thus begin to move upward, either in the firm or in the labor market in general, at the same rate as the typical blue-collar worker.
- That a "suction effect" would be generated, by virtue of the entry level vacancies created by the upgrading of current incumbents, which would lead to the hiring of long-term unemployed and unskilled individuals from the local labor area.
- That employers would operate such programs at their own expense, because their low cost would be more than offset by increased overall productivity. This would occur as a result of such factors as filling skilled vacancies which were otherwise vacant because of the unavailability of these skills in the external labor market. These vacancies would also be filled

from within the organization by employees who were already oriented and motivated, and who as a result of their training would be better equipped with the needed skills than the external new hire.

HDC consequently developed, from 1966 onwards, the High Intensity Training (HIT) approach, which called for thirty hours of mixed skill and personal development training, on company time, with a contractual guarantee from the employer that each graduate of the course would receive a 15% pay increase. The project (conceived as both experiment and demonstration and funded at the time out of the Office of Experimentation and Demonstration) was first developed in New York City and its apparent success led to its extension to Baltimore, Cleveland and Newark. In each of these latter three cities different managing agencies were created; a community-based group in Baltimore, a group linked to the Mayor's Office in Cleveland and in Newark a group forming part of the New Jersey State Employment Training Service. These agencies were coordinated and supervised by HDC; each had to recruit demonstration firms who would sign the contract; conduct training of employees and leave behind a residual capability to continue the HIT approach, without government funding.

A follow-up study conducted in 1971*, some twelve to eighteen months after the upgrading effort, showed that these hypotheses were not supported by the data. Upgraded employees tended to stay where they had been placed after graduation, disproportionately so when compared with "mainstream" progression. Others, who had left the original firm had the same high unemployment rate (some 20%) as the rest of the work force of the inner city labor areas in which they lived. Those who had jobs were working again at the same level of skill and pay they had been in before the HIT program. There was no evidence of any suction effect, primarily because the effects of HIT were to expand and enrich the original job, so that in reality source and target jobs had become merged into one. (This, of course, was not intended by the HIT designers.) Such an effect was probably the reason for the absence of continued progression on the part of HIT trainees. They were probably perceived by their supervisors as remaining in their original jobs, but better trained and capable of a little more work.

Finally, it turned out that employers were not willing to invest their own funds in training (beyond the release time for attending classes) and when they felt the need for more HIT trainees, they requested another course conducted by the

* See Follow-up Analytic Study of a Three-City Upgrading Program, Skill Achievement Institute, 1971.

original government funded HIT upgrading agency. Yet, these same employers did feel that the programs improved employee performance in all respects, from productivity to time keeping.

As HDC and the Office of Research and Development studied these data and the subjective but informed judgments of project managers who had worked intimately with the companies concerned, it became clear that more insights were called for into how upward mobility did take place in industry. Knowledge was needed as to what inhibited or facilitated mobility, what disparate effects there were, and how they were caused. Special attention was needed regarding the upward mobility of minorities and women and what, in general, equitable and rational upward mobility systems would look like. One (among many) projects that were consequently contracted is described in this report, i.e. a study of upward mobility in a large unionized multi-plant manufacturing organization, typifying one important segment of American industry. Its objective was to explore the structure and process of the promotion and transfer system, to design a new career progression system for blue collar (and perhaps also for white collar) workers which would be responsive to any needs emerging from such exploration and which would be judged theoretically sound by the company's management. It would then be necessary to try to implement it and evaluate it in as much detail as was practicable. It was, in fact, to be a case study, expected to have some generalizability to large manufacturing corporations using mass production technology and with a unionized work force. HDC was awarded this contract and, in addition was contracted to provide technical support to the National Restaurant Associations Career Progression project and work with the Equal Employment Opportunity Commission, all as part of the Office of R&D's efforts to further its understanding of the mobility problem in industry.

The multi-plant study was specifically designed to address the following issues:

1. What, if any, are the obstacles to career progression among workers in large manufacturing plants?
2. If obstacles exist, what is an appropriate strategy and methodology for employers to follow in improving prospects for occupation mobility?
3. What, if any, difficulties arise in implementing changes in personnel policies which foster upgrading?
4. Do the specific changes in personnel practices emerging from the strategy work effectively when implemented by employers?

The first step in the project was to secure the cooperation of one or more employers. In selecting a cooperating employer priority was given to large, multi-plant manufacturing firms because:

- manufacturing activities would require the career progression design to deal with manpower utilization patterns within the constraints imposed by the technology of a mass production process;
- a multi-plant firm would provide insight into the problems of transferring career progression designs from one location to another;
- such firms are likely to contain large proportions of youth, minorities and females among their labor force and the development of expanded career opportunities for these groups was assigned high priority.

After approximately six months of negotiations, one corporation which initially expressed interest in the project eventually was eliminated from consideration. This decision was made because management at the plants selected for experimental activities was strongly opposed to any form of union involvement in the project while HDC objected to working without some form of union participation. Efforts to resolve the issue by involving representatives of the corporation's central personnel division could not lead to a timely settlement and another cooperating employer was sought.

A more satisfactory relationship was developed with a second large, multi-plant manufacturing firm, which will be referred to simply as the ABC Corporation. ABC's international headquarters is located in the Midwest and it ranks high on the Fortune 500 list. HDC's first contact with the Corporation took place through the ABC Institute, a central corporate division with responsibility for developing training programs for most of the firm's manufacturing plants.

The ABC Institute became HDC's primary point of communication with the central corporate organization and the institute invested considerable staff time in working with HDC. By the time the project was completed the Institute estimated its expenses related to design and implementation of the Career Progression System at about \$215,000. It was in cooperation with the ABC Institute that two plants were identified as suitable locations for the research and development project - one located in Toledo, Ohio and the other in Detroit, Michigan.

The ABC Corporation has a collective bargaining agreement with a large national union and local chapters are found at both the Toledo and Detroit plants. The Corporation's Personnel Division, which has responsibility for collective bargaining and other labor relations and personnel matters, is an organizational unit distinct from the ABC Institute. No formal relationship was established between HDC and either the Personnel Division or the national organization of the union. Instead, the ABC Institute was designated, by the Corporation as the liaison unit between HDC and other corporate officials, if such contacts became necessary. Contact with the union was to take place at the plant level and after the local plants were identified HDC staff members established informal relationships with the local union leadership and consulted with them regularly.

The remainder of this report describes the research and development activities undertaken in cooperation with the ABC Corporation and discusses the policy implications of the project's findings. The next chapter describes the patterns of mobility which existed in ABC's manufacturing plants prior to intervention by HDC and identifies the problems associated with the existing patterns. The third chapter presents the career progression system designed by HDC to improve occupational mobility within ABC and relates the system design to the broader objectives which government-sponsored intervention is intended to promote. The third chapter also relates the efforts made to implement the design and assesses the impact of those portions of the career progression system which were eventually implemented. The final chapter draws upon the experience with ABC to suggest priorities and guidelines for future government action intended to promote upward mobility for blue collar workers.

The conclusions presented in the final chapter may be summarized as:

1. Collective bargaining agreements are a major instrument for structuring the internal labor markets of large unionized firms and interventions must be designed to confront this reality.
2. Employees in large industrial firms often lack adequate information about promotional opportunities outside their particular department. A well designed career counseling program can help overcome this informational gap.
3. Implementation of career progression systems can be hampered by the employer's desire to utilize only those programmatic elements which affect productivity.

4. Government sponsored interventions should have well-defined objectives beside improved productivity and should avoid partial implementations which do not further these policy goals.

CHAPTER 2

EXISTING PATTERNS OF MOBILITY

EXISTING PATTERNS OF MOBILITY

The first step toward designing and implementing an improved system of occupational mobility is to develop an understanding of the job structure and existing personnel policies and practices within the firm. To accomplish this end, research was undertaken at two plants within the corporation, one located in Toledo and one in Detroit. The purpose of this chapter is to describe the patterns of mobility which exist within the corporation and to identify those characteristics of the existing system which restrict opportunities for advancement among production workers.

The two plants at which existing mobility patterns were studied both manufacture machined parts for the firm's principal product. The Detroit plant employs approximately 3,800 workers of whom about 88% are production workers paid on an hourly basis. The remainder are either clerical and technical personnel also paid on an hourly basis (3%) or are salaried personnel in managerial or other high level functions (9%). The Toledo plant employs about 3,000 workers of whom the vast majority are also in hourly wage production jobs.

The characteristics of the labor force employed at the Detroit plant are summarized in Table 2-1. Virtually all of the workers (95%) are male with females having significant representation only in clerical positions (46%). Members of ethnic minorities comprise 59% of the total work force, but are concentrated in semi-skilled production jobs (74%) and underrepresented in other categories. At the Toledo plant males also predominate, but minority representation (22%) is significantly lower than at Detroit reflecting primarily the difference in the ethnic composition of the labor force in the two communities.

As with most large corporations, ABC has a wage classification system which requires detailed job descriptions and which assigns each job to one of several pay grades depending upon the level of skill and responsibility which it requires. At both plants studied, hourly wage jobs are assigned to one of 29 different wage grades. Despite the relatively large number of pay grades, the range in wage

rates is rather limited. During 1971 the lowest pay grade found in the plants was \$3.90 per hour and the highest \$5.80.

Table 2-1

Characteristics of Workers at
the Detroit Plant

<u>Employment Category</u>	<u>Total No. of Workers</u>	<u>Percent Female</u>	<u>Percent Minority</u>
Managers & Professionals	352	0	25
Technicians	47	0	9
Clerical	65	46	20
Skilled Trades	513	0	9
Semi-skilled Workers	2,797	6	74
Laborens	30	3	97
Total	3,804	5	59

The 29 different pay grades encompass over 100 different specific job titles at each of the plants. Data from the Detroit plant (Table 2-2) illustrate the pattern found at both plants. The majority of both job titles and workers are found in the middle ranges. At Detroit over two-thirds (68%) of the workers earned less than \$4.55 per hour with 27% of the workers in pay grade 9 (\$4.22 to \$4.42 per hour) and 16% in grade 7 (\$4.15 to \$4.35 per hour).

Given the large number of job titles and the 29 different wage rates, there exists significant potential for upward (i.e., higher wage) occupational mobility. Workers could be hired at titles in the lowest pay grades and subsequently promoted to titles in higher pay ranges. Alternatively, upward mobility could be severely restricted; workers could be hired from the external labor market at each of the pay grades and limited to horizontal (i.e., same wage grade) mobility among job titles. To determine the nature of the actual mobility patterns within the corporation, a sample of new hires at each plant was selected and their occupational mobility was traced.

At the Toledo plant, all persons (270) hired into production jobs between August 1968 and September 1969 were selected for study and their job histories from time of hire through December 1971, when the data were transcribed, were analyzed. A review of the job titles into which new workers were hired reveals that "ports of entry" are clearly identifiable (Table 2-3). Precise data were available for 268 of the 270 new hires. These 268 were hired into only 16 different job titles and two titles accounted for 224 or 84% of all hires.

Table 2-2

Distribution of Production Job Titles and Employees
at the Detroit Plant by Pay Grade

<u>Pay Grade</u>	<u>Wage Range^a</u>	<u>No. of Titles</u>	<u>No. of Workers</u>	<u>% of Workers</u>
1	\$3.90-4.10	2	112	3
2	3.97-4.17	3	202	6
3	4.02-4.22	3	115	6
4	4.06-4.26	1	3	*
5	4.10-4.30	8	67	2
6	4.13-4.33	1	41	1
7	4.15-4.35	14	526	16
8	4.20-4.40	1	20	1
9	4.22-4.42	18	908	27
10	4.25-4.45	3	35	1
11	4.27-4.47	6	126	4
12	4.29-4.49	2	15	*
13	4.34-4.54	4	200	6
14	4.35-4.55	1	4	*
15	4.40-4.60	1	18	1
16	4.41-4.61	2	29	1
17	4.55-4.75	1	3	*
18	5.16-5.31	2	5	*
19	5.24-5.44	1	10	*
20	5.25-5.45	1	7	*
21	5.29-5.49	7	136	4
22	5.30-5.45	1	4	*
23	5.36-5.56	1	13	*
24	5.38-5.53	1	1	*
25	5.44-5.64	5	287	9
26	5.50-5.70	1	64	2
27	5.54-5.74	1	4	*
28	5.60-5.80	5	95	3
29	Varies ^b	3	261	8
Total	3.90-5.80	100	3315	100

* Denotes less than one half of one percent.

a Wage rates are as of November 22, 1971.

b Workers in job titles of utility man, job setter, and relief operator are paid wage rates geared to the specific operations they are assigned to perform.

Table 2-3

Entry Job Classifications of Newly
Hired Workers at the Toledo Plant

<u>Job Title</u>	<u>Pay Grade</u>	<u>All New Workers</u>	<u>Minority New Workers</u>	<u>Non-minority New Workers</u>
Janitor - Factory	\$3.90-4.10	3	1	2
Material Handler	3.97-4.17	7	3	4
Conveyor Loader	3.97-4.17	4	1	3
Wash and Degrease Small Parts	4.00-4.20	2	0	2
Inspector	4.10-4.30	2	0	2
Bench Hand	4.10-4.30	98	21	77
Rivet and Stitch	4.10-4.30	2	0	2
Minor Assembler	4.10-4.30	126	29	97
Punch Press	4.13-4.33	3	0	3
Spot Welder	4.15-4.35	6	1	5
Drill Press	4.15-4.35	3	0	3
Broach Surface	4.15-4.35	1	1	0
Water Test	4.15-4.35	3	0	3
Heat Treat Furnace	4.15-4.35	5	2	3
Automatic Press	4.20-4.40	2	0	2
Boring Mill	4.20-4.40	1	0	1
Total	3.90-4.40	268	59	209

Among minority workers there were only 8 entry titles and 85% were hired into the two major ports of entry - bench hand and minor assembler. Entry jobs were concentrated at the lower end of the pay scale; none of the entry jobs were above grade 13 (\$4.20 to \$4.40 per hour) and the two major entry ports were both at grade 11 (\$4.10 to \$4.30 per hour).

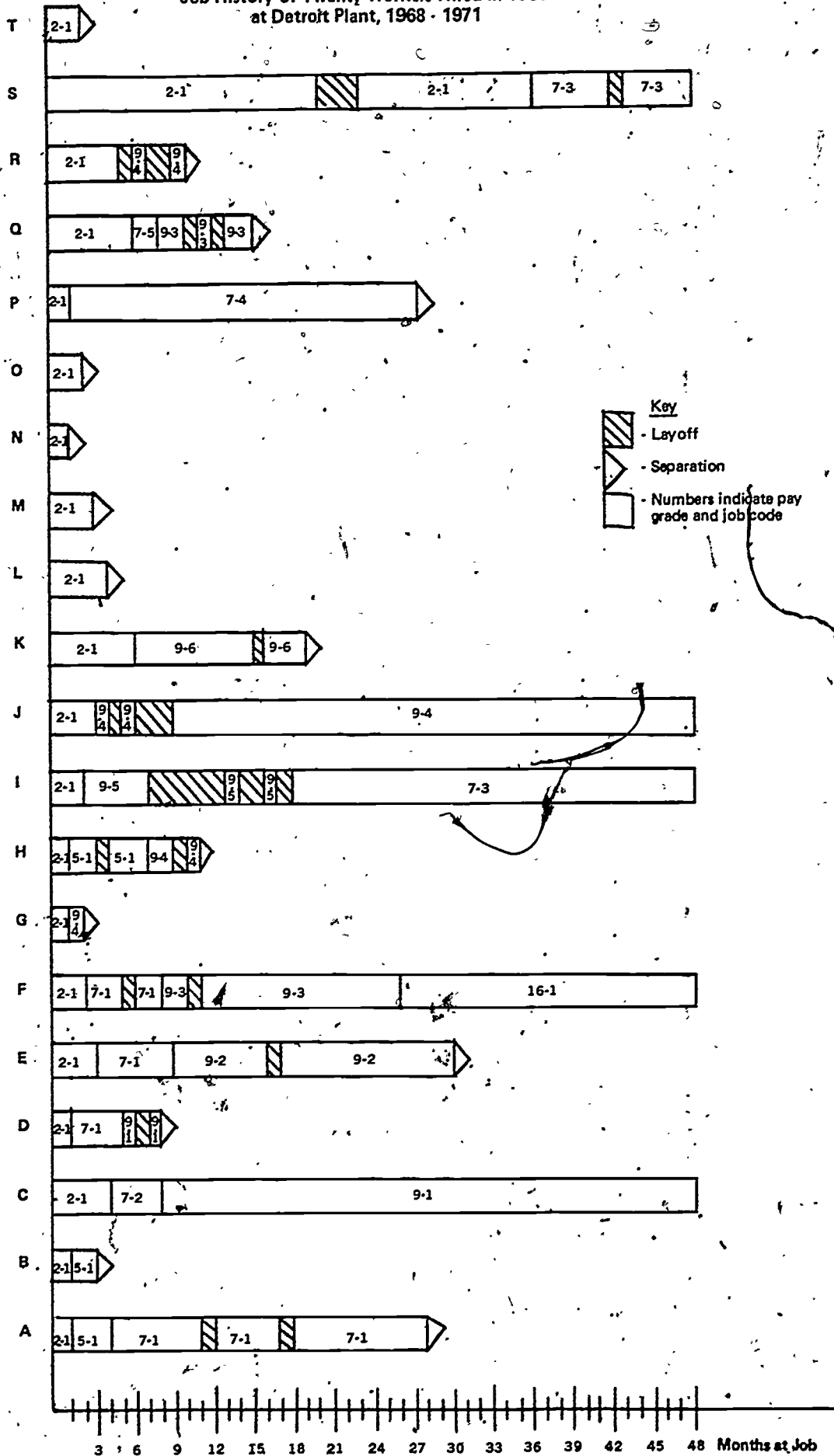
Clearly identifiable ports of entry also exist at the Detroit plant. A sample of 623 workers hired during the four year period 1967 to 1970 found that 399 (64%) were hired into four major entry titles and 214, or over one-third, were hired into the single most important entry job at the plant - conveyor loader. As at Toledo, minority workers were hired into fewer titles but the relative shares of both minority and non-minority workers hired in the four major entry titles were nearly equal.

Although identifiable ports of entry were found at each plant, the analysis of personnel records did not identify any clear-cut or predominant mobility patterns for workers hired into these entry titles. This is related to a number of factors. First, turnover is high. Approximately 60% of the 270 individuals hired at the Toledo plant between August, 1968 and September, 1969 were no longer employed in December 1971. Over 70% of these separations took place within three months of hire and most of these workers were still in their original job title at the time of separation. At the Detroit plant the proportion of newly hired workers leaving within 12 months was approximately 50% for those hired in 1968 and rose to approximately 75% for those hired in 1969 and 1970 when an economic downturn caused layoffs.

While rapid termination of employment obviously forecloses opportunities for advancement, even for those who remain with the corporation no clear-cut patterns of mobility emerge from the analysis of job histories. Of the 270 persons hired at the Toledo plant, 107 were still employed when the analysis was undertaken. These workers were divided among 27 different job titles and 15 of these job titles were not among the list of 16 entry titles presented in Table 2-3. These 15 promotional titles accounted for 38 workers or 35% of those remaining with the firm. Another 28 workers were in one of the four entry job titles which were different from those into which they were originally hired. Thus, at the Toledo plant, approximately 62% of those remaining with the firm experienced some occupational mobility, but with movement spanning 19 different titles, there were no clearly identifiable promotional routes.

The diverse mobility routes of workers are illustrated in Figure 2-1 which summarizes the job history of 20 randomly selected male minority workers hired in the major entry job,

Figure 2-1
Job History of Twenty Workers Hired in 1968
at Detroit Plant, 1968 - 1971



conveyor loader (#2-1), at the Detroit plant during 1968. Of the twenty workers, five (L, M, N, O, T) left the plant without having any promotion after serving periods ranging from one to four months. The initial promotions of the other 15 workers were into nine different job titles. These nine different titles were distributed among three different pay grades. The time in entry jobs before first promotion ranged from one month to three years with the latter (worker S) including a three-month layoff period. Time at entry job was not related to level of promotion; one worker (G) was raised to a job in pay grade 9 after one month, another worker (B) was promoted to a job in pay grade 5 after one month, and a third worker (S) was promoted to a job at grade 7 after three years.

The work histories of the five workers who remained at the Detroit plant throughout the period studied (C, F, I, J, S) neatly summarize the diverse mobility patterns. One is currently at grade 16; two occupy two different titles at grade 9, and two others are in the same title in grade 7. The two in the same job title reached it by different routes. One (S) was promoted directly from his entry title, the other (I) had earlier been promoted to a title in grade 9 and subsequently was rehired after a layoff at grade 7. Of the two workers at grade 9, one (C) reached his current position after a previous promotion to a grade 7 position while the other (J) was promoted directly from grade 2 to grade 9. The worker at grade 16 reached his position via previous promotions to grades 7 and 9.

To give some order to the seemingly inexplicable mobility patterns emerging from the analysis of personnel records, it is necessary to understand the administrative organization and collective bargaining agreements of the firm's manufacturing plants. Each plant is divided into several divisions and each division consists of several departments. The organization of divisions and departments varies with the products and processes which are the responsibility of each plant. Workers hired at a given job title may be assigned to one of several departments in one of several divisions. In fact, each of the major entry titles is found in more than one division, so newly hired workers receive varying assignments even though they are hired at the same title.

The corporation's collective bargaining agreement specifies that when an hourly wage production job becomes vacant, the job shall be offered to other workers within the department and on the basis of seniority. The promoted employee must demonstrate his ability to do the job during a two-week trial period. Employees outside the department can be con-

sidered for the job only after those in the department have declined the position. Should this occur, workers in other departments who have previously applied in writing for transfer will be considered for the vacancy. Applications for transfer to the department are considered on the basis of plant seniority.

Another provision of the collective bargaining agreement specifies that when layoffs are required the employees to be laid off shall be determined on the basis of departmental seniority. The effect of this provision is that an employee seeking to transfer departments in order to increase his promotional opportunities is simultaneously increasing his chances of being laid off.* As the work histories in Figure 2-1 show, layoffs are an ever present threat. Only two of the thirteen employees with more than six months service did not have at least one layoff and only one of five employees remaining at the plant throughout the period escaped layoff. The choice some employees must make between increased promotional opportunity and decreased job security is an unfortunate aspect of the existing promotion system.

Other aspects of corporate policy and union contracts relate to promotion from hourly production jobs to salaried supervisory positions (foremen). These promotions are not based exclusively on seniority. Although a candidate must have at least 12 months seniority, he must also be recommended by his foreman, and complete a special Foreman Training Program. Other deviations from strict adherence to the seniority principle are found in promotions to apprenticeship programs where a candidate must pass a basic skills test. An analysis of the employment records of workers in foreman and apprenticeable position found that these provisions are rarely used. At the Toledo plant, 63% of the foremen were hired directly into a salaried positions and 86% of those in apprenticeable trades were hired directly into this category from the external labor market. While these data may reflect the initial need to staff a newly built plant, they also suggest that these positions may be entry ports rather than promotional titles filled according to the provisions described above. With the exception of these supervisory and

* This problem is somewhat ameliorated by contract provisions which state that: Employees laid off have the right, within two weeks, to displace employees with less seniority in other departments of the division. After two weeks employees can apply in writing to displace less senior employees in other divisions; in this case the employee must be recalled within 30 days provided he has at least nine months more seniority than the employee he would displace.

apprenticeable positions, which are few in number but still significant, departmental seniority is the principle which governs promotional decisions in the corporation.

The net effect of the organizational structure and collective bargaining provisions described above is that a worker's promotional opportunities are directly related to: (1) the turnover rate and occupational structure of the department into which he is initially assigned and (2) the knowledge he has of vacancies in other departments which permits him to apply for departmental transfers in order to make optimal use of his seniority to obtain promotions in other departments. The second point is important because the firm does not have a policy of posting vacancies. Hence vacancies outside of a worker's department may remain unknown to him unless he is informally advised of them. Although no quantitative data are available to support this finding, informal interviews with workers indicated that they felt this system, which is highly dependent on informal sources of information, was used by union representatives and plant management to "play favorites" in awarding promotions.

In summary, an analysis of employee personnel records, corporate policy, collective bargaining agreements, and interviews with workers revealed the following patterns of mobility: Ports of entry are clearly identifiable, but subsequent occupational mobility varies widely. Unequal access to promotional opportunities among workers hired into entry titles results from adherence to departmental seniority as the principle governing promotional decisions despite the fact that turnover rates and occupational structures vary significantly among departments. Additional inequities arise because promotions involving departmental transfers are dependent upon an informal information network which gives discretion to union leadership and management. Finally, there is some evidence to suggest that supervisory and apprenticeable positions which are nominally available on a promotional basis to production workers are in fact, often filled from external sources.

CHAPTER 3

THE CAREER PROGRESSION SYSTEM

THE CAREER PROGRESSION SYSTEM

Design of the System

Programs to improve the upgrading process generally seek one or more of the following objectives: (1) to reshape a firm's occupational structure in order to increase the number of higher level jobs into which lower level workers may be promoted; (2) to increase the proportion of higher wage jobs filled by workers with experience within the firm rather than by workers drawn from the external labor market; (3) to modify the criteria used to select workers from within the firm for job vacancies at higher levels; (4) to increase the number of workers in lower level positions within the firm eligible to be considered for promotion.* The set of recommendations developed by Humanic Designs Corporation for the ABC Corporation, which together may be called a Career Progression System, are best described in terms of these four objectives.

The objectives which the Career Progression System was designed to promote are primarily those of increasing the number of workers eligible for promotion and modifying the selection criteria used in promotional decisions. The other objectives were assigned secondary priority.

Increasing the number of better jobs by altering the firm's occupational structure was not considered a feasible objective. Within ABC the pattern of manpower utilization is largely dictated by the technology of the mass production process. Although over 80 jobs at each plant were subjected

* A fifth objective, improving the wages and working conditions of lower level workers, is sometimes identified with upgrading programs but does not relate to the more specific problem of occupational mobility. For a complete discussion of these objectives, see Charles Brecher, Upgrading Blue Collar and Service Workers, Johns Hopkins Press, Baltimore, 1972, Chapter 7.

to a Job Task Requirements Analysis (JTRA),* only one recommendation emerged for job restructuring. Specifically, at the Toledo plant it was recommended that the Machining Foreman job be restructured slightly to permit the foremen to devote more time to training. This would be achieved by assigning much of the administrative work currently performed by Machining Foremen to a small number of workers to be given the newly created job of Senior Foreman. Alternatively it was suggested that the Machining Foremen retain their administrative responsibilities and that a number of new jobs known as Trainer-Counselor be created. Although these recommendations would have the effect of creating several new higher level jobs, another important reason for the proposed changes was to facilitate training of workers eligible for promotion to existing positions. Thus while the potential for job restructuring was explored through the JTRA, and while a specific recommendation was made to restructure one job title, it may be fairly stated that reshaping the firm's occupational structure was not a primary objective of the Career Progression System.

The analysis of existing mobility patterns summarized in the previous chapter identified areas where increased use of internal manpower sources should be sought. Specifically, the firm was not relying heavily upon internal sources in the apprenticeable trades. However, prior to HDC's intervention with ABC, the Corporation had already developed special programs to fill vacancies in the apprenticeable trades. These programs already had been initiated before HDC began its field work, by the ABC Institute in order to increase minority representation in these trades. Since such programs had already been designed and implemented at both plants, a conscious effort was made to avoid suggestions which would alter the special programs already in operation. Hence HDC's recommendations did not identify greater use of internal manpower for apprenticeable trades as a primary objective.

The remaining two objectives - increasing the number of workers eligible for promotion and making the selection process work more equitably - were the primary goals of the Career Progression System. These goals were to be achieved through three related programmatic recommendations:

* For a description of the JTRA method, see Humanic Designs Corporation, Increasing Employee Mobility Opportunities: An Employers Handbook for System Design, July 1972. A revised edition of the Handbook is being prepared by HDC.

1. To identify the workers eligible for promotion on the basis of newly defined "job families" consisting of job titles with similar skill and knowledge requirements rather than on the basis of existing departmental lines;
2. To utilize on-the-job training programs for promoted employees drawn from selected titles in the newly defined job families;
3. To establish a counseling program to disseminate information about promotional opportunities so that all workers would have equal access to vacant positions.

The recommendation for establishing job families was based upon both the analysis of existing mobility patterns and the JTRA. As the previous chapter documented, workers hired into the same job title and performing the same tasks were eligible for promotion to different jobs based on the department into which they were initially assigned. Since many job titles were found in more than one department, it was recommended that workers in a given title all be eligible for promotion to the same set of higher level jobs regardless of the specific department in which they worked. This would eliminate the inequity of two workers in the same job title having different promotional opportunities because they were assigned to different departments. The groups of jobs from which workers are eligible for promotion to one or more higher level jobs were designated "job families", and were identified on the basis of the JTRA. Figures 3-1 and 3-2 present the promotional routes recommended for production workers at the Toledo and Detroit plants respectively. Separate job families and promotional routes were identified for clerical and technical personnel but are not included in the Figures.

The recommended use of knowledge and skill-related job families rather than administrative departments to define eligibility for promotion required as a corollary the use of tenure within the job family rather than departmental seniority as a criteria for selecting among eligible employees. In other words, length of experience on an appropriate lower level job, regardless of the department in which that job was located, would be the criterion for selecting workers to be promoted.

On-the-job training programs were found to be necessary for selected promotional titles because even within job families experience in lower level jobs did not always provide a worker with all the skills necessary for certain promotional titles. This was the case even in titles where the firm was

Figure 3-1 Recommended Career Progression Routes for the Toledo Plant.

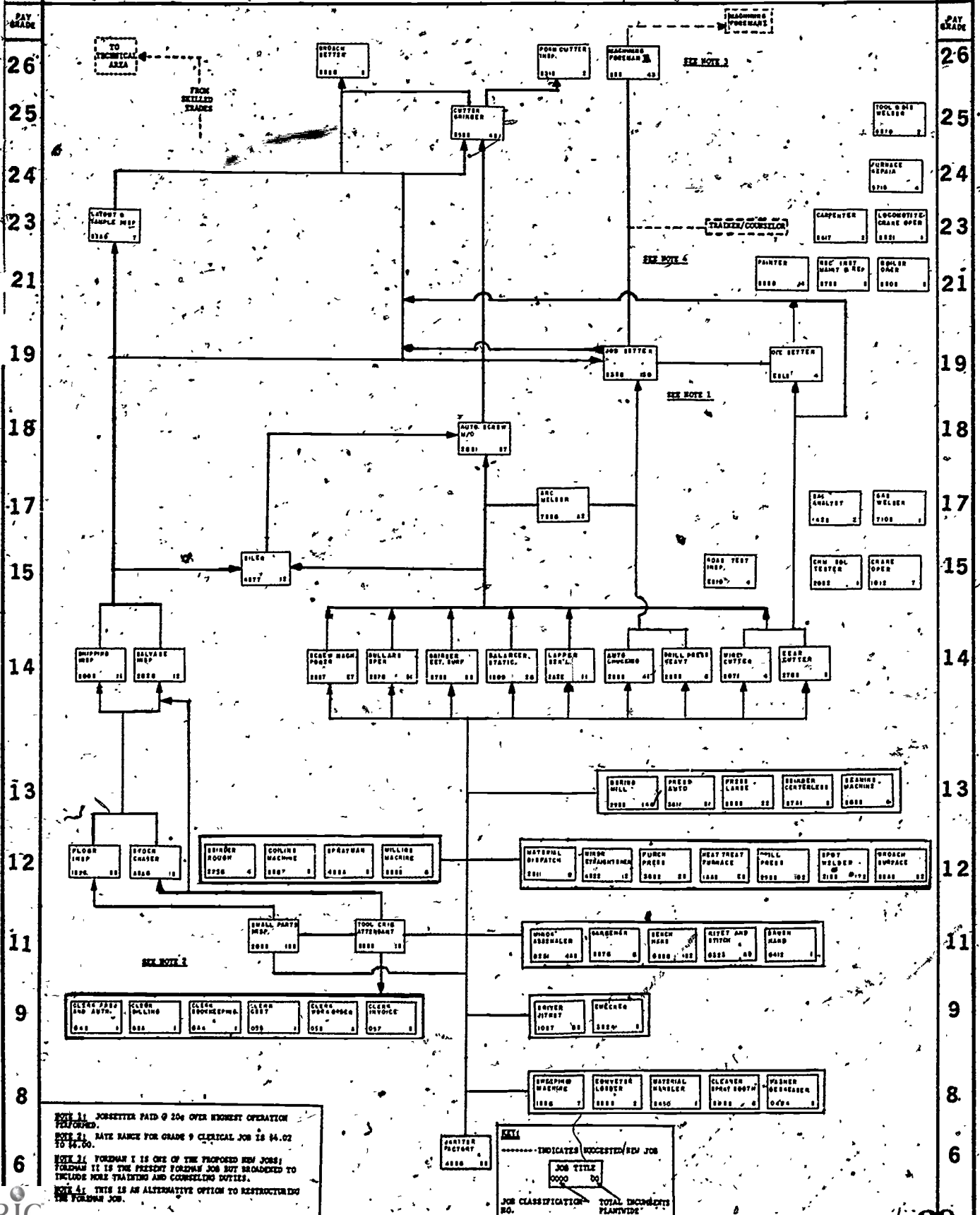
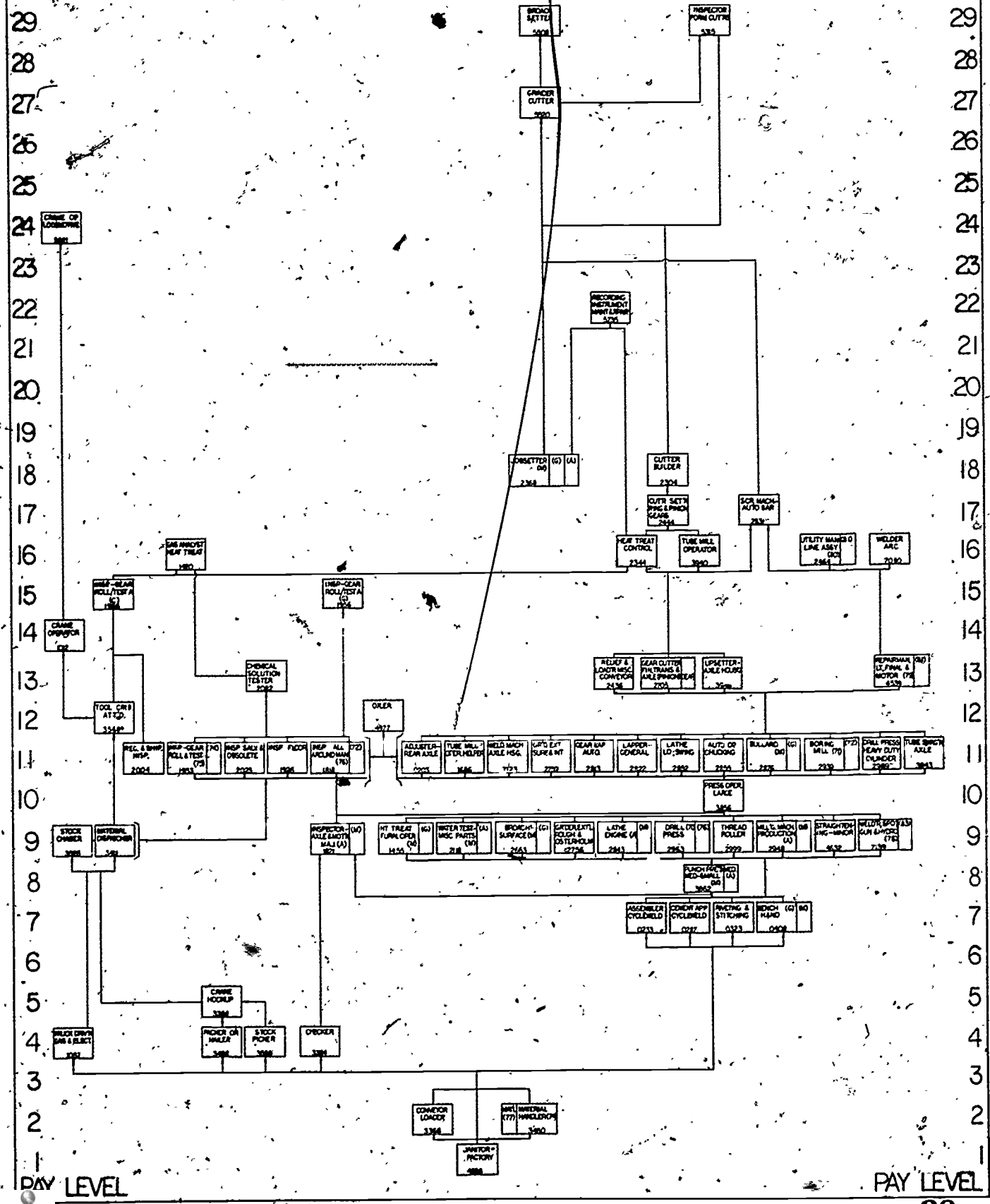


Figure 3-2
**Recommended Career Progression Routes
 for the Detroit Plant**



already relying exclusively upon lower level workers to fill vacancies. The result was a high level of waste and inefficiency in the production process. For example, it was found that at the Detroit plant workers promoted to the position of Gear Inspector, who are responsible for testing and examining gears at a point in the production line, were frequently incapable of recognizing imperfections in the gears. This skill could not be completely learned while working at the lower level positions from which inspectors were drawn - gear lappers and gear grinders - yet no adequate training program existed for newly promoted inspectors. Thus workers were performing the gear inspector jobs at low levels of proficiency with consequent high costs in the form of warranty repairs.

The third programmatic element of the Career Progression System was the creation of a counseling sub-system for all production and maintenance workers. Specifically, it was recommended that a full-time counselor be employed in each plant to advise workers of the positions to which they are eligible to be promoted, to inform them of transfer procedures, to encourage them to seek transfers when this would enhance their promotion opportunities, and to disseminate information about vacancies as they become available. All eligible workers would be informed of available vacancies including those outside his department and the inequities of the existing informal informational system would be eliminated.

In order for the counselor to provide reliable advice he must be equipped with adequate information. Thus HDC also recommended as part of the Career Progression System a Management Information Sub-system which would provide the counselor with (a) vacancy rate predictions for higher level positions and (b) summaries of the in-plant job experience of each employee. It was recognized that precise vacancy rates could not be predicted, but some general approximation of vacancy rates based upon previous growth experience and turnover rates would permit the counselor to advise employees on the feasibility of their reaching specific positions and to redirect them if the desired career goals was not likely to be achieved because separations are few and expansion unlikely. Job experience data would be made available to the counselor from the Corporation's existing personnel records and would permit him to identify all workers possessing the job experience required for each promotional position that became vacant.

In summary, the set of recommendations known as the Career Progression System proposed that eligibility for promotion be extended to workers with appropriate skills regardless of their particular departmental assignment, that seniority

within these newly defined job families replace departmental seniority as the selection criterion, that training programs be established where work experience was not sufficient preparation for promotional titles, and that a counseling position be created to inform employees about promotional opportunities and guide them in applying for assignments which would maximize their promotional opportunities. The problems encountered in implementing the Career Progression System and an assessment of those components of the system which were successfully implemented are the subject of the next sections.

Implementation of The Career Progression System

Implementation of the Career Progression System at the two participating plants took place at slightly different times and with significantly different results. The implementation process at each plant will be considered separately.

Toledo. At the Toledo plant, the research and design work was accomplished primarily through direct contact between HDC and plant management. The ABC Institute, the central corporate staff unit, was not directly involved because plant management preferred this arrangement. Hence response to the recommendations was at the discretion of local plant management and depended primarily upon their perception of the utility of the proposed changes.

The Career Progression System was first presented to Toledo plant management in August of 1972. While both the plant manager and the personnel manager agreed in principle that workers should be given greater opportunity to advance, they felt they could not implement the HDC recommendations. The major obstacle was the firm's collective bargaining agreement which specified that departmental seniority should govern promotional decisions. In addition it was felt that the counseling system would be a functional equivalent of posting all vacancies and the firm had avoided this practice in its negotiations with the union. Consequently, the firm wanted to defer action on these recommendations until after the local union elections and the national collective bargaining sessions scheduled for June 1973 and September 1973 respectively. However, the recommendation for training programs in selected job titles was received more favorably since it could be implemented without violating the existing collective bargaining agreement and was likely to directly affect productivity, a principle concern of the plant manager.

Management's desire to select fragments of the Career Progression System for implementation and HDC's commitment to the entire set of recommendations led to a series of negotiations which continued over a period of more than one year. During this time various compromises were suggested involving phased implementation of the various programmatic components of the system, but no mutually acceptable compromise could be achieved within a reasonable time period. Finally, a suggestion for implementation in selected promotional titles with (a) half the vacancies filled solely on the basis of departmental seniority and half filled on the basis of seniority within the newly defined job families, and (b) all the newly promoted employees receiving formal training, was agreed upon. Subsequently, new problems developed. The desire to establish that training "paid" in the sense of improving productivity required that training should be developed and implemented initially only for those promotional positions where indices of productivity were available for use in a cost-benefit analysis to be performed shortly after implementation. This required renegotiating the titles selected for initial implementation. Once this was settled, difficulties arose over the precise procedures for selecting workers from within the job families. Management insisted that the new practice be implemented without publicity so as not to influence the forthcoming union elections, while the union representative insisted that promoted workers be informed about the new criteria under which they were selected. These difficulties caused further delays. In the latter part of 1973, when energy crisis-related layoffs at the plant precluded any promotions in the near future, it was mutually agreed to terminate HDC's involvement with that plant.

Detroit. Research and design activities at the Detroit plant were begun later than at Toledo and were conducted with greater participation on the part of ABC Institute staff. The ABC Institute was more closely involved because plant management was more receptive to its participation and because the Institute had already established within the plant a well-received program to improve minority representation in apprenticeable trades which involved an on-site staff member serving as recruiter and counselor.

The complete Career Progression System was not adopted at the Detroit plant, primarily for reasons similar to those first encountered at Toledo. That is, use of plant seniority within newly defined job families as a selection criteria for promotion would violate the existing collective bargaining agreement. However, plant management was willing to work within the confines of the collective bargaining agreement to develop a set of modified recommendations which

would enhance career mobility. This led to a series of discussions in which representatives of HDC, local plant management and the ABC Institute sought to identify changes which were possible without violating the collective bargaining agreement. These efforts resulted in a modified Career Progression System being accepted by plant management in November 1973.

The November agreement committed the plant to: (1) Develop training programs for three positions in the Gear Division. The Gear Division, which accounts for approximately 25% of all production workers, was selected because it contained a number of related jobs which management felt were being performed at a low level of productivity. Training for these jobs would be given first to incumbents who would subsequently train newly promoted employees. Curricula would be developed by the ABC Institute with assistance from HDC staff and with data from HDC's JTRA. (2) Develop a counseling program. Counseling would inform employees of the provisions of the collective bargaining agreement governing promotions and departmental transfers, provide them with information about promotional opportunities within their current department, and encourage them to apply for departmental transfers when this would improve their chances for promotion to a desired job. The counseling would be provided by the employee currently serving as counselor in conjunction with the ABC Institute's apprenticeable trades program. This individual had been selected as counselor in early 1973 by the joint action of the ABC Institute and Plant Management and with informal approval of the union. (3) Develop a Personnel Data Sub-system. This system would provide the career counselor and the personnel manager with data describing the probable vacancy rates in each department and the in-plant job experience of each employee. Staff from HDC would assume responsibility for designing this information system.

From November 1973 to the time of HDC's scheduled withdrawal from the ABC Corporation significant progress has been made in executing the compromise agreement. This progress has been made despite the fact that the plant has suffered from several waves of layoffs resulting from national economic conditions that have both consumed the time and energy of plant management and virtually eliminated all promotional opportunities.

The ABC institute, with the help of HDC staff, has developed an Instructor's Training and Orientation Manual. In addition the Institute has created audio-visual and other material for use in preparing supervisory personnel for training roles and for use in training incumbents in one of the three job titles in the Gear Division. Development of curricula for the other

titles is scheduled for after the training of incumbents in the first title has been successfully implemented. The actual training of incumbents in the first title is scheduled for August or September, 1974. This is somewhat later than originally expected, but postponement was necessary because of the layoffs in the Spring of 1974 which affected many workers including several scheduled to be trained.

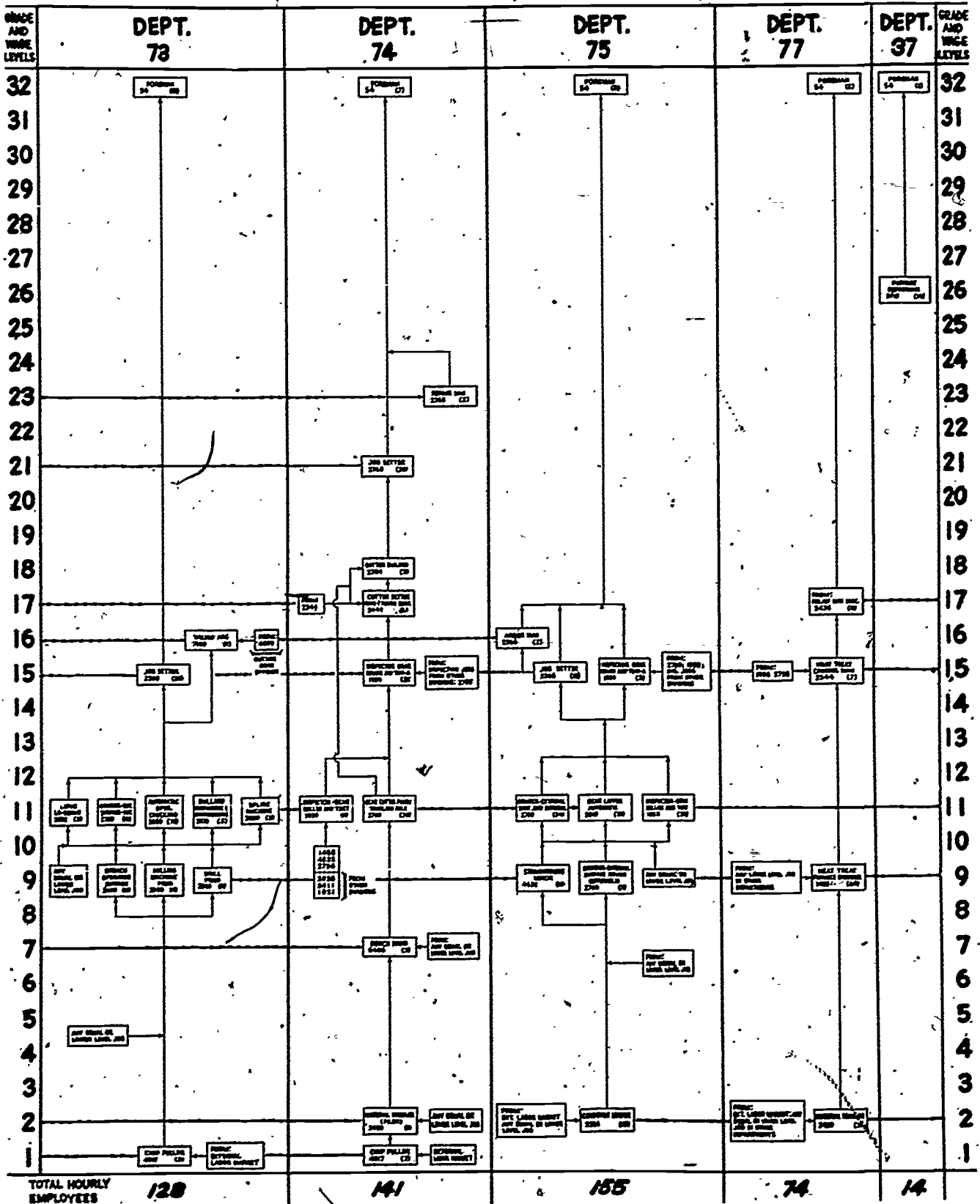
The counselor employed at the plant is now actively engaged in disseminating information to current employees about promotional procedures and opportunities. Since November, he has met with approximately 250 workers in the plant to advise them how best to advance in the firm by applying for departmental transfers or otherwise using the rules set forth in the collective bargaining agreement to their best advantage.

To assist the counselor in this task, HDC has developed three documents - a Counseling Handbook, a Job Content Handbook, and a "Career Progression Map". The Counseling Handbook provides the counselor with information about counseling techniques as well as information about the firm's personnel policies. The Job Content Handbook provides the counselor with detailed information describing the tasks performed by workers in each major job title at the plant. The Career Progression Map, reproduced as Figure 3-3, provides a graphic description of the departmental structure of one major division (Gear Division) in the plant and the promotional routes within the division under the existing collective bargaining agreement. The map is displayed in the counselor's office and it serves as a model for similar maps which will be prepared by the firm for other divisions. In addition to these three documents, HDC, together with the ABC Institute, prepared a fourth document known as the Job Opportunity Map. This pamphlet provides an overview of all jobs at the plant including their relative wage positions. It has been widely distributed by the counselor to interested workers.

A handbook for designing Career Progression Systems within the ABC Corporation has been written by HDC and will be used by the ABC Institute for the design of future systems.

Implementation of the Management Information Sub-system has not been completed at the time of HDC's withdrawal from the firm. However, HDC staff members have conducted an inventory of existing personnel records and prepared specifications for the system which explain how the existing records can be adapted to provide profiles of the workers' job histories and their accumulated skills. It remains up to the firm's personnel officials to apply the design specifications.

Figure 3-3
Career Progression Map
Gear Division—Detroit Plant



In summary, implementation of the Career Progression System as originally proposed was rejected by management at both plants because it required significant violations of the firm's collective bargaining agreement. However, management at the Detroit plant has committed itself to a modified Career Progression System including counseling and training of employees to improve their promotion opportunities. Implementation of this modified system is progressing satisfactorily, given the difficulties associated with the substantial layoffs caused by national economic problems in the early part of 1974.

Evaluation

Because the Career Progression System originally proposed to the ABC Corporation was not adopted, it is not possible to evaluate the impact of this system. However, the changes to which the firm has committed itself - training and counseling - are subject to evaluation.

The training of workers for selected job titles was to have been evaluated by comparing the performance of trained workers with those who were not trained. However, postponement of the implementation of the training, due to large scale layoffs, has made evaluation of this component impossible. Moreover, in retrospect, it does not seem that an evaluation based upon individual worker productivity would have been an appropriate one. As noted in an earlier section, the purpose of the training is to make a broader pool of workers eligible for promotion and, while it may also improve the firm's or a worker's productivity, that is not its prime purpose. Hence, an evaluation of the training program should consider its effectiveness in qualifying workers from a wide range of job titles for a given promotional position. Specifically, it should address the question of whether training has permitted workers from a broader range of job titles to be promoted without a decline in productivity.

No formal plan for evaluating the counseling program was developed. However, informal observation and interviews by HDC staff indicate that career counseling is an effective strategy for altering mobility patterns. The counselor has provided workers with information about promotional opportunities and procedures which they otherwise would have acquired only informally or, more likely, not at all. Counseled workers have successfully sought departmental transfers in order to qualify for promotions in the production divisions. In addition, others have been promoted into clerical, technical and supervisory positions from production jobs as a result of the counselor's intervention.

Overall, the response to the counseling program indicates a strong latent demand among industrial workers for internal labor market information and a capacity to meet this demand through personal counseling supported by appropriated documents and manuals.

CHAPTER 4

POLICY IMPLICATIONS

POLICY IMPLICATIONS

As stated in the Introduction, the purpose of this project was to identify obstacles to occupational mobility in a multi-plant manufacturing firm, to determine what types of measures could be designed to help overcome these obstacles, and to develop an understanding of the difficulties which arise in the implementation of these new programs. The experience with the ABC Corporation provides important evidence relating to each of these issues.

Of course, generalizing from one case study is a dangerous undertaking. There is always the possibility that a unique set of circumstances explain the results and no generalization is valid. Certainly in this case there are a number of distinct features of the experience.

First, it is possible that the way in which the contractor related to the corporation was inappropriate. In this project, HDC worked with both local plant management and the ABC Institute, a central staff unit responsible for developing training programs for production workers. However, it may have been more effective to pursue implementation of changes through corporate units responsible for collective bargaining as well. In this case the appropriate unit, the Office of the Vice President for Personnel, might have quickly rejected the major components of the Career Progression System because of their implications for collective bargaining but the issue would have been resolved more rapidly and with less frustration than the extensive series of discussions with local plant management and the ABC Institute required. Alternatively, if the Personnel Division had committed itself to implementing the proposed changes it may have been in a better position to do so than was local plant management alone.

Second, the role played by the union may have been inappropriate. As part of its working agreement with the firm, HDC never formally involved union leadership in the planning of the Career Progression System. While this was essential for maintaining the firm's cooperation, this type of union-contractor relationship undoubtedly prevented a better understanding of the union's position and desires. Given the close relationship between collective bargaining and occupational mobility, a greater degree of union participation might have changed the outcome of the project.

Third, implementation of even the modified Career Progression System was slowed by an economic downturn and the reduced demand for the firm's product caused by the energy crisis of 1973. If economic conditions were favorable implementation might take a different course and certainly would have proceeded at a more rapid pace.

Finally, the firm itself may not be typical of other large multi-plant manufacturing establishments. Even among manufacturing industries occupational structures differ and ABC does not represent firms in industries with less compressed wage and occupational structures. Moreover, ABC's entry level wage is higher than that of many firms which employ large numbers of workers with low annual wages who are an important segment of the target population for upgrading programs.

Despite the several unique features of this case study, there are a number of conclusions which are suggested by the experience. While they are more likely to apply when circumstances are similar to those which characterized this project, it is also likely that they have some general applicability. On the basis of this admittedly limited experience, the following conclusions seem to be applicable to many large unionized manufacturing firms.

Collective Bargaining and Internal Labor Markets

The most important conclusion emerging from this project is that collective bargaining is a major instrument for structuring internal labor markets. The ABC Corporation is a classic study of how eligibility and selection criteria for promotional decisions are set forth in collective bargaining agreements. There is evidence from the Bureau of Labor Statistics' studies of their file of all major collective bargaining agreements covering 1,000 or more workers that this is a typical practice.* Of the more than 1,850 agreements analyzed over 70% had provisions dealing with promotional practices and 90% of the agreements among manufacturing firms contained such provisions. Moreover, in 90% of all agreements containing promotional provisions, seniority was specified as a criterion to be used in selecting personnel and in 70% the administrative unit within which promotions could be made (plant, division, etc.) was specified. Thus, ABC is typical of most large manufacturing firms in having the structure of its internal labor market specified in its collective bargaining agreement.

The policy implications of this finding are important. Any effort by outside parties, under either public or private auspices, to design and implement programs which significantly

* See Bureau of Labor Statistics, Major Collective Bargaining Agreements - Seniority in Promotion and Transfer Provisions, Bulletin 1425-11, March, 1970.

alter the internal labor market practices of large manufacturing firms will necessarily require upsetting agreements reached as part of the collective bargaining process. The negotiations leading to union contracts typically involve a complex set of trade-offs in which conflicting union and management positions on promotional practices are resolved by compromises on this issue tied to compromises on other issues (wages, fringe benefits, etc.) on which union and management also conflict. Consequently, it is impossible, from the point of view of both union and management, for third parties to deal with internal labor market issues without upsetting a delicate balance of conflicting interests on a broad range of issues. Settlements on the promotional provisions in a contract are inextricably linked through the negotiation process to settlements on a wide range of issues covered by the contract. Thus, in effect, it is impossible to significantly alter internal labor market practices without completely reopening the entire collective bargaining process.

This finding will not encourage optimism among those committed to improving internal labor market practices through public intervention, but it is the conclusion which derives from this project and Bureau of Labor Statistics figures suggest it is broadly applicable. At a minimum, this conclusion indicates that government efforts in this area might be more effective if they were timed to coincide with contract negotiations and took the form of technical assistance to help achieve mutually acceptable promotional provisions which also serve the public interest by reducing the discriminatory and otherwise inequitable consequences of existing practices.

Counseling and Internal Labor Market Information

A second important conclusion emerging from this project is the need for improved information about promotional provisions and opportunities among production workers. Although collective bargaining agreements typically specify the administrative unit (plant or department) and selection criteria (seniority) for promotion decisions, these agreements do not always provide for automatic consideration of all eligible employees or even for posting and bidding for vacancies. The ABC Corporation exemplifies this pattern; the union contract did not require posting and bidding and many employees felt that reliance upon informal sources of information made the system subject to abuses and caused inequities. The same Bureau of Labor Statistics survey mentioned earlier indicates this is a common pattern. Of the 835 agreements containing seniority provisions and specifying administrative units, only 280 also contained provisions specifying that all eligible employees automatically be considered or that posting and bidding is required.

In plants where these practices are not utilized, many employees could benefit from an additional source of internal labor market information. Frequently, they have little knowledge about job opportunities in departments or divisions other than that in which they are currently employed. Unless union officials or personal acquaintances provide such information, their access to promotional positions is limited. Although a long-term follow-up or other evaluative study is not available to confirm this observation, it appears that a counseling program such as that implemented at ABC's Detroit plant helps meet the need for internal labor market information. Moreover, the supporting materials developed by HDC for the counselor - handbooks and a career progression map - may serve as prototypes for aids in disseminating internal labor market information.

The counseling program at the Detroit plant was implemented with little cost to the firm. A counselor already assigned to the plant to assist in minority recruitment and retention was able to take on the additional responsibility of disseminating promotional opportunity information. Similar possibilities are likely to exist at other firms. Personnel department representatives or union officials could assume this new function if provided with suitable tools such as the Career Progression Maps. The appropriate government role may be to encourage such activities and perhaps support technical assistance for developing materials to be used by counselors. Such programs could be efficiently targeted to firms selected because they have collective bargaining agreements which specify promotional policies but which do not require automatic consideration or posting and bidding.

Implementation Strategy

The third significant finding of the research and development effort relates less to the obstacles to occupational mobility and more to the problems in implementing programs designed to improve internal labor market practices. HDC's experience indicates that an employer's overriding concern in all personnel policies including those related to promotional policies is their impact on productivity. Programs which may improve opportunities for employees, but which have no direct positive effect on productivity, will not be assigned high priority for implementation. On the other hand, those individual components of a general program intended to improve occupational mobility which might also serve to improve productivity are likely to be quickly isolated from the total program and selected for more rapid implementation. Thus, the training component of the proposed Career Progression System was quickly selected by plant management at both Toledo and Detroit as an acceptable change because they felt

it might improve their plant's productivity. Other components of the Career Progression System which were less directly related to productivity but which might significantly improve the promotional process were not assigned priority by the firm.

The tendency to view personnel practices in terms of productivity is also evident in the evaluation criteria designed for the Career Progression System. A productivity-oriented cost-benefit analysis for the training component was to be the primary evaluative device. Although this approach was not insisted upon by the firm, the project sponsors felt that unless there was a demonstrable gain in productivity, the experimental project would not be replicated at other plants. In contrast, components of the system, such as the counseling program, which were less directly related to productivity were not subject to any formal evaluation. Yet a primary objective of the research and development project was to design and test programs which develop programs which alter occupational mobility patterns, not to improve plant productivity.

The fact that timely implementation of new personnel practices is often contingent upon a demonstrable impact on productivity highlights the ambiguous, and sometimes contradictory, objectives assigned to upgrading programs. An earlier analysis of this problem found, "Undertaking programs of this nature requires a commitment to the value of equity, not necessarily efficiency. It is in this light that we should approach upgrading policy."* Private employers may be expected to concern themselves with efficiency and productivity, but those involved in publicly-funded efforts should constantly keep in mind their commitment to other goals. This may inevitably produce conflicts between employers and third parties, but it is unjustifiable to avoid this conflict if the cost is an abandonment of all program components which cannot clearly be shown to immediately improve productivity.

* Charles Brecher, Upgrading Blue Collar and Service Workers, Johns Hopkins Press, Baltimore, 1972, p. 113.