

Managing and Employing the Handicapped

The Untapped Potential

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DEDICATION

To my late mother, Tusar Pati,
who instilled in me the basis
for whatever human values I now have.

Gopal C. Pati

To my late grandmother, Mattie Carney,
who despite being a double amputee
and suffering from a heart condition,
never gave up the struggle.

John I. Adkins, Jr.

To Chance.

Glenn Morrison

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FOREWORD

As Consulting Editor for Brace-Park's Human Resource Application Series, I'm pleased to have been associated with this writing project. Dr. Gopal C. Pati has taken the lead in developing resource material derived from over 80 organizations and hundreds of information sources with wide appeal to many readers. With the able assistance of John I. Adkins and with the contributions of Glenn Morrison, a realistic action agenda has been developed. Business officials and managers, public officials, members of the rehabilitation community, union officials, and many others are sure to benefit greatly from this thoughtful, sensitive treatment.

Perhaps, one of our reviewers, a business official, says it best:

I believe this book will serve as a landmark in the current state of the art on the handicapped within the Industrial Relations/ Human Resource area. This book covers all facets and concerns on handicapped employment: not only the historical but, more importantly, the practical and relevant legal problems that exist. This book can (also) be invaluable to all segments of handicapped advocates....

I am quite sure that it will prove to be an invaluable tool for managers and students of managing and employing the handicapped.

Elmer Burack
Chicago, August 1981

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As you can see, our book is really the product of the labor and dedication of many people. In the last analysis, however, it is the authors who must assume the responsibility for the book as it is—for whatever faults and limitations that may exist. We wish to tender our sincere thanks to all those good people listed above and our sincere apologies to any we might have mistakenly omitted.

Gopal C. Pati
John I. Adkins, Jr.
Glenn Morrison

Introduction

THE PURPOSE

Much of the publicity concerning handicapped people usually plays on your emotions: the handicapped are portrayed as either pathetic or heroic; the world that confronts them is heartless and combative. We hope here to deviate from those extremes. We hope to appeal to your reason and arouse your self-interest.

This book is *not* about charity cases; it is *not* a book about injustices. It is *not* even a book of heroic stories, although we think there are some good stories in it. In short, you will *not* be cajoled to weep in pity, *nor* made to tremble in fear (or celebration) at the prospect of omnipotent and omniscient government risen in anger. You will *not* even be inspired to awe of the exploits of courageous disabled men and women.

We intend to talk only good business sense. We will attempt to persuade you that employing qualified handicapped workers will solve personnel and production problems. We will explain how that can be done without much difficulty or significant expense to the employer.

THE READERSHIP

Who is this "you" to which we speak so confidently?

We have addressed this book to three sets of readers:

- **Employers (private and public):** top-level executives, personnel specialists, affirmative action officers, managers, supervisors.
- **Rehabilitation professionals:** agency directors, counselors, job developers, trainers, placement specialists.
- **Other interested parties:** business and rehabilitation associations, academics, unions, public interest groups, and so on.

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We expect employers to be interested because we offer solutions to personnel and production concerns (and, alas, to legal obligations). We expect the rehabilitation community to be interested because we will demonstrate ways to help the people they are dedicated to help—handicapped individuals. We expect the associations, the academicians, the unions, and other groups to be interested because we have new and current information.

At times we will seem to be addressing the first group directly. We hope the others will listen in as well.

THE SITUATION

It is common enough to proclaim that we live in uncertain economic times—probably we always have. Recently it has become conventional wisdom to believe it. Surely the world has gotten more crowded (and more dangerous), and technology, mass communications, and all sorts of new "consciousnesses" (discrimination, environment, quality of life) seem to make it more volatile and hence unpredictable. Nonetheless, we must try to manage—and if in private business, make a profit.

To that end we will isolate a few human and business factors that merit consideration:

1. We have reached a juncture in our economic history when employers continually complain about a lack of people who are willing and able to perform in accordance with corporate expectations, i.e., people who can produce quality work. These employers are looking for persons with at least a modified "work ethic" who will do a good day's work for a good day's pay. At the same time, ironically, many employers either overlook qualified handicapped workers or believe (usually incorrectly) that they are unable to do the job.

2. The labor market is replete with disadvantaged human resources. Moreover, increasing numbers of individuals join the ranks through disabling accidents each year. Most employers do not even take advantage of the tax incentives provided by the federal government to those who hire handicapped and culturally-disadvantaged persons.

3. Many human resource planning principles are already available that can be applied with modifications to more fully integrate and utilize handicapped employees.

Indeed, many leading companies already do a good job finding, training, and managing productive handicapped people.

4. Employers who work under government contract (at one time or another, almost everyone) will be mandated by law to design affirmative action programs that include the hiring and full utilization of the handicapped.

Compliance agencies are becoming more sophisticated; so are employers. It is, therefore, crucial that affirmative action programs be developed that are innovative in meeting not only government objectives, but the objectives of business and industry.

5. Huge sums of tax dollars (which represent an investment in human assets) are spent on rehabilitation of handicapped people. For every dollar spent in this manner, employed handicapped people return between eight and ten dollars in the form of taxes to the U.S. Treasury. Additionally, they become an integral part of a productive labor force, which means a savings on welfare and Social Security payments.

Socially, we have been committed to spending money to rehabilitate the handicapped, but commercially we have not been fully committed to hiring them. On the one hand, government at all levels has been willing to invest in rehabilitation; on the other hand, industry and business (and government, strangely enough) have not been ready to take advantage of that investment.

One of the major reasons for this contradiction is that historically there has been little interaction between rehabilitation practitioners and the business community. Today, however, both communities are beginning to recognize that they can assist one another and realize a profit thereby. By cooperating they can serve their own interests and those of society as well.

THE THESIS

We have been building our thesis by degrees for the last few pages. Here it is again in its most simple form: **Handicapped people constitute an underutilized human resource of great potential value to employers.**

That statement can be broken down into three components:

1. The handicapped are often reliable, competent people who are highly motivated to succeed at regular jobs, to be personally independent, and to contribute to society.

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2. Handicapped workers are screened twice: once by the rehabilitation service, once by the employer. A properly trained and selectively placed handicapped worker will increase the employer's productivity.

3. Successful corporations and organizations of all sizes are making the hiring of disabled workers a routine part of their personnel practices, with no significant costs or inconveniences (and often with savings).

SOME QUESTIONS

To reach this desirable solution, we will have to provide answers to some honest and practical questions. Like the following:

What are the barriers to training and selectively placing qualified handicapped people?

What should employers know about this widely divergent population?

What is the legal definition of "handicapped"?

What is the legal framework of equal opportunity for the handicapped?

What are the ingredients of a successful affirmative action plan and of favorable compliance?

What kinds of organizations can provide assistance to employers?

What are some of the model programs that link the rehabilitation and the business communities?

How do the principles of management, in general, and human resource planning, in particular, apply to employing handicapped people?

What are the components of a solid organizational support system? What services are necessary?

Why do employers hire the handicapped and how are they benefiting?

What are some successful corporate and organizational employment programs?

What are the emerging technologies and innovations that can assist both employers and disabled employees?

What accommodations are necessary to make facilities accessible to handicapped individuals?

Are drug abuse and alcoholism considered handicaps? How should employers respond?

What kinds of training and education programs are available?

What are the unresolved issues? What will government, business, the rehabilitation community, unions, and the handicapped population have to do in the future to make the system work for everyone?

THE STRUCTURE

To answer those questions and others and to put the whole process of handicapped employment into some meaningful structure, we have organized the book into nine chapters:

- Chapter One describes the handicapped population in real, every-day terms. The population is larger and more diverse than you might suppose. (And it is growing.)
- Chapter Two defines the legal framework in which employers and rehabilitation personnel have to work. It will provide what you need to know about the regulations and legislation and will tell you how best to comply.
- Chapter Three explains how rehabilitation agencies can work with employers to solve personnel problems. Several model agencies are investigated.
- Chapter Four details how to design and implement an effective recruitment and placement system using proven and workable management ideas.
- Chapter Five illustrates the techniques expounded in the two previous chapters with models from corporations, small businesses, unions, and public organizations.
- Chapter Six offers a review of the technological aids that are available to help disabled workers perform a great number of jobs.
- Chapter Seven delineates the accessibility standards and provides some help with logistics of getting people in, out, and about the worksite.
- Chapter Eight discusses the training and consciousness raising—for both managers/supervisors and employees—that is necessary for a successful employment program.

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- Chapter Nine sums up the lessons of the preceding chapters and makes recommendations for all groups concerned with the process of handicapped employment.

THE BEGINNING

The best way to begin the process of tapping the potential of handicapped workers (besides reading our book) is to make a commitment and be flexible. Gerald Ford, in a 1975 proclamation, suggests a point of view to keep in mind:

Those of us who are not handicapped think of what we could *not* do if we lost an arm, or a leg, lost our sight or our voice, or were disabled in some way. We often forget that the handicapped are thinking of what they *can* do.

Please Note:

Throughout the book we have not tried to balance our pronouns: "he" and "his" appear more than "she" and "her." This imbalance reflects a lack of dexterity on our part and not an attempt to exclude women from the professional ranks and the handicapped population.

Rehabilitated alcoholics and drug abusers are handicapped people protected by the law. Since there are abundant substance abuse programs and considerable information on the subject is available from professional and health organizations, we have not treated the topic here in a separate section. We have, however, considered the problems of those individuals within the context of the handicapped population. Supervisory ramifications are discussed in Chapter 8.

Chapter 1

Who Are the Handicapped?

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"I'm disabled, yes, and will be for the rest of my life, but it's not necessary for me to be handicapped."

-Jack Catlin

Jack Catlin is the director of Access Chicago, the consumer department of the Rehabilitation Institute of Chicago. He has been confined to a wheelchair since 1974 due to a permanent back injury.¹ Catlin's distinction between "disabled" and "handicapped" will help us arrive at our central theme: so-called handicapped people constitute an underutilized human resource of great potential value to employers.

DISABILITY/HANDICAP/INABILITY

Let us begin by considering a physical or mental *impairment* that any of us might have sometime in our lives: loss of hearing or

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vision (partial or complete), loss of a limb, decrease dexterity due to arthritis or other conditions, some decrease in stamina or strength or mental functions due to a heart condition or successful cancer operation, and so forth. If that *impairment* interferes with our ability to perform normal human activities—to think, to care for ourselves, to work, etc-- then we have a disability. and please notice that we say "interferes with" and not "prevents." It is when that disability is perceived by others as an inability to function that we become *handicapped*.

Disability need not mean inability. It is a condition requiring adaptation. Adaptation is easier for the disabled when they have understanding and cooperation; they become handicapped when we handicap them. "It is the environment that creates the handicaps,"² says Jack Catlin. The environment in this case includes the perceptions of the handicapped by nondisabled persons and the physical and psychological barriers those perceptions create.

Suppose that Mr. A is partially deaf and therefore has an impairment. Since his impairment makes hearing difficult, we can say that a normal life activity is strained (interfered with) and that Mr. A, thus, has a disability. When the world outside of Mr. A perceives his disability as an inability (He *can't* hear, therefore he can't..., and not he has to adapt—hearing aids, lip reading, signing, phone amplifiers—to function as well as a "normal"-hearing person would), then Mr. A has become handicapped.

Thus, Jack Catlin knows his back injury disables him, but he also knows that he is able, adaptable, and need not be handicapped.

That perception is, of course, important to Jack Catlin, who would rather be independent and productive than dependent on charity and a drain on society. It is important to all disabled people. And, as we will say over and over again, it is important to all of us citizen taxpayers, employers, and business taxpayers not to handicap and thus make dependent and unable all those who wish not to be. This book is dedicated to demonstrating how to remove those handicaps—to allowing disabled people to use their abilities to their benefit and yours.

First, in this chapter we want to clear away some basic perceptual obstacles to this desirable solution. These obstacles can be challenged by either one of the following statements:

1. We are not just concerned with a few people with white canes or wheelchairs.
2. We are not talking about charity.

DEMOGRAPHICS: THE HANDICAPPED* POPULATION

A disability, so the common definition goes, is any "physical or mental condition that makes normal living and working activities difficult."³ Disabilities include vision and hearing impairments, mental and nervous conditions, arthritis and rheumatism, hypertension, asthma, diabetes, and heart conditions. Obviously, any of these could range from mild to severe, but all must interfere with normal living activities to be considered disabilities.

Keeping those conditions in mind, ponder these rather startling numbers. Nearly 1 in 7 Americans can be considered to be disabled. Handicapped population estimates range from 30 to 36 million.

Unofficial estimates place the total handicapped figure at 35.6 million, 11.9 million between the ages of 16-34.⁴ The *American Journal of Public Health* puts the figure at just over 30 million.⁶ The study reported in the *Journal* breaks down the population by cause. The most staggering increase was in disabilities from diabetes, up 174 percent. There were also significant increases in the under age 45 population in asthma, visual impairment, and disabilities involving muscles and bones.

The final report of the White House Conference on Handicapped Individuals (May 23, 1977) put the nation's handicapped population at more than 36 million.⁶ Of course, estimates do vary. An Urban Institute study, for example, conducted in 1975 for the U.S. government, claims 1 out of every 5 Americans aged 18 to 64 is disabled. This estimate does not include those who are institutionalized.⁷ Frank Bowe projects that by 1985 the disabled population will increase by 20 percent (from 1978), that there may be one disabled person over 65 for every nondisabled person in the United States.⁸

But why the increase? Why the big jump from the reported 20 million of 1970?⁹ One reason can be found in the word "reported." Better health programs and a health/disability consciousness among the population make it easier for disabled people to be found. Also, more "hidden" handicapped persons are identifying themselves as more hope of adapting to or eliminating the stigma of disability is expressed.

*We will continue to use the terms "handicapped" and "disabled" interchangeably because that is consistent with common usage; the distinction between ability and inability will be with us always. "Handicapped" can also be considered here to include disabled veterans.

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And yet, the increases are not only due to more thorough record keeping. Improved medical care, breakthroughs in science and technology, increased research and experimentation are all bringing about increased life expectancies for Americans. Longer lives mean a greater potential for debilitating diseases or conditions, and some diseases are disabling people rather than killing them. In addition, we are living in a more stressful and polluted environment, which is a likely cause of increases in disabilities due to asthma, cancer, and high blood pressure. Finally, there are staggering numbers of accidental injuries caused by automobiles, hundreds of thousands of injuries sustained at the job or at home, and many more (largely unnumbered) recreational accidents. We are a large, crowded, mobile, active, industrial society; we have created an environment in which accidents can happen to anyone.

The bright side is that the medical technology that can rescue people from death and deliver them into disability is also capable of creating new possibilities for them to lead increasingly normal lives. Our large, mobile, changing society that creates hazards also creates opportunities for people to adapt and fit back in. We will discuss accommodations, adaptations, and technology in more detail in later chapters. It is important now to recognize the extent of the problem and the positive attitude that is needed for a solution.

The solution—employing qualified handicapped people in jobs they can do well—becomes more important, though not necessarily more difficult, in more difficult economic times. As you might expect, the handicapped are seriously affected by abrupt changes in the labor market.¹⁰ On the one hand, economic prosperity, which increases the total number of jobs available, has a favorable impact on the handicapped. On the other hand, however, recessionary conditions (which limit the number of available jobs and/or opportunities) adversely affect the handicapped. The net result is that larger numbers of the handicapped remain either unemployed or underemployed. This situation is further aggravated as more women, members of minority groups, undocumented workers, and nonhandicapped individuals begin to compete for the jobs that do exist.

In normal economic circumstances, many persons would not consider certain undesirable jobs (jobs that many handicapped individuals have traditionally accepted as a way of at least entering the labor market). Nonetheless, during dire economic straits, the nonhandicapped are often happy to obtain and retain such employment.

In addition, the handicapped worker is frequently negatively affected by layoffs during economic hard times. Much like other

"late comers" to the job market (e.g., women and minorities), the handicapped also suffer as a direct result of seniority systems. Although current data on layoffs affecting the handicapped are almost nonexistent (organizations refuse to disclose relevant facts, a refusal often based on practical considerations), it is the contention of the authors that a bad economy only conveys bad news to the handicapped. We have known instances in which numerous handicapped persons were laid off, not because of their handicap, but because of the seniority system in a union environment.

In the meantime, life becomes considerably easier for many managers. They find nonhandicapped job applicants (who are now in abundance because of the overall economic climate) a very attractive commodity, despite the fact that many such individuals may not be a good choice for the job opening or openings in question. Life is easier, nonetheless, because the managers do not have to coordinate with external rehabilitation agencies; they don't have to take greater care in selective placement; they don't have to concern themselves with fair accommodations for the handicapped; and they don't have to stretch their imagination or tax their brains in selecting a truly qualified individual for the job (i.e., they frequently do not rigorously know what qualifications, aptitudes, and abilities are necessary to accomplish the job they seek to fill). What does all this mean for the handicapped? They are systematically "screened out."

That this screening occurs in the commercial world may not be surprising for the reasons given. Yet, in academic society as well expediency sometimes reigns. Let us consider the reported story of a young undergraduate who had applied to Stanford University to do graduate research in the field of history.¹¹ His name was Frank Graff. His grades were good, and he clearly had the intelligence requisite for successfully completing a rigorous academic program. Unfortunately for Mr. Graff (at least from Stanford's point of view), he was blind. So, despite his credentials, Mr. Graff was rejected. The letter of rejection from Stanford quotes the report of the history department:

Mr. Graff is a young man of superior courage and quite possibly superior intellect as well. But blindness in a research historian is virtually an insuperable handicap.

The example vividly indicates that universities, too, can be ill-informed or misinformed when it pertains to the handicapped. Blindness in a research historian is considered an "insuperable handicap" (note the artificial barriers). The basic problem, from the

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university's vantage point, is that the blind cannot scan vast bodies of printed material. In fact, thousands of blind people do cope with the demands of the various research professions. It is *possible* that Stanford was unaware of these successes; it is more likely that with a surplus of qualified applicants the university chose the easier road we described for the business managers: avoided a handicapped person and the minor adjustments he might require and used the handicap as an excuse. (As a postscript to this story, it should be noted that Mr. Graff was accepted for graduate work in history at another prominent university.)

On trial at Stanford were not only the blind, but anyone not possessing the physical characteristics often wrongly considered requisite for success in typical academic pursuits. Among other lessons it contains, the Stanford experience validates the theory that the handicap of blindness (or any other disability) lies not so much in the physical fact as in the misconceptions about it and the exclusionary actions taken on the basis of those misconceptions.¹²

The results of such "screenings out" are obvious. Increasing numbers of handicapped are forced to rely on public assistance. Many of them with marketable skills become discouraged and give up the pursuit of work. Huge sums of money that are spent on rehabilitation do not get the returns they should. Over a billion dollars each of the last five years was spent to improve the employability of the handicapped.¹³ Moreover, in many instances the field of rehabilitation has somewhat neglected the crucial idea of placement and the additional dimension of the labor market.¹⁴

What we mean by this is that rehabilitation has not fully taken into consideration the skill requirements of "jobs" in the labor market. Handicapped people need marketable training with emphasis on careers in those fields where a crucial demand for human resources exist. Although it is less a problem today, rehabilitation professionals (with some exceptions) have somewhat neglected attempts at plotting future occupational overviews or profiles. Who suffers? Of course, the handicapped and their families. And society as a whole suffers because valuable human resources are either totally wasted or only partially utilized. It also means that employers may be consistently failing to get the right people for the important jobs they need done.

The response generally received from employers and managers when they are questioned about hiring handicapped persons is one of charity.

It is our contention that the employment and fuller utilization of America's handicapped population is anything but charity. It is a

matter of crucial significance for the survival and prosperity of U.S. business and industry.

Today, a policy of hiring qualified handicapped individuals (please notice the "qualified") is no longer only an expression of social consciousness, liberalism, and/or philanthropy. It is, in addition, a manifestation of sound business sense and human resource planning.

MYTHS ABOUT THE HANDICAPPED

You are not going to believe our assertion is true if you are encumbered by the many myths concerning handicapped people. Myths come from lack of contact or outdated information. We will assume an interest (enlightened or apprehensive) in contact with disabled people as potential employees in anyone who has gotten this far into the book. We will happily provide the up-to-date information in the next several chapters. First let us deal with some myths of interest to potential employers of handicapped persons.

Myth: The handicapped are fit only for menial or entry-level jobs, if that.

Fact: There are handicapped persons successfully employed at almost every level in almost every imaginable profession or field.

Myth: Disability is a constantly frustrating tragedy. Disabled people are courageous, brave, and inspirational by being able to overcome their handicaps.

Fact: A disability is an inconvenience. Most disabled people do not sit around pondering their fate. They simply carry on their lives as normally as they can. Individuals with disabilities cannot be stereotyped any more than can other minority groups. Each is an individual personality and, as such, each disabled person will deal with his or her disability differently.

Myth: They do not want to work.

Fact: Like the nonhandicapped, disabled persons have material needs. The satisfaction of those needs requires money. The

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handicapped as a rule do not seek charity, but want to earn their way in our society. Not only do the handicapped want to work, but they are frequently highly competent workers, and extremely reliable.

Myth: Able-bodied people have an obligation to take care of the disabled.

Fact: Some disabilities may require a level of dependency upon others. In such cases, the disabled person will usually ask for help—as we all do from time to time. But common courtesy and good sense dictate when and where help is needed. Nondisabled people have no obligation (based on intrinsic paternalism) to give pity, charity, or extraordinary assistance to persons with disabilities.

Myth: The handicapped are prone to a higher incidence of on-the-job accidents.

Fact: In general, the handicapped have fewer accidents than their nonhandicapped counterparts on the job.

Myth: Insurance rates go up when handicapped are hired.

Fact: Insurance rates are based on the nature of the hazards involved in the work and the employer's accident record, not the employee's physical condition. Indeed, since disabled employees have good accident rates, they have good insurance rates.

Myth: Disabled workers miss more days.

Fact: Many companies and organizations have found that disabled workers have attendance records as good as or better than nondisabled workers.

These are just some of the myths that abound regarding the handicapped. The fact is handicapped workers have individual differences from nonhandicapped workers, but generally they have more in common. As a group, handicapped workers are just as intelligent as able-bodied workers. Furthermore, according to studies by government and private agencies, both handicapped and nonhandicapped persons perform work of about equal quality, and they have similar absentee rates.¹⁵

Skeptical? Well, keep reading. And consider this: the handicapped possess a willingness to work—a desire to be independent and productive—a need to prove themselves. Ever wonder where the work ethic has gone? Consider someone for an employee who has the motivation and self-discipline to adapt to a disability and meet the qualifications for the job.

WHAT SPECIFICALLY CAN THE HANDICAPPED DO?

A handicapped person can serve as President of the United States, as did Franklin D. Roosevelt, a victim of polio. A handicapped person can be a poet of the caliber of John Milton, who was totally blind before he authored his best-known work, *Paradise Lost*. A handicapped person can enrich all of society as did Thomas A. Edison, the deaf inventor who gave us the electric light bulb, phonograph, and moving picture camera. Or, a handicapped person can aspire to emulate Sarah Bernhardt, the French actress who became one of history's most famous stage performers, despite an injury that resulted in the amputation of her right leg. History is filled with the names and achievements of successful persons who overcame their handicaps. From Homer, the author of epic Greek poems, we can quickly traverse almost 2,800 years to the likes of violinist Itzhak Perlman. The former was blind; the latter suffers from polio.

Of course, these persons represent famous examples of individuals who have surmounted their disabilities. Our focus here is not on the famous role models, but the anonymous millions of handicapped persons seeking greater access to the world of work.

Where can handicapped workers be found? Practically everywhere people are engaged in productivity. The handicapped are employed as engineers, machinists, switchboard operators, typists, lawyers, clerks, counselors, teachers, carpenters, editors, mechanics, printers, artists, lathe operators, photographers, musicians, proofreaders, economists, chemists, architects, anthropologists, physicists, druggists, cashiers, botanists, butchers, electricians, biologists, politicians and government officials—to name just a few of their many and diverse occupations.

VARIED APTITUDES, ABILITIES, AND INTERESTS

In order to form a more accurate picture of the aptitudes, abilities, interests, and motivation of the handicapped, we here introduce the story of Donald J. Greenough.¹⁶

In 1948, Donald Greenough graduated from high school and joined the Marines. Because he scored quite well on the Armed Forces aptitude tests, Donald was made a sergeant at the time of his enlistment. He was also placed on temporary inactive status. Since he was in effect still a civilian, Donald went to work at a steel foundry near his home. A good worker, he soon received a promotion. One day while working on a power saw that did not have a safety guard, Donald accidentally cut through his hand, losing three fingers. He received \$500 in workmen's compensation (although \$200 of that was assessed in taxes).

Donald spent roughly two weeks in the hospital. Rehabilitation was not available to Donald, so Donald rehabilitated himself. He was released from the hospital and would have been able to go back to work (the company he worked for offered him a lifetime job), but another accident occurred. While celebrating his homecoming with some friends at a bar, a fight erupted with some Air Force enlisted men. Donald busted his injured hand and required major surgery. He was incapacitated for three months and used this time to further rehabilitate himself.

Donald eventually returned to work, accepting the lifetime position offered by his company. His new job was in the scheduling department and entailed the duties and responsibilities of a supervisor. Feeling he was too young to be stuck behind a desk for the rest of his life, Donald quit. He also believed the company felt sorry for him and gave him the job out of sympathy.

Soon after leaving his old job, he was offered a position with another company as a surveyor's assistant. After much hard work, and several night courses later, Donald passed the required examinations for becoming a licensed surveyor in the State of Kansas. In all, it took him six years. In 1960, he joined the American Bridge division of the U.S. Steel Corporation as a structural field engineer. He has worked on such buildings as the Standard Oil Building, Sears Tower, John Hancock Building, and Prudential Plaza, all in downtown Chicago. He continues to work for American Bridge today.

It is important to note that Donald was responsible for his own rehabilitation; he was not aided by any agency (in large part because when he suffered his injury such rehabilitation agencies did not exist). Donald made it in the labor market despite his handicap. His story has no doubt been replicated thousands of times; we don't relate it here because it is unique. Instead, our intention is to reveal the sort of motivation many handicapped Americans bring to the work place: they are eager for a meaningful job, willing to train hard for the job, and disinclined to accept "charity" from any company.

WHAT EMPLOYERS NEED TO KNOW ABOUT THE HANDICAPPED

Hiring the handicapped is a very distasteful subject among some employers, managers, supervisors, and trade union officials. In the case of most businessmen, the paramount fear is that hiring the handicapped will force up the cost of insurance rates, increase the incidence of accidents on the job, and result in higher absenteeism (as well as skyrocketing workmen's compensation costs). We have already proclaimed these ideas to be simply myths. Despite numerous studies to the contrary (and the actual experiences of many companies, both large and small), too many employers continue to give credence to these false notions (see Table 1.1 for a summary of major studies that have been conducted so far in the employment area, exploding these myths).

Other myths believed by employers include:

- Handicapped workers will not be accepted by other employees.
- Considerable expense will be involved in making necessary adjustments in the work area.

The very fact that insurers are among the leaders in rehabilitation and placement of disabled workers refutes the idea that they oppose hiring the handicapped. Property-liability insurers have frequently pointed out the good work records of most handicapped employees. Absenteeism among them is no greater—and is often less—than among nonhandicapped workers. They are often the most loyal workers, and their overall quit rate is about the same as that for other employees. When placed in jobs they can handle, handicapped workers as a group produce at a slightly higher rate than able-bodied workers on the same job.¹⁷

The trend toward automation and specialization in industry is to the advantage of handicapped workers. Even the highly disabled can be trained for specific jobs. (And the retarded placed in what would be for others boring and repetitious jobs.) A highly trained computer engineer, for example, performs his vital job perfectly well at Hughes Aircraft Company in California,¹⁸ although he has been almost totally paralyzed with polio for the past several years.

U.S. Department of Labor surveys have shown that "impaired persons" have fewer disabling injuries than the average worker exposed to the same work hazards. They have about the same number of minor injuries as other workers. When placed in suitable jobs, they are for all practical purposes no longer handicapped. And

TABLE 1.1**Summary of Major Studies on Handicapped Employment**

Study	Coverage	Findings (as compared to nonhandicapped persons)
Du Pont Study, 1973 ^a	1,452 people covering disabilities such as blindness, heart disease, vision impairment, amputation, epilepsy, paralysis, hearing impairment, total deafness	1) No increase and lost time in disabling injury 2) Safety: 93% average or better 3) Job stability: average or better 4) Special privileges: none 5) Attendance: 79%—average or better 6) Job performance: 91%—average or better 7) No increase in insurance costs
A Joint Study by the U.S. Chamber of Commerce and National Association of Manufacturers, 1949	600 companies surveyed with 279 reporting	1) No effect on insurance costs as a result of hiring the disabled 2) Lower absenteeism, lower turnover, good job performance
The BLS Study, 1948 ^c	109 plants (manufacturing) covering 11,000 impaired workers and 18,000 unimpaired workers—comparative performances	In terms of total work performance, quality of job, work injury, turnover, absenteeism, there is very little difference between an impaired and an unimpaired person. The only exception was a slight increase in absenteeism—that, too, is not statistically significant.
The Canadian Chambers of Commerce Study, 1976 ^e	195 Chamber members responding to a question, "Why has your company not considered the possibility of hiring the handicapped?"	Employers uninformed about what handicapped persons can do
The Rehabilitation Institute of Chicago, 1976 ^e	Based on 275 follow-up cases of placed clients (primarily paraplegics)	1) Accidents are lower 2) Job performance is the same or better 3) Insurance costs do not go up 4) Turnover was exceptionally low 5) Absenteeism is lower 6) Minimum or no special accommodations

President's Commission on the Employment of the Handicapped	Unknown; primarily based on other studies	Tremendous need to educate employers and public
Federation of Employment and Guidance Service of New York City [^]	1,470 older disabled clients	<ol style="list-style-type: none"> 1) Large majority want to work and retain sufficient ability to do so 2) Attitude of employers, labor unions and public in general are serious deterrent 3) With proper rehabilitative assistance, most older persons can work
Author s Study, 1976-77	16 major corporations employing approximately 8,000 handicapped people	<ol style="list-style-type: none"> 1) Lower absentee rate (one company reports 3.4% as compared to 13.9% of the nonhandicapped) 2) No impact on insurance costs 3) Job performance is the same or better 4) Minor accommodations to no accommodations 5) Lower turnover 6) Labor-management cooperation 7) Effective outside rehabilitation agencies needed

Source Reprinted with permission from Gopal C. Pati. "Countdown on Hiring the Handicapped," *Personnel Journal* (March 1978) 146

Joe Wolfe, "Disability is No Handicap for Du Pont," *The Alliance Review*, Winter 1973-74, also reported by Robert B. Nathanson, "The Disabled Employee: Separating Myth from Fact," *Harvard Business Review*, May-June 1977, pp. 6-8.

Chamber of Commerce of the U.S. and National Association of Manufacturers, *Employment of Physically Handicapped and Older Workers*, Washington, D.C., 1949

^c*The Performance of Physically Impaired Workers in Manufacturing Industries*, U.S. Department of Labor, BLS Bulletin #923, 1948.

Susan Paquette, "Hiring the Handicapped: Fact and Fantasy," *The Labor Gazette*, April 1976

Personal interview

Where Do We Go From Here? A report on the 1976 Annual Meeting of the President's Committee on Employment of the Handicapped

⁹*Labor Gazette*, March 1969.

since they are not inherently "unsafe," the handicapped cannot adversely affect workmen's compensation rates.¹⁹ These rates are based solely on the relative hazards of a company's operations and on the company's accident experience.

One of the most recent and extensive surveys of handicapped employees was conducted by E.I. Du Pont Nemours and Company, the nation's sixteenth largest employer. Du Pont's eight-month study gathered data on 1,452 employees with physical handicaps. These included persons with orthopedic problems, blindness, heart disease, vision impairment, amputations, paralysis, epilepsy, hearing impairments, and total deafness.

How did the handicapped do? Quite well. The key findings were:

- *Insurance.* No increases in compensation costs nor lost-time injuries.
- *Physical Adjustments.* Most handicapped workers require no special work arrangements.
- *Safety.* A total of 96 percent of handicapped workers rated average-or-better both on and off the job; more than one-half were above average.
- *Special Privileges.* A handicapped worker wants to be treated as a regular employee.
- *Job Performance.* 91 percent rated average-or-better.
- *Attendance.* 79 percent rated average-or-better.²⁰

The Du Pont study also indicated that there is very little difference between handicapped and nonhandicapped workers as to their ability to work in harmony with supervisors and fellow employees.

How does the employer benefit? Besides getting a competent, motivated worker, there are outside financial rewards as well.

In Pennsylvania, for instance, employers who hire certain Pennsylvania Bureau of Vocational Rehabilitation clients and provide them on-the-job training to qualify for a specific job are in turn reimbursed up to one-half the starting pay for the job for as long as 12 weeks of training. The training must develop the specific vocational skills required for the job.²¹ Similar programs are available throughout the United States.

There are CETA-sponsored programs for payment for bonafide training of the handicapped. The total cost of the reimbursement to private-for-profit employers may not exceed 50 percent of the trainee's starting wage rate. The minimum starting wage cannot be less than the applicable federal and state minimum wage laws or the prevailing wage rate established for starting workers in like

occupations and industry, whichever is greater.²² Training time can range from 40 days to a maximum of 150 days, even more for disadvantaged trainees.

Also for employers, the National Association of Retarded Citizens will reimburse the employer for the first 320 hours of employment of a mentally retarded person he hires through the Association. It pays one-half of the person's wages for the first 160 hours of work and one-quarter for the second 160 hours.

The Federal Revenue Act of 1978 (Federal Targeted Jobs Tax Credit) provides up to a \$3,000 tax credit toward the first year's wages and \$1,500 toward the second year's wages of any handicapped person hired through the Pennsylvania Bureau of Vocational Rehabilitation. This is an elective tax credit that applies to wage costs incurred between January 1, 1979 and December 31, 1980 for certified employees hired after September 26, 1978.

In addition, up to \$25,000 in deductions in any one year are authorized by the federal government to compensate employers for certain costs of removing architectural and transportation barriers to the employment of the handicapped. This Tax Reform Act of 1976 provision pertains to modifications to buildings, structures, equipment, roads, walks, parking lots, and other facilities that make these more accessible to and usable by handicapped individuals. The employer may deduct expenses incurred in any taxable year beginning December 31, 1976 and ending before January 1, 1983.

SO, WHAT'S THE PROBLEM?

In an article entitled "Employment of the Blind: A Look Back and a Look Ahead," James Gashel articulates some of the attitudinal issues involved in giving equal opportunity to the handicapped. Here, his example involves the case of the visually impaired:

The real problem of blindness is not the blindness—the real problem is the misunderstanding and lack of information which exist. If a blind person has proper training and if he has an opportunity, blindness is nothing more than a *physical nuisance*. The average blind person is able to perform the average job in the average place of business and do it as well as his sighted neighbor, given proper training and an opportunity.²³

But, then, where is the problem? Consider what Gashel has to say when a group of blind tourists were denied the normal tour of a mill because the owner feared for their safety:

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On that day at that mill for that group the real problem was not the blindness. Many blind persons have been working in "run of the mill" hazardous occupations, and at least one is a nuclear physicist. The real problem was the misunderstanding and lack of information which exist. We pointed out to the mill manager that if the mill were really as dangerous as he would have us believe and that if the employees who had been injured were all sighted employees, he probably ought not to permit any sighted visitors. In fact, he probably ought not to hire any sighted employees. After all, it was not a blind employee or even a blind visitor who had been injured in his mill. Then we considered staging a "mill-in," but we didn't...²⁴

To be sure, the lack of progress in implementing the increased employment of the handicapped cannot be solely attributed to the often cited lack of social responsibility of business and industry.²⁵ On the contrary, many businesses can be cited as positive role models in this regard. As we see it, the stumbling blocks have been the following:

- The snail's pace on the part of the federal government in writing the regulations (which will be thoroughly considered in Chapter 2),
- The fears and uncertainties entertained by many employers because of their lack of valid information detailing the needs, capabilities, and potential of the handicapped. The frequent assertion that such fear has "largely been dissipated" and that both the public and employers are well aware of the germane issues is not quite accurate.²⁶

There are a number of reasons for the lack of awareness.

1. The handicapped are as diverse as the culturally pluralistic United States. A centralized source of information about them is simply not available.
2. Whatever valuable information is available (and there is plenty) tends to gather dust in non-business-related publications.
3. Business educators have done remarkably little in this area and have given little assistance to the practitioners.
4. Although improving, government agencies (federal, state, and municipal) have done a poor job.
5. Perhaps most regrettably, the handicapped historically have not effectively lobbied, until fairly recently, for their rights.

6. The handicapped have had few advocates on corporate boards and in union headquarters.²⁷

What should employers know about this segment of our population? To begin with, the handicapped are all too painfully aware of their limitations. They are also, however, aware of their abilities. They are most anxious to work and be evaluated on the basis of their performance. They resent preferential treatment, as the following comments indicate:²⁸

Dick (a handicapped computer programmer): "Preferential treatment is another form of discrimination."

Sue (a blind bank employee): "People think the handicap has affected our minds. People should be made aware that being handicapped makes you more special that you can do a job, can do a service and need to feel needed. Handicapped people need it more because they are pushed aside. People think they are leeches."

John (a paraplegic student): "Let people know that we are normal. Yes, I can't walk, but I can see, I can think, I can touch, I can talk, I can get around, I can do my work, I can love and care."

Sarah (a visually impaired student): "I feel like crying when I notice people staring at me. Maybe I am too conscious of it. I feel I get grades for being handicapped because I look normal. People ask me, 'How did you see that?'"

The handicapped, by and large, are concerned about being a burden on society, their families and/or friends. Despite the diversity of their backgrounds and aptitudes, one thing that the handicapped have in common is their eagerness to prove themselves. The anxiety of a disabled person is frequently expressed in this manner: "Are they prejudging me, or do they know what I have to offer?"

Yet, having said all this, just what is it the handicapped want? Why do they want to work? For the same reasons most Americans want to work: to provide food, clothing, and shelter for themselves; to lead decent, responsible, and independent lives; to achieve, maintain, or enhance a sense of self-worth and self-esteem—the sorts of things most reasonable people pursue.²⁹ And in the pursuit of their economic and political interests the handicapped are, like so many others, organizing and finding that in their collective strength

they can have an impact on public policy and on corporate decision making.

THE HANDICAPPED: A GROWING POLITICAL FORCE

Unlike the days of Plato and Aristotle, when the handicapped were often turned out of the Greek city-states and left to their own resourcefulness, today we have thousands of handicapped persons marching on Washington, D.C., demanding the right to enjoy their fair share of the American dream.

For years, the National Federation of the Blind, for example, has been a force in the fight to achieve full civil rights for blind and other disabled citizens. The work and writing of Jacobus tenBroek broke new ground in the arena of civil rights and have led to the adoption of white cane laws in approximately 30 states and the District of Columbia. Indeed, these laws created the legislative framework upon which more recent amendments to state civil rights acts have been constructed.

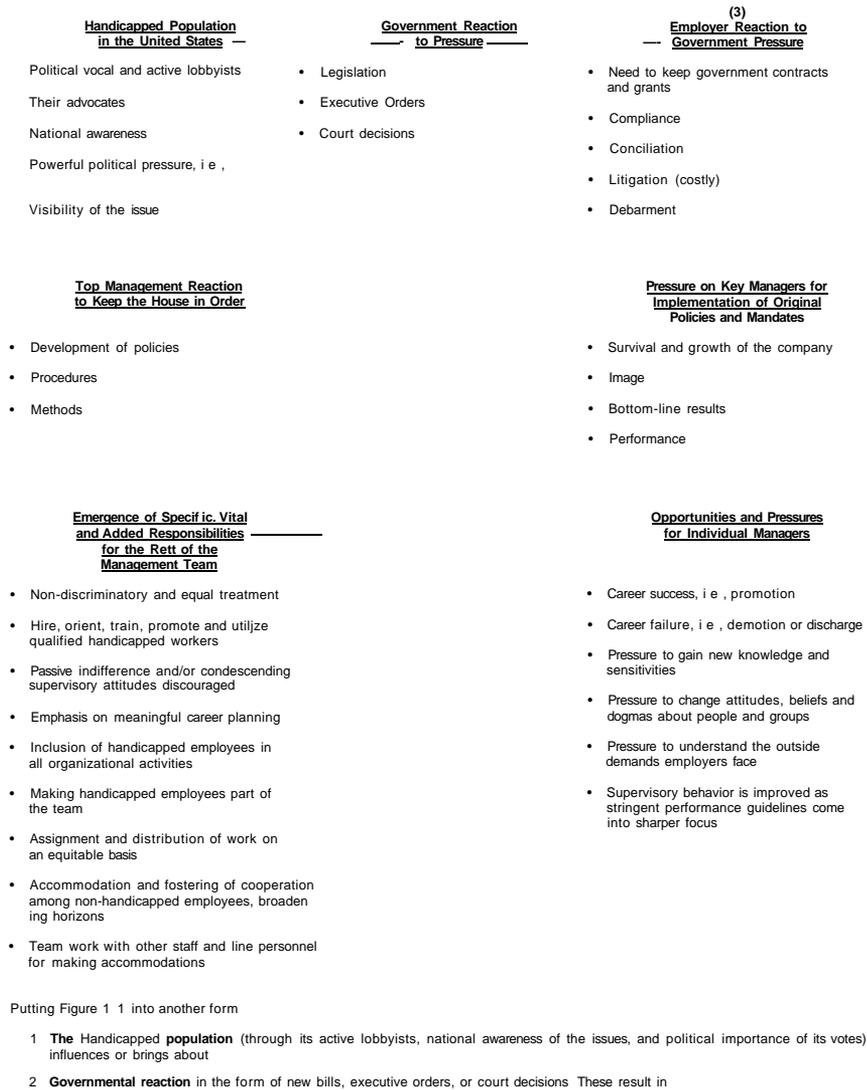
At the federal level, the legislative approach to guaranteeing civil rights for the handicapped has been somewhat different. For years, in Congress after Congress, new legislation has been introduced to amend the basic Civil Rights Act of 1964 to expand its coverage to prohibit discrimination on the basis of handicap. Gashel notes that for a variety of reasons (not the least of which has been the reluctance of the Congress to reopen many of the longstanding controversies surrounding civil rights) these bills have never moved.³⁰

As an alternative, the Congress approved and the President signed into law some limited civil rights provisions, which were made a part of the Rehabilitation Act of 1973, as amended. (This act and its crucial sections will be discussed fully in Chapter 2.)

On May 23, 1977, President Carter opened the White House Conference on Handicapped Individuals by noting that "the time for discrimination against the handicapped in the United States is over." This was not empty political statement. The voice of protestation had finally been heard as a result of the political muscle of the handicapped. The manner in which the handicapped are increasingly asserting that muscle is delineated in Figure 1.1.

1. **The Handicapped population** (through its active lobbyists, national awareness of the issues, and political importance of its votes) influences or brings about

Figure 1.1. Impact of the Handicapped and the Political Environment on the Manager



2. **Governmental reaction** in the form of new bills, executive orders, or court decisions. These result in

3. **Employer reaction** to governmental pressure. This reaction, often based in large part on the need of the employer to keep government contracts and/or grants, may take the form of compliance, conciliation, debarment, or litigation. This results in

4. **Top management reaction** to keep the house in order. This reaction is manifested in the development of policies, procedures, and methods for hiring and training the handicapped. This reaction in turn creates

5. **Pressure on key managers** for the implementation of original policies and mandates generated from the top. At stake here is the survival and growth of the company, its corporate image, performance, and bottom-line results. From these considerations emerges

6. **Specific responsibilities** for the rest of the management team. Such responsibilities may include:

- a. Providing nondiscriminatory and equal treatment.
- b. Initiating a policy to hire, orient, train, and promote (and fully utilize) the handicapped, when qualified.
- c. Discouraging passive indifference and/or condescending supervisory attitudes.
- d. Emphasizing meaningful career planning.
- e. Including handicapped employees in all aspects of organizational life.
- f. Making handicapped workers part of the team.
- g. Assigning and distributing work on an equitable basis.
- h. Fostering improved cooperation between handicapped and nonhandicapped employees and broadening the horizons of the nonhandicapped workers.
- i. Teaming up with other staff and line personnel in making accommodations for the handicapped.

A response along these lines would then result in

7. **Opportunities and pressures** for individual managers. These might be reflected in career success (promotion); career failure (demotion or discharge); motivation to change or repudiate outmoded attitudes, beliefs, and dogmas about people and groups; a new willingness to understand the outside pressures

weighing on the employer; and improved supervisory performance and focus under stringent guidelines.

The impact the handicapped and their advocates can have (and have had) on public policy and corporate practices is clearly plotted in this model. While their impact has been considerable, and continues to increase, the gap between expectations and reality is still wide and will not be bridged overnight. Part of the means, however, for narrowing this gap lies in human resource planning and its link to handicapped human resource programming.

HUMAN RESOURCE PLANNING AND PROGRAMMING: ITS LINKS TO THE HANDICAPPED

Human resource planning is "the process of obtaining the right number and kinds of people at the right time in order to fulfill organizational needs." Human resource programming involves integrating the overall people plan into the ongoing activities of career management and personnel (e.g., recruiting, selection, compensation, training, and management development), as well as assuring the availability of needed people information.³¹

As the larger external environment changes, innovative organizations also change their internal "workings" to meet the challenge of the "new reality." Therefore, human resource planning and programming is an ongoing process that assists in achieving organizational goals in these times of rapid change.

Handicapped people are a vital part of that human resource supply. Nonetheless, and ironically, as was previously mentioned, myths, misconceptions, custodial/paternalistic attitudes, and personnel policies have unintentionally screened them "out," not "in." The handicapped have been viewed by many as outsiders—outsiders who are supposed to be taken care of by government, charity, and "checkbox sympathy." This philosophy of "let somebody else take care of them" has created two major problems:

1. Handicapped people have remained underutilized or unutilized in our society and in the labor market.
2. Organizations, although with some exceptions, have not fully appreciated the critical role to be played by this segment of the labor force in meeting the quality and overall heightened productivity needs of business and industry.

Handicapped workers with training, guidance, and motivation are ready and waiting to be utilized; yet, organizations have not taken full advantage of this significant alternative source of labor. As a matter of fact, the perception of the handicapped as "outsiders" is so all-pervasive that it is almost appalling. Consider the following scene:

A Drug Store Encounter

On a hot summer afternoon in 1980, one of the authors ran into a prominent labor leader at the corner drug store.

Labor Leader: "What are you doing this summer?"

Author: "I'm working on a project involving a book on the employment of the handicapped."

Labor Leader: "That's great! I'm proud of you, but in this economy with high unemployment among *regular* people are you advocating the employment of the handicapped?"

Author: "Well, what difference does it make? If there is an opening and the individual in question is qualified, the handicapped person should be considered..." (author is interrupted).

Labor Leader (angry): "Boy you're strange. There's already a lot of people taking care of *those people*. *They* are taken care of by the government. *They* can stay home and be safe. If the economy was better, I could see it. But, not now! Hey, who is going to take care of me? If the *regular* people have jobs, they can help *those people* out. What do *they* want?"

It's hard to believe after that encounter that handicapped people are Earthlings, citizens, people with human needs and feelings. Incidentally, those with a sense of history will recognize that the "they" in our little scene could be immigrants, blacks, women, refugees in another day or another place.

And, of course, we are not restricted to one labor leader with tunnel vision. The authors have heard similar comments from other prominent persons who in one way or another shape the lives of all of us, including the lives of the handicapped. Some executives refer to

them as "nonregular" employees. Some educators call them "special students." Some rehabilitation experts call them "clients." Some officials in public aid departments view them as "cases." Government views them as a "protected class." Some supervisors call them "our handicapped employees." And some families call them "our *handicapped* son, daughter, nephew, aunt," etc.

Despite the fact that the handicapped are an integral part of the society, perceptions such as these have kept them out of the mainstream. Business is part of the society and the means whereby one becomes mainstreamed into it. Managers, decision makers, and supervisors are components of that same society. However, it is this latter group of individuals that formulates human resource planning and develops programs to meet the people and productivity needs of business and industry. It is hardly surprising, therefore, that human resource systems in the past (as a rule) have been too inflexible to accommodate the handicapped. Heretofore, the emphasis, sadly, has been on the negative, not the positive attributes of the handicapped, i.e., on *inability* as opposed to *ability*. The terms "disability" and "inability" have been mistakenly used interchangeably, and this mistaken use has created all sorts of unnecessary, and at times imaginary, obstacles for the handicapped to overcome.

The notion of human resources must include the handicapped. Human resource planning includes handicapped persons; human resource programming includes the handicapped. The only added dimensions are selective placement and accommodations on reasonable bases (these are discussed in greater detail in later chapters).

If the concepts of individual difference, career planning, human satisfaction, right job for the right person, equitable treatment in all phases of organizational life, and so forth are key concepts in human and organizational development, then decision makers must realize that the hidden element in the labor force—the physically and mentally challenged, i.e., the handicapped—is an integral and crucial part of that total picture. *No separate system is necessary. What is necessary is an attitudinal change and consequent flexibility in human resources approaches.* Too often we tend to emphasize the differences between individuals and deemphasize our commonalities.

AN ACTUAL CASE: TRUEMAN C. WHALIN

What follows is a brief autobiographical sketch of Trueman Wralin, a polio victim, who is an employee of the State of Indiana. Mr. Whalin wrote this for the authors.

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It was July 3, 1918 on a hilly farm as the youngest of nine that I first saw the light of day. At the tender age of five months, I managed to contract polio. At that time in history, there was no known cure or treatment. If you were strong enough, you survived; if not, you died. There were four doctors in our community; they all predicted demise before I was five. As fate would have it, I would end up attending all their funerals.

Some might say we were poor and underprivileged, however, anyone saying this in our presence would have been inviting a lump on the head. True, the entire brood went barefoot all summer; true, we wore patched clothes. However, the clothes were clean, and we were taught to be honest and fair. We understood that our name would be as good as we made it.

My earliest years were spent crawling around like any other child, except I remained in this stage longer than usual. I got my first pair of crutches when I was around five years old. What a beautiful sight they were, and I took to them like a duck takes to water. They were my introduction to mobility; with them, I soon learned to go more places and was able to pester my brothers and sisters when they were away from the house. The terrain around the house was rough and not by any means level. In fact, it was down right hilly and I fell often. But, that was the way I learned to get up and try again. Soon, I learned to bounce like a rubber ball, and although I took some terrible falls, I never received any serious injuries.

It wasn't until later that I found that if you cut a piece from an old auto tire and nail this to the end of the crutch, it did not slip quite so easily. Then, I found that someone had a store bought item that performed the same function. Will wonders ever cease?

In my early days on the farm, I learned some valuable lessons. For example, if you don't have something, you have to find a way to make do without it.

Neither my mother nor father were psychologists, but I thank my lucky stars that they had the innate intelligence to treat me just as any of the others in the brood, despite the fact that I was handicapped. I was permitted to try things and find out for myself if I could do them. It's funny, but most of the time I did manage to find a way. Growing up in this kind of atmosphere, I feel, enabled me to become a whole person; if not physically, then definitely in my mental outlook. I therefore feel I've lived a productive, useful, and pleasant life. Not that I haven't had my highs and lows, but who among you hasn't?

To skip a few years, I found my first employment, which led to the purchase of my first automobile. At the time, I had no intention of learning to drive; there were any number of young people available who were ready and eager to drive, but who did not have anything to drive. So, I reasoned I would provide the transportation and one of my friends would provide the driver. I thought this would be an ideal arrangement; however, this was not how things

worked out. Oh, finding a driver was indeed no trouble; it was finding a *good* driver that was the problem. I quickly got tired of having my car wrecked every week and decided I could learn to drive myself.

I contacted my mechanic, who was also my special friend, and together we designed some equipment, which permitted me to control the vehicle. Our first attempt was far from a success, but eventually by evolution there emerged a useable product.

You must remember that in the late 1930s there were no commercially manufactured hand controls for automobiles—they didn't come along until much later.

So, now I had a workable set of controls. All that remained was to try them on the road, in traffic. Not having any training in this matter, and not wishing to expose anyone else to danger, I took off alone down a wagon trail across a field on a friend's farm. I only encountered one slight problem: I misjudged the distance between the car and a gate. I didn't hurt the gate, but I did put a minor scratch on the car.

All in all, though, it wasn't too bad for the first time out. I soon gained enough confidence to make for the open road. When I say *open road*, that is just what it was. Unless you made for a main highway, you mostly had the open road all to yourself. I learned to drive without further incident.

I was always interested in girls. This progressed to an interest in a particular girl, and this resulted in matrimony. A few years later, the union resulted in the birth of a beautiful girl; later, a handsome son was born. So, the responsibilities pile up and the fear keeps gnawing away at you that you may not be able to provide for your family as you feel you should. So, you do the best you can and some how things work out.

My working life was not at all times a bed of roses, but then neither is it for most people. I did not change jobs often, but when I did it was never easy. I was told on many occasions that I could not be hired because of my handicap. Usually, the excuse was fear of high insurance rates or violating a union contract. Neither of these rationales was true, but at the time I didn't know that. What I did know was that when I heard this, it meant move on and keep looking; there is someone out there who will hire you and you must search them out. And, search them out I did.

As I look back on 62 years of life, I have to say it has been good. And, it can be good for you, whoever you are, wherever you are, and whatever your problems are. The best advice I can give you is don't lose your sense of worth as a person, and above all don't lose your sense of humor.

Trueman Whalin's message needs little amplification. His life history epitomizes triumph in the face of extremely difficult circumstances. From the point of view of an employer, manager,

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and/or supervisor, Mr. Whalin exemplifies qualities of perseverance and self-reliance, which comes from self-respect. Above all, he wants to lead a life like anyone else and be treated like anyone else. Many such qualified handicapped workers are an immensely valuable human resource—a human resource too valuable to go untested, unused, and underemployed.

LOOKING BACK: QUESTIONS TO CONSIDER

1. Is a "disabled" person necessarily a "handicapped" person?
2. What are some common handicaps? How is the handicapped population in the United States a diverse group?
3. Why is the population designated as "handicapped" growing?
4. What are some of the common myths about the handicapped?
5. What were the findings of the major surveys concerning the employment of the handicapped?
6. What benefits are available to employers who hire disabled workers?
7. What can we learn from the "Drug Store Encounter"? How do competent disabled people feel about charity?
8. What is the significance of the growing political power of the handicapped?
9. What is the link between human resource planning and disabled workers?
10. What can be learned from Trueman Whalin's life experience?

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Chapter 2

Legal Framework and the Human Resource System

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36 Managing and Employing the Handicapped

Man is the only animal that laughs and weeps: for he is the only animal that is struck with the difference between what things are and what they ought to be.

From: Final Report of Wisconsin's Task Force
on Problems of People with Physical Handicaps.

In our society when enough people have perceived a difference between what things are and what they ought to be and when enough weeping, threatening, pleading, flattering, and persuading have gone on around Congress, the result is social legislation—our country's attempt to make life more fair. During the 1970s the federal government responded to the difficulties (the unfair treatment) of its handicapped citizens. The result was the Vocational Rehabilitation Act of 1973 (amended in 1974 and 1978), the Vietnam Era Veteran's Readjustment Assistance Act of 1972 (amended in 1974), and Executive Orders 11914 (President Ford) and 12250 (President Carter).

To handicapped people these recent laws are necessary (and long overdue) to protect their rights to equal opportunity for education, housing, mobility, and employment. To many (though certainly not all) managers, employers, and administrators—in the public as well as the private sector—the laws are a nuisance, a burden, a threat: another outside intrusion into the way they wanted to do business.

We are not going to argue the merits of or the need for the laws here. They are a fact. They represent an awakening of awareness of problems and needs of disabled persons. The number of disabled people is growing (as we saw in Chapter 1); the awareness is growing; the laws will not be repealed—if anything, they will get tougher.

As we have already made clear, it is the thesis of this book that employment of qualified handicapped persons is an opportunity for businesses, corporations, and organizations to solve personnel and production problems with little or no significant costs or inconveniences. The why and how of that will be laid out in detail in the next few chapters. Here we will deal with the law as it exists and as it is likely to exist. Rightly or wrongly, the law is what brought many employers to consider the handicapped—and brought many people to this book. Our goal in this chapter is to help you (whatever your motivation) deal with the law.

We must begin by strongly endorsing a point of view, one that we believe and one that will help you cope if your original response was to feel affronted by the legislation:

The government did *not* create those laws in a mean-spirited attempt to bother employers. They came about in response to real needs of actual citizens.

Affirming that attitude (if you need to) should help you feel better. In any case, we expect to prove as the book progresses that it is easy to make compliance a part of good management practices and to make those practices part of business as usual.

THE LAWS: KEY PROVISIONS

The Vocational Rehabilitation Act of 1973, as amended, is an extremely complex piece of legislation. It is very comprehensive and sweeping in that it attempts to tackle a multiplicity of real problems handicapped individuals encounter. Many scholars and practitioners, as well as the handicapped people, are still somewhat "uneasy" about the true meanings and full implications of the laws.

However, the authors take the position that with any new law come regulations and court tests. As handicapped statutes begin to be more fully implemented, many issues will be clarified and a balance will be developed. During the last several years, we have encountered many over-reactions and apprehensions about many sections of the statute; a spirit of reasonableness will benefit all parties.

In this section we will attempt to present only the objectives and key provisions, so that you can get a feel for the legal mandates. We will only discuss federal legislation in this chapter. You should, however, examine your state statutes. Your local rehabilitation/vocational agency will be able to supply particulars. (A list of such agencies can be found in Appendix 2.)

THE VOCATIONAL REHABILITATION ACT OF 1973 (PUBLIC LAW 93-112)

The 1973 Act was amended by the Rehabilitation Act of 1974 (Public Law 93-516) and the Rehabilitation, Comprehensive Services, and Developmental Disabilities Amendments of 1978 (Public Law 95-602). The Act (as amended) contains the following objectives. The added emphasis (*italics*) is ours.

- (1) develop and implement comprehensive and continuing State plans for meeting the current and future needs for

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providing vocational rehabilitation services to handicapped individuals and to provide such services for the benefit of such individuals, serving first those with the most severe handicaps, *so that they may prepare for and engage in gainful employment;*

(2) evaluate the rehabilitation potential of handicapped individuals;

(3) conduct a study to develop methods of providing rehabilitation services to meet the current and future needs of handicapped individuals for whom a vocational goal is not possible or feasible *so that they may improve their ability to live with greater independence and self-sufficiency;*

(4) assist in the construction and improvement of rehabilitation facilities;

(5) develop new and innovative methods of applying the most advanced medical technology, scientific achievement, and psychological and social knowledge to solve rehabilitation problems and develop new and innovative methods of providing rehabilitation services to handicapped individuals through research, special projects, and demonstrations;

(6) initiate and expand services to groups of handicapped individuals (including those who are homebound or institutionalized) who have been underserved in the past;

(7) conduct various studies and experiments to focus on long neglected problem areas;

(8) promote and expand employment opportunities *in the public and private sectors* for handicapped individuals *and to place such individuals in employment;*

(9) establish client assistance pilot projects;

(10) provide assistance for the purpose of increasing the number of rehabilitation personnel and increasing their skills through training; and

(11) evaluate existing approaches to architectural and transportation barriers confronting handicapped individuals, develop new such approaches, enforce statutory and regulatory standards and requirements regarding barrier-free construction of public facilities and study and develop solutions to existing architectural and transportation barriers impeding handicapped individuals.

The Act established a Rehabilitation Services Administration within the Department of Health and Human Services (formerly known as HEW) and provided it with the statutory basis to achieve the above objectives. The act consists of five Titles, each dealing with various aspects of rehabilitation. But, for the purpose of this book, we will discuss Title V, which deals with prohibition of discrimination and complaint-related matters that are of crucial concern to employers, managers, and handicapped employees alike. Unlike much legislation, this statute not only provides certain mandates through Title V, but many activities through other Titles as well, so that Title V can be effective. This is crucial because (although Title V attempts to promote employment, remove barriers, and push for full utilization of handicapped people) successful placement and overall utilization of the handicapped population does not take place in a vacuum. In other words, the government that passes a law to prohibit discrimination against *qualified* people, is the same government (through other provisions) that provides external support services over which an employer may not have direct control. Thus, what Congress is saying, in essence, is this:

Mr. Employer, you do your part, and we will do ours.

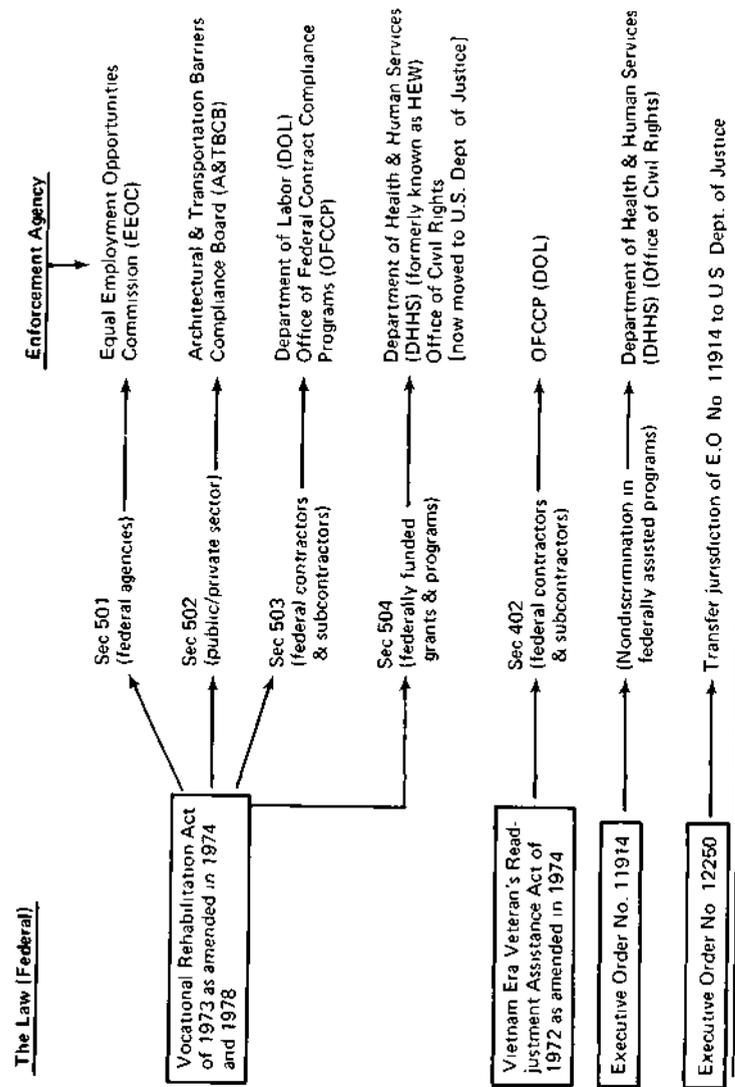
Figure 2.1 provides a summary of the legal framework for employment and other support services. Figure 2.2 lists other key support provisions of the laws. When viewed in the entirety, the legal gamut is essentially saying three things:

1. Don't discriminate against a qualified handicapped person.
2. Stretch your imagination and be aggressive in finding out more about them: who they are, what they are, what they can do, and what they can't.
3. Don't "beat" the system; i.e., be candid and tell the handicapped population inside and outside your organization that you are not going to screen them out because of their handicap, or dump them in undesirable jobs and pay as little as possible just because of their handicap. You want to give them a fair chance.¹

Sections 501, 502, 503, 504, and 505 of the law provide a basis of enforcing nondiscrimination and allowing affirmative action activities for the handicapped.

A brief description of these vital sections follows.

Figure 2.1. Legal Framework of Employment and Other Support Services for the Handicapped



Section 501. This section mandates federal agencies to develop affirmative action programs to recruit, promote, and fully utilize handicapped people. It covers nonelected, nonappointed jobs and positions in executive agencies, the legislature, and the judiciary of the federal government and the local government of the District of Columbia as well. It also covers the U.S. Postal Service and Postal

Figure 2.2. Other Key Support Provisions of the Vocational Rehabilitation Act (as amended)

1. Establishes the Rehabilitation Services Administration.
2. Requires White House Conferences on handicapped individuals.
3. Requires individualized written rehabilitation program for the handicapped.
4. Establishes National Institute of Handicapped Research.
5. Allows for comprehensive rehabilitation centers.
6. Provides for special demonstration programs.
7. Provides reader services for the blind and interpreter services for the deaf.
8. Encourages recreational programs.
9. Establishes the National Council on the Handicapped.
10. Creates the Inter-Agency Coordinating Council.
11. Allows for pilot programs to aid handicapped to get meaningful employment.
12. Provides legal basis for projects with industry (PWIs) and other business opportunities for the handicapped.
13. Allows for experiments in independent living.

Rate Commission. The enforcement of 501 falls within the jurisdiction of the Equal Employment Opportunity Commission (EEOC).

Section 502. This section establishes within the federal government the Architectural and Transportation Barriers Compliance Board (ATBCB) to enforce the Architectural Barriers Act of 1968 requiring government funded or assisted public buildings and facilities be made accessible to the handicapped. (See Chapter 7 on accessibility for details.)

Section 503. This section requires that any organization that receives a contract or subcontract with the federal government of more than \$2,500 must have an affirmative action program to recruit and more fully utilize handicapped persons. Those organizations with contracts of \$50,000 or more and who have 50 or more employees must have a written affirmative action program. The Office of Federal Contract Compliance (OFCCP) of the Department of Labor has the responsibility to enforce this section through issuance of regulations.²

Section 504. Employers covered by this section include the recipients of grants. Virtually every public and private institution receiving governmental assistance is covered. It prohibits discrimination against present employees, beneficiaries, and applicants for employment or admission to the recipient's program. The Depart-

ment of Health and Human Services (DHHS) is empowered to issue regulations to grant recipients.³

Section 505. This section provides for remedies and attorney's fees in an action involving the violation of the rights of the handicapped. However, a complainant must exhaust administrative remedies, i.e., the contractor's own internal review process or those provided by government agencies (such as EEOC, OFCCP, or DHHS), before pursuing a court action. Nevertheless, before this section was enacted the entire burden fell primarily on the shoulders of the handicapped. Now, some of this burden has been shifted to the employers.

*VIETNAM ERA VETERAN'S READJUSTMENT
ASSISTANCE ACT OF 1972 AS AMENDED IN 1974*

Section 402. Employers covered by this section include those who receive contracts or subcontracts of \$10,000 or more. Such employers must take affirmative action to employ, advance, and fully utilize disabled veterans of the Vietnam era. The OFCCP has the jurisdiction to enforce this section and issue regulations. Complaint procedure is also provided.⁴

EXECUTIVE ORDER NO. 11914

This executive order issued by President Gerald Ford mandates the Department of Health and Human Services to issue guidelines to enforce Section 504, which would be followed by other federal departments and agencies in developing affirmative action and other programs to assure nondiscrimination on the basis of the handicap. The department has issued such guidelines and, with some minor variations, it follows other regulations issued by other agencies.⁵

EXECUTIVE ORDER NO. 12250

This order was issued by President Carter on November 2, 1980. It transferred 504 lead agency coordination responsibility from DHHS to the Department of Justice [E.O. 12250 supersedes E.O. 11914].

Thus, the Vocational Rehabilitation Act of 1973, as amended; the Vietnam Era Veteran's Readjustment Assistance Act of 1972,

as amended in 1974; and Executive Orders 11914 and 12250 provide the legal framework for the employment of the handicapped. The regulatory bodies (as described above) issue regulations that must be followed by the contractors and subcontractors. In the rest of this chapter we will attempt to explain how to live with all the legal and regulatory mandates and describe how to design an affirmative action program on a realistic basis.

Scholars and practitioners alike would debate over the years about legal terminologies, "intent," "reasonableness," etc. But we take the position that if we (as managers in corporations, small businesses, and institutions) can start doing a few obvious things, we can serve the interests of our organizations, while at the same time conform to the legal requirements.

HOW TO LIVE WITH THE LAWS AND REGULATIONS

A LIST OF DO'S AND DON'TS

The first step in living within the laws is to clarify collectively what *they say* and what they do *not* say. The laws do NOT require an employer:

1. To hire unqualified handicapped people.
2. To set goals, quotas, and timetables.
3. To spend huge sums of money *now* to restructure old buildings and equipment to accommodate handicapped persons.
4. To run rehabilitation centers.
5. To get involved in endless paperwork in order to employ or more fully utilize handicapped workers.
6. To reduce qualifications or production standards.

However, the laws *DO* require an employer:

1. *Not* to discriminate against a *qualified* handicapped person for the job in question.
2. To *seek out qualified* applicants from inside and outside the organization and include them in a pool of applicants for the "opening" in question.
3. To establish contact with rehabilitation service centers, state employment agencies, and other organizations that can

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assist the employer to recruit and select qualified handicapped persons.

4. To make accommodations to a person's handicap *without undue hardship in terms of cost and business necessity*.

5. NOT to discriminate in overall employment, i.e., wages, benefits, promotions, training and development, and all other aspects of organizational life.

6. To make qualification standards *job related* and to update personnel policies and procedures that tend to "screen out" an individual just because of his/her handicaps. The laws do not talk about lowering standards; they emphasize relevant standards.

WHO ARE THE HANDICAPPED, UNDER THE LAW?

This question has created quite a bit of confusion, which will probably last for awhile until and unless (1) we get used to the idea that the handicapped worker has come to the labor market to stay, and (2) we have seen a massive body of court cases that would specifically determine the exact scope of that definition.

In the meantime, we will have to live with the broader definition of the handicapped and refine it as time passes. The legal definition of the handicapped is a person who:

1. Has a *physical or mental impairment* that *substantially limits* one or more of the *major life activities*.
2. Has a *record* of such an impairment. *Or*
3. *Is regarded* as having such an impairment.⁶

"Physical and mental impairments" are interpreted to mean any physical disorder or condition, cosmetic disfigurement, or anatomical loss: such as blindness, deafness, amputation, paralysis, epilepsy. The examples of mental or psychological disorder would be mental retardation, mental illness, or learning disabilities.

"Major life activities" involve skills necessary for caring for oneself—such as walking, seeing, hearing, speaking, breathing, learning, working, etc.

"Record of such an impairment" means a history of an impairment. For example, a person may have been in a mental hospital but is now mentally sound, or an individual was treated for a heart condition or cancer but now is healthy. Please note that the record is included in the definition because historically individuals with such records have been discriminated against.

The term "regarded as having such an impairment" is included in the definition Because of our attitudes. A person may have serious disfiguration of his face (as a result, for example, of an auto accident) or an individual might seem mentally retarded but is not. An employer's attitude toward a particular "cured disease" may include inability to do a job. These individuals are considered handicapped because they have been discriminated against in employment even though they were fully qualified to do the job in question. (Recall the distinction between "handicapped" and "disabled" we made in Chapter 1.)

The "disabled veteran" is a handicapped person, too. The above definition applies to him/her as well. In addition, (1) the veteran must be entitled to disability compensation under laws administered by the Veterans Administration (VA) for disability rated 30 percent or more; or (2) the veteran must have been discharged or released from active duty for a service-connected disability if any part of such duty was performed between August 5, 1964 and May 5, 1975.

WHAT IS A HIDDEN HANDICAP?

It is not always readily apparent that individuals have had diabetes, epilepsy, heart disease, cancer, or breathing problems or that they might be rehabilitated alcoholics or drug abusers. These and other disabilities are known as hidden handicaps.⁷ Hidden handicaps are not always disabling, although some of them may cause physical or mental limitations to certain jobs. Because of the difficulty in identifying individuals with hidden handicaps, employers are, under their affirmative action obligations, required to *invite* employees to identify their handicaps. Without such identification, it is extremely difficult for employers to make accommodations. However, many employees do not identify their handicap because of:

1. Fear of losing their job.
2. Fear of disclosing personal handicaps that may lead to ridicule by coworkers.
3. Failure to understand (or believe) both that such information is kept confidential and that he/she may not be legally protected if his/her employer or immediate supervisor is not informed about the disability.

Under the regulations, individuals with hidden handicaps are protected and accommodations must be provided. However, em-

ployers are prohibited from asking questions on application forms relating to disability; that is, they may *invite* information but *may not require* it. If company physicians discover hidden handicaps during medical examinations, such information may *not* be used to screen out an applicant *unless it has a direct impact on job performance*. (We will discuss the proper role of job-related medical screening in Chapter 4.)

The authors appreciate, at this time, the dilemma the employer faces. On one hand, he is supposed to make accommodations on the hidden handicap; on the other hand, an employee may not tell him about the same, and the employer cannot *demand* the information. We expect in time this dilemma will lessen. As time goes by, people will begin to trust employers as well as the legal process, and consequently become more courageous about reporting disabilities. Employers can help by dealing openly and in good faith immediately.

Remember, no one is asking for charity. Whether an individual's disability is visible or nonvisible, just being a handicapped person does not mean automatic protection under Title V of the Vocational Rehabilitation Act and other regulations. *The key word is qualification*. The person must be a qualified handicapped person. If you are confused with the broader definition of the word "handicap," we may offer comfort with the aids that are available to help determine handicap status.

1. The Department of Rehabilitation Services of the State of Indiana has compiled a summary of disability codes, listing some 600 medical conditions under major categories (see Exhibit A in Appendix 1) that can be used in determining whether a person is handicapped or not. Most state rehabilitation services should have such lists available.

2. The American Medical Association has an excellent publication on disability codes.⁸

3. The Social Security Administration and the Civil Service Commission also have disability codes for the purpose of definitional clarification.

WHAT ABOUT ACCOMMODATIONS?

The recipients of government contracts and grants under Sections 503 and 504, or both, are required to make "reasonable accommodations to the known physical or mental limitations of an otherwise qualified applicant or employee unless the recipient can

demonstrate that the accommodation would cause an undue hardship on the operation of its program."⁹

This concept of reasonable accommodation has created much anxiety among recipients of grants and contracts. And yet, as pointed out in Chapter 1, the concept of accommodation is nothing new. We accommodate all the time in the area of employment and, for that matter, in almost all phases of our daily living. So what seems to be the source of the trouble? Besides many other sources, we believe three areas are noteworthy.

1. Who determines what is reasonable and what is not?

Organizations have learned from past experience involving affirmative action for women and minorities that what appeared reasonable to one group was quite unreasonable to another group. In the past, interpretations varied from one agency to another, from one compliance officer to another, from one attorney to another, from one court to another, and even from one manager to another. Little has changed in this regard. Employers have been concerned about the monetary cost. They have also been apprehensive that a good faith accommodation could escalate into an unreasonable accommodation when encountered by the enforcement agencies.¹⁰

2. For whom do you make reasonable accommodations?

Many employers (business and factories, schools and colleges, governmental departments and agencies, social service agencies, health care facilities, etc.) don't realize that the regulations pertain to *qualified* handicapped applicants, students, or employees who, with or without accommodations, *can perform the job or the essential functions of the job* or pursue studies with some adjustments. We are not talking about a handicapped person (unable person) per se.

3. How do you define accommodations? What are the parameters? Indeed, there has been vagueness. But over the last several years we are learning the scope and details about the kind of accommodations that can be made. As pointed out in Chapter 1, handicapped people are a very diverse group in our country, as diverse as the country itself. Who can come up with a precise list of accommodations for each type of handicap? As we get more experience in this area, we will begin to see some light; we are seeing some bright lights already. We will present in detail the accommodations that have been made and are being made by business, industry, and government and their specific workable experiences in Chapter 5.

The Office of Selective Placement Programs of the United States Office of Personnel Management has produced an excellent, thorough publication that should be required reading for employers making accommodations for handicapped workers. It includes experiences involving accommodations actually made within the federal government.¹¹ Some of those experiences will be presented in Chapter 5, but the questions related to the scope of reasonable accommodations are quoted below:

The value and nature of a particular accommodation may be clarified by considering questions such as the following:

- Is the accommodation necessary for the performance of the duties?
- What effect will the accommodation have on the agency's operations and on the employee's performance?
- To what extent do the accommodations compensate for the handicapped person's limitations?
- Will the accommodation give the person the opportunity to function, participate, or compete on a more equal basis with co-workers?
- Would the accommodation benefit others (non-handicapped as well as other handicapped individuals)?
- Are there alternatives that would accomplish the same purpose?¹²

Once we add these questions with that of the cost, size of the organization, amount of contract, budget, the type of operation, the nature of accommodations, etc. (which are provided by the regulations), an accommodation can be made without "undue hardship" or "unusual pressure." The authors' experience suggests that the question of reasonable accommodation has created more heat than light and that, so far, the national experience with which the authors are familiar suggests the costs of accommodations have been minimal or, in some cases, zero.

The OFCCP, for example, has found its experience quite similar to ours. The Agency conducted a sample survey in 1979 in 11 states and found that "accommodation efforts made were indeed reasonable to both employers and disabled workers...a large percentage of modifications sampled were done at little or no cost and did not create serious or lasting disruptions in the workplace...."¹³

We believe this whole issue of reasonable accommodation forces us to be more imaginative and creative and is a much better

alternative than underutilization analysis, goals, and timetables—as are required in the area of women and minorities (Executive Order 11246). Indeed, the area does pose a challenge, but it also offers employers an opportunity to be free of future restrictive government regulations. Many major employers are of the opinion it is better to get actively involved in the spirit of the law than force the "sheriff" (regulatory agencies) to do their managing for them.

DESIGNING AFFIRMATIVE ACTION PROGRAMS (AAPs)

Designing an AAP for the handicapped is a complex and challenging task. Our objective here is to assist not only the recipients of contracts and grants to develop an AAP,* but to promote further understanding of what the AAP calls for and its major elements. Furthermore, we wish to help translate these laws we have been discussing into action.

To begin we need to briefly describe (1) some of the major differences between the regulations in Sections 503 and 504 and (2) the components of a written affirmative action program.

DIFFERENCES BETWEEN SECTIONS 503 AND 504 REGULATIONS

Both sets of regulations have one purpose: to eradicate discrimination against qualified handicapped persons solely on the basis of their respective handicaps. However, there are some differences. It is our opinion, as time progresses, that the Office of Civil Rights of the Department of Health and Human Services and the Office of Federal Contract Compliance (OFCCP) of the Department of Labor will reconcile these differences. Furthermore, we speculate that soon a contractor or subcontractor will automatically satisfy Section 504 if that contractor is covered by Section 503, and vice versa.¹⁴ And, we anticipate some uniform guidelines emerging in the near future.

For now, if you have a contract (Section 503) or a grant (Section 504), or both, the differences delineated below might be useful.

*Even though Section 504 does not require AAP, we feel the recipients are legally obligated to take positive steps. Frequently, the steps that are taken under Section 503 are about the same as Section 504, with minor differences.

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1. Section 503 (contracts) requires affirmative action; Section 504 (grants) requires nondiscrimination. In other words, Section 503 demands active recruitment; Section 504 is more passive.¹⁵

2. Section 503 applies only to contractors and subcontractors with at least a \$2,500 contract. Contractors with contracts of \$50,000 or more must have written affirmative action programs (AAPs). Section 504 applies to all organizations and institutions that receive federal financial assistance and to each program or activity that receives benefits from the grant.

3. Section 503 is concerned with employment-related issues. In addition to those issues, Section 504 is also concerned with admission to the recipients' programs, program accessibility, activities, and services. Note: Section 504 is talking about program accessibility *not* barrier-free environments. The former requires only reasonable accommodation; the latter exists only in Utopia.

4. Section 503 allows contractors to conduct preemployment medical examinations as long as the results are not used to exclude or limit opportunities for the handicapped. Section 504, on the other hand, prohibits usage of such medical examinations unless they are given to all employees and applicants and unless such examinations are conducted after a conditional offer of employment has been made.

5. In the definition of "physical and mental impairment," Section 504 does not limit to employability as Section 503 does. Section 504 is much broader and takes into consideration handicaps that normally would not be considered handicaps under Section 503. Alcoholics and drug addicts, for example, are considered handicapped under Section 504.

In its definition of "qualified handicapped person," Section 504 contains an additional phrase not found in Section 503—the phrase "essential function." The phrase was added in Section 504 to emphasize that handicapped persons should not be disqualified simply because they may have difficulty in performing tasks that bear only a marginal relationship to particular jobs.

6. Under Section 503, as part of the AAP obligation, an employer must extend an invitation to the employee to identify

their handicaps. Section 504, because it is a nondiscrimination statute (passive), does not have such a requirement. But if an employer under Section 504 is voluntarily undertaking to increase the number of handicapped persons, he may solicit such information, which will be kept confidential and available only to the supervisors and managers directly involved and to the first aid people who may be involved in case of emergency treatment.

AFFIRMATIVE ACTION COMPONENTS

As indicated earlier, an AAP for the handicapped does not require underutilization analysis, goals, and timetables; but it does require a good faith effort and extensive self-examination of the organization's personnel policies and procedures, structure and strategy, etc. As we will find later, because of the perceived softness of the law and employer apprehension about the enforcement of the statutes, many organizations are not doing their own "things" voluntarily. As a result, organizations are violating the law outright and, in some cases, paying heavy fines and court costs. It is, obviously in the best interest of employers to take whatever measures necessary to accommodate qualified handicapped people. In a changing economic and regulatory environment, they may have to be creative; the effort is worth it.

Organizations need to maintain three separate AAP plans: one designed to meet the requirements of the Vocational Rehabilitation Act covering the handicapped, a second for disabled veterans to conform to the Vietnam Era Veteran's Readjustment Assistance Act, and a third designed to meet the requirements of Executive Order 11246 dealing with women and minorities. Written AAPs also vary, of course, from one organization to the next. However, there are some common elements that should be included in all AAPs. The major components are:

1. A statement of policy indicating nondiscrimination on the basis of handicap.
2. A statement of assignment of responsibility for implementation of policy and programs.
3. A description of outreach programs and steps being undertaken, or to be undertaken, to seek out the handicapped.
4. The inclusion of an affirmative action clause in all subcontracts or purchase orders of more than \$2,500.

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5. A review of personnel and employment practices.
6. A statement and documentation of reasonable accommodations.
7. An extension of an invitation to the existing employees to identify their handicaps.
8. A statement of cooperation with the appropriate compliance agency.
9. The introduction of an internal review process and procedure.
10. The delineation of methods of communication to supervisors employees, unions and the community about the AAP.
11. A periodic review and updating of the AAP.

Of course these major components involve numerous specific activities. We have prepared lists of such affirmative action items for two populations—Vietnam era veterans and the handicapped—to help meet the requirement of the acts that cover those groups. Figures 2.3 and 2.4 present those items. You'll notice that the lists are very similar. In Chapter 5 we will offer several detailed accounts of how various organizations have implemented their AAPs.

Figure 2.3. Affirmative Action Items for Disabled Veterans and Veterans of the Vietnam Era

1. Post "equal employment opportunity" poster in conspicuous places available to employees and applicants.
2. Notify union(s) of your organization's compliance with the Vietnam Era Veteran's Readjustment Assistance Act of 1974.
3. Include in the affirmative action clause that the jurisdictional amount of covered contracts is for \$10,000 or more.
4. Either incorporate the corporate EEO policy or adopt a Vietnam era veteran's policy for your facility. (For multi-union organizations)
5. Prepare an affirmative action program. Retain a copy for on-site compliance inspection.
6. Inform and solicit support of management and supervisory personnel of your organization's AAP obligations.
7. List all suitable employment openings with the State Employment Service, which will then give referred priority to Vietnam era veterans.
8. Retain records of jobs listed with the State Employment Services and file quarterly reports regarding employment practices to the central office of the State Employment Service. The reports shall indicate for each hiring location.
 - a. the number of individuals hired during the reporting period.
 - b. the number of nondisabled veterans of the Vietnam era hired.
 - c. the number of disabled veterans of the Vietnam era hired.

9. The mandatory listing requirements originally published in the Manpower Administration's proposed regulations on February 18, 1975 must be incorporated into the program.
10. Post notices in conspicuous places available to employees and applicants stating your organization's obligation to take affirmative action on disabled veterans and veterans of the Vietnam era for employment.
11. Identify and determine the status of disabled veterans and veterans of the Vietnam era employees by invitation.
12. Review and update the affirmative action plan annually.
13. Review employment practices to determine whether the personnel programs provide the required affirmative action for employment advancement of qualified disabled veterans and veterans of the Vietnam era.
14. Review all physical and mental job qualifications requirements to ensure they are job related and are consistent with business necessity and the safe performance of the job, and to discover and eliminate potential barriers to disabled veterans.
15. Enlist the assistance and support of all recruiting sources.
16. Review employment records to determine the availability of promotable and transferable qualified known disabled veterans and veterans of the Vietnam era presently employed, and to determine whether their present and potential skills are being fully utilized or developed.
17. Inform employees and applicants that the affirmative action plan is available upon request.
18. Periodically inform all employees and prospective employees of your organization's commitment to implement the affirmative action plan.
19. Review facilities and equipment for reasonable accommodation to the physical and mental limitations of disabled veterans.
20. Make appropriate modifications to accommodate disabled veterans.
21. Review personnel processes to determine whether the present procedures assure careful, thorough and systematic consideration of the job qualifications of known disabled veteran applicants and Vietnam era veteran applicants for job vacancies filled either by hiring or promotion, and for all training opportunities offered or available.
22. Make your employment office and training centers accessible.

Source: Adapted from Gopal C. Pati and Michael J. Mezey, "Designing an AAP for the Handicapped." *Training and Development Journal* (June 1978).

Figure 2.4. Affirmative Action Items for the Handicapped

1. Post "equal employment opportunity" poster in conspicuous places available to employees and applicants.
2. Notify union(s) of your organization's compliance with Sections 503 and 504 of the Rehabilitation Act of 1973 as amended.
3. Include affirmative action clause or reference thereto in purchase orders or contracts over \$2,500.
4. Adopt a handicapped employment policy.
5. Review medical questionnaire and application form.
6. Prepare an affirmative action program. Retain a copy for on-site compliance inspection.

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7. Inform and solicit support of management and supervisors of your organization's AAP obligations.
8. Inform employees and applicants that the handicapped AAP and employment policy is available for inspection.
9. Remove from medical forms any language or suggestion of rejection based on the medical examination.
10. Forms submitted by medical examiner should contain two findings:
 - a. Healthy individual capable of performing essentially any job.
 - b. Medical finding that indicates applicant may require special job placement.
11. Notify recruitment sources of employment policy. Establish contacts with appropriate training centers and social service agencies.
12. Identify and determine the status of handicapped employees by invitation.
13. Review employment qualification practices to discover and eliminate potential barriers to handicapped individuals.
14. List job openings with the State Employment Service.
15. Review physical facilities and equipment for reasonable accommodations to special needs of handicapped.
16. Modify existing structures to accommodate the handicapped. (Is the entrance door to your operation at least 32 inches wide?)
17. In new construction, make physical provisions to accommodate the handicapped.
18. Review and update handicapped AAP annually.
19. Retain complaint and employment records for two (2) years or until complaint is settled, if longer.
20. Periodically inform all employees and perspective employees of your organization's commitment to engage in the affirmative action plan.
21. Review personnel processes to determine whether the present procedures assure careful, thorough, and systematic consideration of the job qualifications of known handicapped applicants or employees for job vacancies filled either by hiring or promotion, and for all training opportunities offered or available.
22. Make your employment office and training centers accessible.

Source: Adapted from Gopal C. Pati and Michael J. Mezey, "Designing an AAP for the Handicapped." *Training and Development Journal* (June 1978).

When your organization is formulating an AAP, it is extremely crucial that the organization involve the handicapped worker/manager who may have perspectives that could indeed make the AAP more innovative. You should also contact the nearest state or private vocational rehabilitation specialists to get their ideas. As we will stress in the next chapter, improved cooperation between employers and rehabilitation people will better serve the interests of all parties concerned.

COMPLIANCE: PROCEDURES AND EXPERIENCES

The "push" for handicapped compliance is a relatively new phenomenon. Consequently, comprehensive data on enforcement is either inadequate or unavailable. Historically, i.e., until 1978 in the public sector (federal government), enforcement of handicapped statutes rested with the Civil Service Commission (CSC), which has been more of an advocate than an enforcer. Under President Carter's reorganization and consolidation plan, the Equal Employment Opportunities Commission (EEOC) has the responsibility of approving and enforcing AAPs for the handicapped, although the program and personnel management activities relating to handicapped are still vested with the CSC. In the future, Section 501 (public employment) enforcement under the auspices of the EEOC is expected to be stringent. All indications suggest that employers in both the public and private sectors are violating Sections 503 and 504 nationally.

Regulations in the area of Section 503 (contracts) have been developed more rapidly than that of Section 504 (grants). Although numerous court cases are favoring handicapped rights, many government agencies are still writing their own Section 504 regulations, very much patterned after the regulations issued by the Department of Health and Human Services (DHHS). In addition, on November 2, 1980, 504 coordinating responsibilities were transferred from DHHS to the Department of Justice.

Section 502, dealing with accessibility, is still up in the air. Even though the American National Standards Institute (ANSI) has just published the revised updated standards on accessibility,¹⁶ which is in tune with the Architectural Barriers Act of 1968 and is the result of a massive five years' work involving inputs from some 53 public and private organizations at a cost of \$500,000 (funded by HUD), varieties of federal agencies plan to issue their own guidelines. As of this writing, the Architectural and Transportation Barriers Compliance Board (ATBCB) has just published its own standards for public comments,¹⁷ and the U.S. Postal Service and the General Services Administration are in the process of doing the same. There is a great deal of confusion and instability.

Nevertheless, despite the uncertainty, we advise against a "wait and see" attitude. Use the checklists already provided and the information to come to cope with affirmative action regulations. Our continuing advice is to use the mandates of the law as an opportunity to solve personnel and production problems: incorporate employing qualified handicapped workers into your management system.

PRIVATE SECTOR

Since 1978 the enforcement of equal opportunity, particularly on federal contract activities, has undergone some drastic changes. In this nation there are over 250,000 contractors who do business with the federal government and employ over 31 million people.¹⁸ Historically, the enforcement has been weak. The handicapped and their advocates, employers, members of women and minority groups all protested about (1) a lack of proper or uneven enforcement of the regulations, (2) a lack of consistent policies, (3) a lack of trained personnel, (4) a multiplicity of agencies and their conflicting expectations.

Compliance took on the aspect of a nightmare. Lack of a coherent enforcement strategy kept handicapped workers from taking advantage of employment opportunities. Recently, however, the ball game has been drastically changing. The federal government has stepped on the accelerator rather hard in responding to the aforementioned concerns. Here are some indications:

- The reorganization of the Employment Standards Administration's office of Federal Control Compliance Programs (OFCCP) and an increased number of trained specialists to protect the job rights of the handicapped—a response to an old gripe of inadequate manpower.
- A large scale transfer of personnel and budget from 11 other federal agencies into OFCCP's jurisdiction to enable the government to enforce the laws more vigorously—a response to the frustration of inadequate budget.
- A move to make Section 503 of the Vocational Rehabilitation Act of 1973 and Section 402 of the Vietnam Era Veteran's Readjustment Assistance Act of 1974 an integral part of the OFCCP's overall enforcement system—a response to past complaints about the lack of unified strategy of enforcement.
- Extensive research to determine nationally what government contractors and subcontractors were doing and not doing in terms of handicapped compliance—a response to past concern about inadequate homework by the government.
- The finding that 91 percent of government contractors are *not* in compliance, and usage of this data to train employment specialists when they "hit" the field, suggesting more prepared compliance officers—another response to the well known criticism of unqualified compliance personnel.

- The investigation by OFCCP of some 5,000 cases as of October 1978, with more than half already resolved—a response to the traditional complaint of the backlog of cases.

- The citation of six major contractors for violations of the handicapped statute, including two major airlines and a large defense contractor, and a major conciliation effort in 1978. Awards to individual handicapped complainants totaled more than \$18,000. In 1977 alone, settlements and conciliation efforts came close to three-quarters of a million dollars. In the next several years, major debarments from holding future contracts can be expected, as has been observed in the area of women and minorities—a response to the notion of a law without "bite."

In 1980 the Department of Labor obtained the largest back pay award for a record number of handicapped employees at one facility in Texas. The following is a case history of that settlement.¹⁹ Consider it in the light of the major components of the AAP we listed earlier.

The Bruised Electronic Contractor

The company is a contractor with the Department of Defense. In 1978 it had contracts totalling about \$53 million to manufacture electronic systems and equipment at a plant employing approximately 1,200 people. A group of handicapped applicants alleged that they were screened out of many jobs because of their handicaps. OFCCP's Dallas office started investigation in 1977 and a settlement was reached in 1980. What did the investigation reveal?

1. Preemployment medical examination that was not job related.
2. Automatic exclusion of applicants on the basis of their handicap, even though there were jobs qualified handicapped persons could do.
3. Discrimination against employees with invisible handicaps such as obesity, color blindness, high blood pressure, allergies, and varicose veins.

This is a case of systematic discrimination: where the employment policies and criteria were such that they excluded/screened out individuals from gainful employment, where such policies and procedures were not job relevant, a clear violation of Section 503 (contracts). What did the settlement entail?

1. A \$225,000 back pay award plus interest to 85 handicapped persons.
2. A granting of job preference to 32 of the back pay recipients.
3. A promise that the company will make reasonable accommodations to an applicant's physical and mental handicap.
4. Steps to improve selective placement of the handicapped in terms of aggressive recruitment and selection.
5. Steps to strengthen its AAP and the inclusion of the settlement terms in the company's written affirmative action plan.

Besides this recent action, a review of back pay awards during the last four years to the victims of handicap discrimination suggests the determination of the Department of Labor to enforce laws affecting the handicapped. A review of these cases also reveals that many employers have not taken the statutes seriously. It also reveals that the back pay recipients constitute a diverse group in terms of their handicaps, occupations, and positions within the organizations. The cases come from all geographical regions. Handicaps include: controlled epilepsy, "assumed to be" epileptic, rehabilitated alcoholic, mental illness, diabetes, visual/hearing impairment, heart conditions, mastectomy, back injury and spinal conditions, blindness in one eye, 50 percent disability (of a veteran), spinal condition, depressive personality, deafness, hypertension, emphysema, sclerosis of the spine, arthritis, asthma, enlarged heart, transplanted kidney, bleeding ulcer, schizophrenia, etc.

The authors feel the compliance activities are going to be more efficient in the future because the OFCCP has done its homework and has developed uniform compliance procedures. Those procedures can be found in the Federal Contract Compliance Manual.²⁰ We strongly suggest that contractors/subcontractors acquire this helpful manual, which systematically outlines the entire procedure and the requirements. Incidentally, the authors expect no lessened commitment from the new administration in Washington. There is every indication that the handicapped are still a target protection group.

How Does the Procedure Work?

In the past the enforcement of the Vocational Rehabilitation Act (Section 503) and Vietnam Era Veteran's Readjustment Assistance Act (Section 402) has been implemented by the Department of Labor (DOL) almost exclusively through the individual complaint process. Such a process lacked adequate follow-up and consistency.

The thinking now, however, is that the early detection of problems can lead to avoidance of many difficulties for the contractors as well as the DOL. Consequently, the Department has developed what is now known as Directed Compliance Reviews. The implementation of this program means that rather than only investigating a company's compliance when there has been a violation, an Equal Opportunity Specialist (EOS) would complete 30 onsite reviews of randomly selected companies within a period of 180 days. These same companies are to be contacted every 18 months as a follow-up. Upon visitation, an EOS goes through three sets of regulations involving Executive Order 11246 (women and minorities), the Vocational Rehabilitation Act of 1973 (as amended), and the Vietnam Era Veteran's Readjustment Assistance Act of 1974 and examines for compliance with all the mandated points. A compliance review consists of five steps:

1. Planning and preparation.
2. On-site review.
3. Off-site analysis.
4. Conciliation.
5. Enforcement.

Planning and Preparation:

The EOS is well prepared and knows in advance what to look for. The DOL has prepared and trained the EOS on the basis of data derived from a pilot study of 300 contractors. The EOS knows the result of the study, the bottom line of which is that 91 percent of the companies surveyed were not in compliance with legal mandates required by the handicapped statutes. The EOS also knows the areas of vulnerability. Table 2.1 shows the result of the pilot study depicting specific areas in which the contractors were not in compliance.²²

A well-prepared EOS, in the preparation and planning phase, sends a letter to a randomly selected contractor notifying him of a scheduled date for a compliance review and asks for the following information,

1. The employer's affirmative action plan.
2. The data showing the workforce and their utilization.
3. The established procedure to implement the AAP.

If the AAP plan is not submitted within 30 days from the date of the letter, the employer may receive a phone call. If the response from the employer to this information is negative, he may get a

TABLE 2.1

Results of DOL's Survey of 300 Companies, Randomly Selected*

Non-compliance with items	Percent
Non-compliance with the statute	91
Lack of AAP for the handicapped	24
Lack of AAP clause in their contracts	51
Failure to extend invitation to handicapped employees to identify themselves	57
Lack of outreach program	44
Lack of review of total personnel system	53
Failure to review job requirements	50
Lack of review of total employment practices	46
Failure to make reasonable accommodations	18
Failure to disseminate nondiscrimination policy statement and AAP	53
Failure to meet mandatory job listing requirement with state employment services	69
Inadequate AAP	25
Failure to display posters	29

Source: OFCCP, Department of Labor.

These organizations comprised small, medium, and large facilities from all 10 regions of the country.

show-cause notice. In this preparation phase, the EOS analyzes a variety of information on his own (for example, the availability of qualified handicapped in the community, possible complaints that may have been filed against the employer, court actions, labor market information, reactions of vocational rehabilitation organizations or state employment agencies about the employer's tone in terms of "outreach" efforts). The EOS now reviews the employer's AAP, looks for deficiencies, and gets ready to start the next phase.

On-site Review

After the preliminary discussion, the EOS will review the information with the contractor. If, for a good reason, an AAP document was not sent to the DOL, it must be made available during on-site review. There are several key items an EOS looks for, i.e., those that tend to discriminate. Several key questions are very basic during an on-site review. Here are a few important items:²³

- Is there a pattern? Does the contractor reject all handicapped applicants or only those with certain disabilities?

- Are there discriminatory clauses in the contract?
- Has the contractor really made an outreach effort?
- Has the contractor extensively reviewed its employment and personnel policies and procedures?
- Has the contractor included an AAP clause in each of its covered contracts and subcontracts?
- Has the contractor posted job openings with state employment agencies?
- Is the compliance history of the organization favorable?
- Is there a good implementation system?
- Has the contractor solicited union cooperation in a union environment?
- Are the medical standards relevant?
- What efforts are being made to rewrite/upgrade job and position descriptions?
- If the organization recognizes some deficiencies, what efforts are being planned to correct them?
- Does the organization get rehabilitation personnel or handicapped people involved to get their input?
- What efforts is the organization undertaking to make its managers and supervisors aware of its commitment to an AAP for the handicapped? What programs are being employed to raise consciousness?
- Are handicapped people promoted within the organization?
- What are the termination procedures?

To prepare for the on-site review, raise these questions yourself and be ready to document the answers.

Our interviews with compliance officials suggest (besides many others) that the following areas constituting a recurrent problem:

1. Outdated job descriptions.
2. Lack of promotions of qualified handicapped employees or failure even to recognize their existence.
3. Vague termination notices.
4. Outdated medical standards and records*
5. Dumping, i.e., steering of handicapped employees to undesirable jobs.

*Stipulations such as "can be hired," "limitation," "severe limitations," or "do not hire" should be discarded.

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6. Lack of documentation of efforts a contractor has legitimately made.
7. Lack of internal review procedures.

Off-site Analysis

At this stage a determination is made whether the contractor's personnel practices, procedures, and overall attitudes operate to discriminate against qualified applicants or employees who are handicapped. All deficiencies are documented, and specific recommendations are made for correction of these deficiencies.

Conciliation

The EOS prepares and sends a letter of notification of results of compliance review to the contractor, which documents the coverage, findings, and conclusions. In the case of noncompliance, the contractor is invited to begin the process of conciliation, the goal of which is to obtain corrective action through persuasion within a reasonable time. Typically, a conciliation agreement includes specific written commitments that a contractor makes to correct the deficiencies. After such commitments are approved by a higher DOL official, the contractor may be considered in compliance on condition that the commitments are kept. The EOS revisits the contractor on arranged dates to determine whether or not the commitments have been fulfilled. If the commitments have not been met to the satisfaction of the OFCCP, the contractor is so notified, and the enforcement process begins.

Enforcement

If the contractor refuses to sign the conciliation document and there is disagreement with the recommendations of the OFCCP, the Regional Office refers the matter to the Solicitors for Processing for a hearing. If the hearing finds against the contractor, he is given 10 days to conform to the sanction or a penalty is imposed. Penalties can include:

1. Withholding payment on the present contract.
2. Cancelling any existing contracts.
3. Debarring the contractor from receiving future contracts.
4. Seeking judicial action to enforce the contractual provisions.

The authors have interviewed many compliance officials (who have chosen to remain anonymous) who have expressed concern about employers' attitudes toward compliance. They are amazed to

see, in case after case, how a contractor's policies and procedures are not kept current. Promotions are denied to handicapped people without explanation. In spite of the availability of manuals and availability of a market of "how to do things," employers' affirmative action programs are vague. The lack of dissemination of the AAPs through their own management is apparent from such things as supervisor failure to attend meetings where employment and utilization of handicapped are discussed or failure to visit a rehabilitation center. Aggressive recruitment is almost nonexistent from colleges or rehabilitation centers—places with available, qualified handicapped people.

Many compliance officers also express concern that many contractors are not taking the Department of Labor signals seriously, in spite of massive back pay settlements. They admit that compliance in the past may have been weak but assert that it will be weak no longer. Personnel specialists and supervisors, by and large, are perceived as insensitive to the needs of the handicapped. It also appears, according to the officials, they are still concerned about what the handicapped people can't do, rather than what they can do. Some are still preoccupied with the "fear of the unknown."

We asked officials how an organization can overcome this. The following comments of an EOS (who chose to remain anonymous) summarize it all:

Companies must arrange with a local vocational rehabilitation office to visit a workshop, to let the supervisors actually feel, touch, and see what the handicapped person is all about. The myths surrounding high insurance rates, safety hazards, non-acceptance of handicapped people by fellow non-handicapped workers need to be dispelled. The employers, instead of attempting to "beat" the system, could improve their personnel management, and compliance would be smooth. It's the contractor with misinformation and obsolete personnel practices who is the one who typically fails to comply.

Please do not think of such a visit as threatening. More and more managers *are* going to workshops and training. And, as we shall see in the next few chapters, many organizations are successfully (and without coercion) employing qualified handicapped persons as part of their standard management system.

INDIVIDUAL COMPLAINT PROCEDURE

If a handicapped employee and applicant feels that his/her rights have been violated, a written complaint can be filed with the

Director of the OFCCP. If the contractor has an internal review mechanism, the complainant should take advantage of that procedure first. If the matter is not resolved within 60 days, the DOL or its designated agent will investigate. If the contractor is not found in violation, the complainant may request a review by the Director of OFCCP within 30 days after receipt of notice. The procedure is the same for the disabled veteran also, with one exception. If a complaint is not resolved through an internal review process, then the complainant must refer the matter to the local veteran's employment representative, who would refer the complaint to the OFCCP.

PUBLIC SECTOR (FEDERAL GOVERNMENT)

In 1974 the General Accounting Office (GAO) found weaknesses in the selective placement program within the federal government. It indicated that the program could be strengthened by "increasing CSC resources... improving the agency coordination systems, and... improving the system for collecting data to measure program effectiveness." In 1978 they reported that "while some progress has been made along these lines, many problems and weaknesses still exist." The GAO study was conducted at the request of the Chairman of the House Committee on Science and Technology, who was concerned about the lack of progress in recruitment and fuller utilization of handicapped people.²⁴

This 1978 report recognized some positive steps taken since 1974, but also pinpointed major problems still unresolved within the federal government. Here are some of the major findings:

1. The CSC was playing an advocacy role rather than administering and enforcing the selective placement program.
2. The commission had no sanction to motivate uncooperative agencies.
3. Many selective placement specialists were either not trained or could not devote adequate time to the program because of other duties.
4. Measuring program success was impossible because of unreliable data.
5. There was a lack of in-depth compliance reviews aimed at assessing agency accomplishments.

6. The government's resource commitment to enforce the handicapped regulations was inadequate.

7. Staff resources to provide technical assistance to agencies needing help in acquiring devices, restructuring jobs, and evaluating accessibility and accommodations were inadequate.

8. Handicapped programs were overshadowed by more established programs for women and minorities.

9. Personnel policies and programs were not fully revised to accommodate the needs of the handicapped.

10. Architectural barriers made programs and facilities inaccessible to the handicapped.

11. Widespread attitudinal barriers of directors and managers of various agencies hindered progress.

12. There was no legal provision for the handicapped employee that entitled him to attorney's fees for successful litigation or gave him the right to proceed to federal courts with a new case if a formal complaint was tied up in administrative procedure for more than 180 days.*

The GAO study also pointed out that the government has pursued the enforcement of affirmative action more vigorously with federal contractors, while adopting a weaker standard for government agencies. President Carter's reorganizational project study corroborated the same findings, noting that as a result of poor enforcement within the federal government, the federal employment record was substantially poorer than that of private sector employers.²⁵

The Interagency Committee on Handicapped Employees (ICHE) identified and made at least 41 recommendations to correct problems within the federal government. It is interesting to note that many of the problems identified by the GAO and ICHE studies, whether they were attitudinal or otherwise, are very much similar to those encountered in the private sector. Problems such as old position descriptions, inadequate AAP or its lack of proper implementation, lack of trained supervisors and managers who understand the handicapped, accessibility problems, inadequate public

*This problem has been corrected by the 1978 amendments to the Rehabilitation Act, 1973.

information and internal communication, attitudinal barriers, questionable medical procedures, inter-departmental or inter-agency communication problems, lack of coordination, antiquated personnel practices, etc. seem to be common in both private employment and the federal sector.

Some Positive Trends in Federal Efforts

In life, many good things emerge as a result of problem identifications. It appears to the authors that, as a result of these negative findings, the federal government has recognized the following:

1. There must be more emphasis on the selective placement of handicapped people.
2. There must be tougher standards and enforcement of APPs within the government.
3. There must be more money and trained human resources made available to make selective placement effective.
4. Personnel practices within the federal government must be updated.
5. Attitudes toward the handicapped must be modified by better communication of positive steps that have already been taken within the federal government.

This recognition has been accompanied by some very positive steps.

1. The Civil Service Commission (CSC) and its staff have been diligently working to improve and further strengthen the *Federal Personnel Manual (FPM)* with aggressive actions taken by the Office of Personnel Management. Chapter 306 of the *FPM* dealing with selective placement of the handicapped has been improved tremendously. Recently, the Office of Personnel Management has come up with two publications explaining many of the changes. These two publications, (1) *Handbook of Selective Placement of Persons with Physical and Mental Handicaps in Federal Civil Service Employment* (1979) and (2) *Handbook of Reasonable Accommodations* (1980), should be required reading for all agency heads, supervisors and personnel officers, and selective placement staffs of the public and private sectors.

The Civil Service Commission has also implemented, since March 1974, some 89 recommended changes (by ICHE) that involve strengthening "complaint procedures, improving agen-

cy affirmative action plans, removing attitudinal and architectural barriers, and establishing information systems to collect federal employment data."²⁶ It has also recognized the urgent need to more fully integrate the selective placement program with the total federal personnel system.

2. In 1978 President Carter unveiled a reorganization plan that consolidated EEOC and AAP enforcement activities within the federal government. This responsibility is now shouldered by the EEOC, with the hope that government can fight job discrimination against the handicapped on a more aggressive and coherent basis.

3. Today handicapped employees or applicants have the right to reasonable accommodations within the government. They had the right before. But what is different today is that if a handicapped person is dissatisfied with the agency procedure in terms of resolving his case, he has the right to take his case to a U.S. District Court.

It is too early to tell what the EEOC is going to do. So far, the EEOC chairman has expressed the EEOC's commitment to enforce the law within government. On December 6, 1979, in a policy statement to all the heads of federal agencies, the EEOC explicitly communicated the following management directive:

It is the intent of the EEOC to take a positive and directive role in assuring that Federal Agencies fully comply with Section 501 of the Rehabilitation Act of 1973, as amended, and Section 403 of the Vietnam Era Veteran's Readjustment Assistance Act of 1974. It is the policy of the Federal Government to provide equal opportunity for persons with disabilities. All Federal agencies must take affirmative action to hire, place, and advance qualified handicapped individuals, including disabled veterans, and to retain Federal employees who become disabled after appointment.²⁷

To achieve the goals of this directive, the commission is considering 1979-81 to be transition years in which the agencies were to focus their attention in a number of areas:²⁸

1. The emphasis is on the employment of handicapped individuals with severe disabilities. The agencies are to analyze their work force data keeping this emphasis in mind and utilizing disability category codes described on Standard Form 256. (See Exhibit B in Appendix 1.) The codes that are

emphasized are 16 and 17 (deafness), 23 and 25 (blindness), 28 and 32-38 (missing extremities), 64-68 (partial paralysis), 71-78 (complete paralysis), 82 (convulsive disorders), 90 (mental retardation), 91 (mental illness), and 92 (distortion of limbs and/or spine).²⁹

2. Priority should be given to increase hiring of the handicapped by (a) establishing goals and timetables on the basis of past performance of the agency, analysis of the records of other successful agencies, overall government progress, and census data, (b) developing special recruitment programs, and (c) keeping close tabs on the turnover of the handicapped people.

3. Facilities should be accessible to the handicapped people. This must be accomplished by (a) going through a self-evaluation and a survey of agency facilities and (b) establishing goals and timetables for removal of barriers.

4. Agencies must develop plans explaining how they intend to achieve the goals in the aforementioned areas.

5. Agencies are also required to analyze their selection procedures and identify those areas that impede the selective placement process. They are to utilize the uniform guidelines on the employee selection process issued by the government in 1978.

6. There are also some stringent reporting requirements consisting of achievements of goals in the aforementioned areas and detailed explanation in event the goals are not achieved. As of this writing, the EEOC has extended the transition period until 1981 to give agencies additional time to accomplish the bottom line results. All agencies (small and large alike) would be advantaged to procure the reporting procedures and forms from the EEOC itself as soon as possible.

We feel these are positive developments. Once the EEOC receives all the final reports during fiscal year 1981-82 and makes an analysis, we will be in a position to evaluate more accurately the results of these efforts in improving opportunities for the handicapped in federal employment. At this point it is evident that employers in both the private and public sectors are violating the handicapped statutes, the enforcement of which is going to be more stringent in the future.

**COURT CASES:
WHAT THEY ARE SAYING AND NOT SAYING**

As previously mentioned, it is going to take a considerable period of time to settle the numerous issues and concerns raised under the handicap statutes. Critical issues associated with the definition of phrases or terms such as "handicap," "reasonable accommodations," etc. are going to be debated for some time. Concerns such as "right to private action," requirements of "goals and timetables" in the federal employment are all subject to future court interpretations. There are also perceived conflicts between federal and state laws involving the handicapped. Many cases have been filed under state statutes or under Due Process and Equal Protection clauses of the Fourteenth Amendment. It is our belief that the 1980s and 1990s are going to be "fertile" decades in the area of handicapped litigation.

The objective of this section is to provide some "feel" for what the courts across the nation seem to be saying, so that decision makers can take steps to correct some of the difficulties. An extensive review of cases suggest the following:

1. The definition of a handicapped person is an issue closely related to qualification standards and to that person's ability to perform the job under review.
2. Organizations are being required to make accommodations, even though there are variations and exceptions.
3. Numerous cases are being brought to courts under the state statutes instead of the Rehabilitation Act.
4. Right to private action under the Rehabilitation Act is a recurrent theme in numerous cases.
5. More court cases are found in the area of Section 504 compliance involving the recipients of federal grants and programs as opposed to Sections 503 (contracts) and 501 (public employment)—suggesting tremendous success by the DOL in its conciliation efforts.

Let us now discuss a few of these areas in some detail.

DEFINITION OF A HANDICAPPED PERSON

It appears that in numerous cases the judges have been experiencing difficulty in getting clear guidance from the legislative

definition of the term "handicap." A frequently asked question has been: "What is an effective definition of physical and mental handicap?" In one case, a job applicant with a kidney transplant was declared not to be handicapped under the Illinois State Equal Opportunities for the Handicapped law.³⁰ The court agreed that his handicap was not severe enough to include him under the state statute. On the other hand, there have been cases, where judges have relied on *Webster's International Dictionary* to settle cases. The dictionary definition of handicap is, "...a disadvantage that makes achievement usually difficult; esp.: a physical disability that limits the capacity to work." In two cases in Wisconsin, judges utilized this dictionary definition to conclude that individuals with asthma and leukemia were indeed handicapped persons.³¹ Within the context of New York's Human Rights Law, obesity and hypertension were handicaps, and denial of reemployment based on those conditions was discriminatory.³²

In order to be considered as "handicapped" under the Rehabilitation Act, a person must be a qualified individual who can perform the job in question. Mere possession of a disability condition or impairment does not qualify the individual to receive protection. The individual who is qualified and has an impairment that does not prevent him from discharging his duties, yet is experiencing difficulty in seeking employment, is covered. Also covered is an individual who is not handicapped, yet is being perceived as handicapped. In this situation, it is the attitude toward a disability that is handicapping rather than the actual presence or absence of a handicap. Furthermore, the ability to perform the duties is being used as the acid test of whether or not an individual is "handicapped."

Drug users have been declared handicapped people under the Vocational Rehabilitation Act. The case involves the City of Philadelphia, which denied employment to two individuals solely on the basis of former drug use without regard to their qualifications, present treatment status, and the nature of the job. The court found such exclusion denied the applicants the benefits of a program receiving federal financial assistance and, thus, was in violation of the Act.³³

Epilepsy has been treated by the courts as a handicap, but in many cases restrictions have been imposed. For example, a case involving the U.S. Postal Service, which has a rule of excluding individuals with epilepsy from performing jobs involving driving, moving machinery, or working at heights, was not considered discrimination under the Rehabilitation Act, since such individuals were not excluded from all jobs—only from hazardous jobs.³⁴ But, on the other hand, controlled epilepsy in at least two separate state

cases has been treated quite uniquely. In Wisconsin a welder with controlled epilepsy was denied employment in spite of the fact that, because of effective medication, he could perform the job without the likelihood of another seizure. The medical opinion also favored his reemployment. Such action on the part of the employer was declared illegal.³⁵ In Colorado in a case involving a job applicant with epilepsy, the court ruled that the blanket exclusion of persons with epilepsy from patient care positions was illegal. Determination had to be made on an individual basis.³⁶ In another case in Washington, an individual was perceived to be epileptic when he in fact was not, and he was discharged. The court found such action discriminatory.³⁷

Employment decisions have to be made on an individual basis, keeping in mind the actual job demands and the ability of the individual to do the job. Therefore, exclusion on the basis of handicaps such as visual impairment with corrected vision of 20/20 (the employer could not prove that individuals with 20/70 uncorrected vision could not perform the job),³⁸ discharge of a teacher solely on the basis of his blindness when he could have taught with minor accommodation,³⁹ or a discharge of an insurance agent solely on the basis of his having high blood pressure,⁴⁰ or denial of employment to individuals with glaucoma,⁴¹ or refusal to hire a job applicant as a grain weigher because of his past condition of tuberculosis⁴² are all illegal actions.

ACCOMMODATIONS

There are a number of major cases that not only address the issue of qualifications, but the accommodations questions as well. Does a contractor or recipient of grants have to reduce qualification standards? Does he have to modify program contents? Does an individual have the right to receive aids or interpreter services? Here are a number of cases that provide us with some insight into these matters.

In the well known Davis case,⁴³ the Supreme Court ruled that the college in question was *not* required to make major changes in the content of the nurses' training program to accommodate a deaf student. The court warned, however, that Section 504 of the Act did not allow educational institutions to disregard the disabilities of the handicapped individuals; it prohibited the institution from discriminating against an "otherwise qualified" person just because of his handicap. In this case, however, the Supreme Court did not find Davis to be an "otherwise qualified person" when it was demonstrated that she had extreme difficulty in hearing, a difficulty that

could not be sufficiently improved by hearing aids and that would, subsequently, endanger her patients. The court took into consideration public safety, program integrity, and bona fide qualification standards (which were not arbitrary) to decide the case. Although the court found for the nursing school, its decision indirectly challenges professional schools, although they do not have to lower standards or change the contents of the program, to make sure their professional standards do not discriminate against individuals with handicaps.

The quest for objective standards and bona fide justifications of such standards are of crucial importance in making accommodations. Thus, two visually impaired students at a junior high school, each with vision in one eye, could not receive relief under Section 504 of the Rehabilitation Act in their quest for inclusion in contact sports. The Court of Appeals found that the school's justification for such exclusion was adequate and that the plaintiffs could not prove such requirements without merit.⁴⁴ On the other hand, the United States Court of Appeals for the Third Circuit found a school system's policy of not allowing blind teachers to take state qualifying examinations consisted of the assumption that blind individuals could not be competent teachers. The court also found the school system's medical and personnel policies were arbitrary and discriminatory under the U.S. Constitution. The teacher in question was awarded retroactive seniority.⁴⁵ In a similar case, two institutions of higher learning were ordered by the courts to make interpreter service available (1) to a deaf faculty member so that she could continue earning credits for maintaining her teaching certificate⁴⁶ and (2) to a deaf student so that he could continue his education, pending an administrative resolution by HEW.⁴⁷

RIGHT TO PRIVATE ACTION

In a number of cases, the issue has been whether an individual has the right to private action under the Rehabilitation Act. This has been an issue because the agencies that enforce the regulations all have administrative procedures to handle complaints. The hidden item in the agenda, of course, has been the perceived credibility of such procedures. Are they too little or too late? In spite of differences of opinions around the country among the judges, a rough consensus is emerging. Section 503 of the Act involving federal contractors does not imply private action for its enforcement. In one case, a decision summed up the issue rather well by saying, "to imply private cause of action under Section 503 would be to frustrate the informal conciliation efforts mandated by the

regulations and add little to the presently available sanctions that encourage compliance with Section 503 by government contractors."⁴⁸ Case after case involving the obligation of the contractor to take affirmative action finds that administrative remedies under DOL are adequate.⁴⁹

But under Section 504 (grants) the ball game seems to be different. Courts are saying that an individual does have a right to private action under Section 504, because that section does not expressly provide for an administrative remedy, as Section 503 does. Furthermore, it also had been argued that Section 504 explicitly forbids discrimination, whereas Section 503 only requires affirmative action. But, in any event, the right to private action has been recognized under Section 504 with varying degrees.⁵⁰

PRESENT AND FUTURE TRENDS

As we suggested before, in the future numerous litigations are inevitable. Although the intent of the rehabilitation statutes was to forbid discrimination against individuals solely on the basis of their handicaps, the legal authorities are telling us implicitly that the laws have been poorly written and that more court cases are necessary to clarify definitions and terminologies. In the meantime, existing court decisions, administrative decisions, and conciliation agreements are giving us a number of clues of future legal directions. We believe the decision makers should seriously consider the following as emerging principles.

1. Certain categories of handicaps have been definitely identified.
2. Discrimination against a qualified handicapped person is prohibited.
3. Job performance or ability to do the job is the acid test.
4. Accommodations and placement have to be accomplished on an individual basis.
5. Accommodations are made or denied on the basis of "business necessity" and "undue hardship" to the organization on an individual basis. Cost has been a consideration.
6. Programs and employment offices should be made accessible.

7. Medical examinations should be job related. Physicians should not make employment decisions; they should only diagnose the conditions. That information should be utilized by managers to make the final decision.

8. Organizations with grants and other federally-assisted programs should conduct a self-evaluation of their personnel policies, accessibility, and instructions to make sure that they do not discriminate against qualified handicapped persons.

9. Occupational stereotyping should be avoided.

10. Records should be diligently kept about accommodations made or not made.

We appreciate the notion that many employers in the private as well as the public sectors have had unfavorable experiences involving affirmative action for women and minorities. The law is rather soft now. And if organizations adopt a "wait and see" posture, we will not be surprised if harsher forms of legislation and executive orders emerge. The objective of public policy is to eliminate discrimination; one of the objectives of good business is to promote fair employment practices. If we truly recognize that common element in this area of human concern, then further government intervention in private decision making may not be necessary.

LOOKING BACK: QUESTIONS TO CONSIDER

1. What (in our opinion) is the best attitude to take about legislation outlawing discrimination against the handicapped?
2. What are the key provisions of the major sections of the laws and regulations?
3. What *do* the laws say and *do not* say?
4. Who are the "handicapped"? Why is the legal definition so broad? What are the difficulties involved in developing a precise definition?
5. What is a hidden handicap?
6. What are the kinds of questions that could be considered in making reasonable accommodations?

7. What are the major components of an AAP for the handicapped?
8. What are the major differences between 503 and 504 of the Vocational Rehabilitation Act of 1973 as amended?
9. How does the compliance procedure work? What are its major components?
10. What can be learned from the "Bruised Electronic Contractor"?
11. On the basis of the national experience in the area of handicapped compliance, what specific steps can be taken for effective compliance both in private and public sector?
12. What are the trends in the area of handicapped litigations?

NOTES

1. Based on concepts developed in Gopal C. Pati & Michael J. Mezey, "Designing An Affirmative Action Program for the Handicapped," *Training and Development Journal* (June 1978).

2. "Affirmative Action Obligations of Contractors and Subcontractors for Handicapped Workers," 41 CRF 60-741, *Federal Register*, January 18, 1977.

3. "Nondiscrimination on the Basis of Handicap in Programs and Activities Receiving or Benefiting from Federal Financial Assistance," 45 CFR, Part 84, *Federal Register*, May 4, 1977.

4. "Affirmative Action Obligations of Contractors and Subcontractors for Disabled Veterans and Veterans of the Vietnam Era," *Federal Register*, July 25, 1976.

5. See "Implementation of Executive Order 11914, Nondiscrimination on the Basis of Handicap in Federally Assisted Programs," *Federal Register*, January 13, 1978.

6. This definition is used for the purpose of Sections 501, 503, and 504 of the Vocational Rehabilitation Act of 1973. Also see regulations as cited in notes 2, 3, and 4.

7. For a good discussion on the subject, see *Federal Contractor's Guide to Workers with Hidden Handicaps, A Booklet*, Washington, D.C., Mainstream, Inc.

8. *Guide to the Evaluation of Permanent Impairment*. American Medical Association, 1971. The OFCCP utilizes this publication extensively. Case laws so far have accepted the following as handicaps: blindness, diabetes, epilepsy, alcoholism, rheumatoid arthritis, asthma, cerebral palsy, leukemia, heart disease, paraplegia, deviated septum.

9. "Nondiscrimination on the Basis of Handicap in Programs and Activities Receiving or Benefiting from Federal Financial Assistance;

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Proposed Rules," U.S. Department of Labor, *Federal Register*, Part VII, January 4, 1980.

10. Initially, when the law was passed and the regulation were just being drafted, there were "wild" stories about demolishing old buildings, completely changing or modifying machines and equipment, building of brand new structures to accommodate the handicapped. Happily, that was not the case and is not the case now.

11. See United Office of Personnel Management. *Handbook of Reasonable Accommodation*, Personnel Management Series 720-A, March 1980.

12. *Ibid.*, p. 2.

13. Weldon J. Rorgeau. "Accommodations: They are Reasonable." *The Mainstream* (January-February 1980):2.

14. Such proposal has already been made by the Department of Labor. See note 9.

15. *Section 50k Training Midwest*. CRC Education & Human Development, Inc., Belmont, Mass, 1979, pp. 1-21.

16. American National Standards Institute, Inc. *American National Standard Specifications for Making Building and Facilities Accessible to and Usable by Physically Handicapped People*, New York, ANSI A 117.1-1980. (This document is a revision of ANSI A 117.1-1961.)

17. Architectural & Transportation Barriers Compliance Board. "Proposed Minimum Guidelines and Requirements for Standards for Accessibility and Usability of Federal and Federally Funded Buildings and Facilities by Physically Handicapped Persons," *Federal Register*, August 18, 1980.

18. U.S. Department of Labor. "Contract Compliance Undergoes Dramatic Changes," Office of Information, Employment Standards Administration, Washington, D.C., October 6, 1978.

19. U.S. Department of Labor, Office of Information, Employment Standards Administration, News Release #80-157, March 11, 1980.

20. U.S. Department of Labor. *Federal Contract Compliance Manual*. Employment Standards Administration, OFCCP. This document can be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington. D.C. 20402.

21. *Ibid.*

22. Information derived from Department of Labor. For further discussion in compliance, see Gopal C. Pati and John I. Adkins, Jr. "Hire the Handicapped—Compliance is Good Business." *Harvard Business Review* (January-February 1980): 1-5.

23. These items can be found in the *Federal Contract Compliance Manual*.

24. The Comptroller General of the United States. *Federal Employment of Handicapped People*. Washington, D.C, General Accounting Office, July 1978, pp. 2, 12.

25. *Ibid.*, p. 3.

26. *Ibid.*, p. 4.

27. EEOC, *EEO Management Directive #703*, Washington, D.C, December 6, 1979.

28. *Ibid.*, p. 2.
29. *Ibid.* The emphasis is given in the Directive to develop a solid data base.
30. *Advocates for the Handicapped v. Sears, Roebuck & Co.* Illinois Court of Appeals, (1978) 19 EPD par. 8957.
31. *Chicago M. St. P & PRRR Co. v. Washington State Human Rights Commission*, (1976) 13 EPD par. 11,526.
32. *Lipton v. New York Human Rights Appeal Board*. NY. Set. (1979) 19 EPD par. 9018.
33. *Darts v. Butcher*. (1978) 17 EPD par. 8437.
34. *Counts v. U.S. Postal Service*. (1978) 18 EPD par. 8788.
35. *Chicago & Northwestern v. Wisconsin Labor & Industry Review Commission*. Wisconsin Circuit Court (1978) 17 EPD par. 8637.
36. *Silverstein v. Sisters of Charity, Co.* U.S. Court of Appeals, (1979) 23 EPD par. 31,103.
37. *Barnes v. Washington Gas Co.* Washington Court of Appeals, (1979) 19 EPD par. 8953.
38. *Chicago & Northwestern Transportation Co. v. Wisconsin DIL & HR*. Wisconsin Circuit Court, (1978) 17 EPD par. 8621.
39. *Fisher v. Wisconsin DILHR*. Wisconsin Circuit Court, (1979) 19 EPD par. 9010.
40. *In re American National Insurance Co. California*, FEPC par. 5077.
41. *Burgess v. Joseph Schlitz Brewing Co.* North Carolina Court of Appeals, (1979) 19 EPD par. 8959.
42. *Wisconsin Department of Agriculture v. Wisconsin Labor & Industry Review Commission*. Wisconsin Circuit Court, (1978) 17 EPD par. 8607.
43. *Davis v. Southeastern Community College*. (1979) 20 EPD par. 30,002.
44. *Kampier v. Nyquist*. 553 F2d 296 (Second Circuit) 1977.
45. *Gurmankin v. Constanzo*. 556 F2d 184 (Third Circuit) 1977.
46. *Barnes v. Converse College*. 77-1116 (U.S. District Court, South Carolina) 1977.
47. *Crowford v. University of North Carolina*. 440 F Supp. 1047, 1977.
48. *Anderson v. Erie Lackawanna Railway Co.* 468 F Supp. 394, 1979. This interpretation is quoted from *Handicapped Requirements Handbook*, Washington, D.C., Federal Programs Advisory Service, October 1979, p. IV:A:xxxvi.
49. Some of the major cases include *Hoopes v. Equifax, Inc.* (1979) 23 EPD par. 30,919. *Moon v. Roadivay Express, Inc.* 15 EPD par. 7093. *Rogers v. Frito-Lay, Inc.* 433 F. Supp. 300 1977. These cases went to the Court of Appeals for the Fifth Circuit, and the ruling was the same: no right to private action under Section 503. Also see *Doss v. General Motors Corp.* 478 F. Supp. 139, 1979.
50. See *Lloyd v. Regional Transportation Authority*. 548 F. 2d 1277 (Seventh Circuit) 1977. *United Handicapped Federation v. Andre*. 558 F. 2d 413 (Eighth Circuit) 1977. *Drennon v. Philadelphia General Hospital*. 428 F. Supp. 809 (Pennsylvania) 1977. *Michigan Paralyzed Veterans of America v. Coleman*. 451 F. Supp. 7 (Michigan) 1977.

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"Support Your Local Sheriff"— movie title

*"Rehabilitation services are an extension of personnel
administration "*

Paul L. Scher, Corporate Manager—Handicapped
Program, Sears, Roebuck and Co.

In Chapter 2 we tried to convince you that you could live with the laws protecting equal opportunity for employment of handicapped people. We suggested that could best be done by making compliance part of your standard better management practices—that employing qualified handicapped persons simply expanded the pool of competent, motivated, dependable workers while adding little (if any) time or inconvenience.

In this chapter we intend to spread the good news that employers (private and public) have a partner in this endeavor—the vocational/rehabilitation service agencies.

Some managers have had poor experience with certain local agencies, and those managers and others have an attitude similar to the one they have about compliance statutes; that is, agencies (like the laws) are a nuisance factor imposed on the natural function of

business, an outside intruder—the government's sheriff come to inspect and enforce the law.

If that is your perspective, we have another that we plan to demonstrate is true: rehabilitation agencies are in existence to help employers as well as the handicapped population. As we will see, you may have to help them learn how to help you; it is in your best self-interest to do so.

More on that later. Let us now consider our first success story.

OREGON JOB PROJECT

In Oregon (as elsewhere) there were many more unemployed educable retarded people than nonretarded people of the same age group. This situation was rectified by a state program: the Extending Methods of Rehabilitation Project. In two years the project worked with 600 adults and placed 463 of them (77 percent) in employment or training.¹

How nice for them, you say? Well, consider also that this state-funded agency has been cost-effective in each of its two years of operation. It has returned—in the form of taxes on wages paid and welfare eliminated—more money to the federal government than it has expended. Specifically, graduates of the project paid over \$77,000 in income taxes in one year. And when the 35 percent of the project's people who were in public assistance were removed from the rolls (with independence) they saved the taxpayers over \$88,000. That was the first year. The second year savings (taxes and reduced assistance) was over \$340,000.

The initial project had a budget of \$143,832, or \$572 per participant. As we have seen, the money saved in public assistance benefits and the money gained through taxes paid by successful (now employed) participants easily paid for the project. In addition, the states (and nation) have people who will be productive citizens and taxpayers for years instead of annual recipients of aid.

VOCATIONAL REHABILITATION PROCESS

Rehabilitation is a new human resource management tool. Employers need qualified people; qualified handicapped people need jobs. Rehabilitation agencies exist to help handicapped people become qualified (adapt to disabilities, train for employment) and to help them find employment. All three entities want the same

thing: competent people placed in the right position. That goal becomes easier when the agencies and the employers learn more about each other.

In the past employers have been unaware of the valuable services of the state and private rehabilitation agencies. They may also have been uneasy about using them—about letting an outsider into the personnel process. But consider that many of the services are supplied in full or in part by tax dollars (some of your money) and that they can supplement your personnel efforts at a significant cost savings.

THE SERVICES

Services to the handicapped and to the employers vary greatly from agency to agency and with individual needs. An individual program, after evaluation and diagnosis, might include some combination of the following services:

- Counseling: interpersonal, vocational, group, family
- Academic instruction
- Skill instruction: job seeking, work adjustment, social
- Training: on-the-job, off-the-job, vocational
- Work-study programs
- Medical evaluation
- Prosthetic aids and devices (artificial limbs, hearing aids, etc.)
- Transportation to program site(s)
- Worksite evaluation
- Placement
- Job coaching (on-site aid to supervisors, employees)
- Follow-up after placement
- Regular contact with employers or placement agency

All of these services fit somewhere into part of the overall rehabilitation process. In general, the steps are:²

1. **Referral.** Locating a disabled person early in life or early after the disability when possible.
2. **Diagnosis or evaluation.** Medical examination, personal interview, aptitude tests to pinpoint problems and needs.
3. **Counseling and guidance.** Adjusting to disability, selecting goals, relating abilities to opportunities.

4. Physical restoration. Eliminating or reducing disability as occupational handicap.

5. **Training for an occupation.** Personal adjustment, instruction, increasing skills.

6. Auxiliary services. Transportation, learning tools, prosthetic devices.

7. Placement **in** employment. Selecting a position to fit abilities and needs.

8. **Post-employment** services. Aid in adjustments, supplemental training.

It is possible that an individual going through this process would be involved with more than one agency. Physical training to adapt to a disability tends to get separated from placement in employment. That is why some rehabilitation agencies need to learn more about the actual demands of jobs—just as employers need to learn more about what handicapped people can do.

Yet, today, vocational rehabilitation is diversifying and becoming more job specific. There are hundreds of programs across the country that provide extensive services to handicapped people and to employers. There should be a program available to you wherever you are located. Check Appendix 2 for a list of agencies or start with your state's vocational rehabilitation office (all states have them). Judith Appleby's book³ is also an excellent source. She has identified and evaluated 152 major agencies. For now, to give you a sense of the possibilities, we will briefly review a few of the programs available.

THE AGENCIES

Chicago Lighthouse for the Blind.

This private, not-for-profit agency has been serving the blind and the Chicago community for 75 years. The Chicago Lighthouse describes its function as trying "to prevent blindness from changing lives in a negative way."⁴ The Lighthouse fulfills this function by helping blind people discover and develop their own abilities and by educating sighted people about blindness and blind people.

The agency provides a variety of services, several of them of special interest to employers. One is the Office Skills Training Program, which begins with basic transcription typing and can

continue to more advanced programs in word processing, medical terminology, and legal terminology. The Lighthouse averages 60 students in this program, with nearly 100 percent placement in competitive industry for those successfully completing the course. Another service is the High Skills Program of the Vocational Training Center, which trains enrollees for skilled positions in competitive industry. The trainees work only on jobs obtained by the Lighthouse through competitive subcontract bids. Bids have come from such major companies as Western Electric, Zenith, Sunbeam, and Kraft.⁵

Lighthouse also has a community outreach program and a vocational placement center. The agency places an average of 50 visually impaired persons in jobs every year. In 1979 (the last year for which figures were available) over 80 people found employment through Lighthouse.⁶

Arkansas Enterprises for the Blind (AEB)

Headquartered in Little Rock, this agency has been operating a rehabilitation center since 1947 and involved in the Projects With Industry (PWI)* program since 1973. As of 1979 AEB had placed 290 individuals in positions with government or industry through their vocational programs.⁷ Those programs train blind people to be taxpayer service representatives, civil service information specialists, "information expeditors" (reservation clerks, credit clerks, customer service representatives, specialized phone operators, information clerks, etc.), operators of word processing machines, and computer programmers.

The process of placing disabled people in technical positions using sophisticated equipment involves two functions we will discuss in detail in later chapters: (1) job analysis of positions to see what can be modified to meet the abilities of handicapped people, and (2) creation of technical aids and modification of existing equipment. AEB has been effective in both those areas—allowing them to place people with such companies as Southwestern Bell, IBM, Honeywell, McDonnell Douglas and with various federal, state, and county government agencies.

California League for the Handicapped.

The League, founded in 1961 and located in San Francisco, is a private, nonprofit agency that provides a great deal of recreational

*Such programs begin with grants from the Rehabilitation Services Administration of the U.S. Department of Health and Human Services. PWI will be dealt with in detail later in this chapter.

and social services to individuals of all ages (children through the elderly)—in addition to their employment placement services. Concern for the whole person is a perspective gaining force in the health, personnel, and counseling fields—for all people, not just the handicapped.

The League's employment service works at fairly high volume; 156 handicapped persons were placed in jobs in 1979, for example. In the process, 48 people were removed from the welfare rolls. That same year over 200 other individuals took advantage of the League's job counseling services. As with most agencies of this type, the participants are "job ready" when they are recommended for employment. And, as with many agencies, there is no fee to either employer or employee.⁸

Goodwill Industries (Tacoma, Washington).

Goodwill Industries is, of course, a very familiar, national name. Yet, individual local Goodwill agencies perform different services. The Tacoma rehabilitation center is a comprehensive facility, providing an interlocking program of vocational training with social and interpersonal development (the "whole person" approach in the nature of the California League, above). Tacoma Goodwill provides training in sheltered workshops and for competitive employment. Participants are prepared for jobs as car detailers, kitchen workers, paraprofessional aides, custodians, groundskeepers, TV/appliance repairpersons, printers, pressers, assembly line workers, and so on. Their placement service will find competitive employment for over 30 persons in a representative year. As an indication of the "job readiness" of its participants, 90 percent of the employers contacted by the placement staff were evaluated as "very cooperative" and willing to make opportunities available; 7 percent were rated as "cooperative"; and only 3 percent were judged "uncooperative."⁹

Ray Graham Association for the Handicapped (RGAH).

Begun in 1962, RGAH is located in Addison, Illinois, a few miles west of Chicago. The Association consists of a training program, a sheltered workshop, and a placement service. RGAH works very closely with employers: (1) a committee of employers and Association representatives discuss programs and progress; (2) on-the-job evaluation days proceed permanent employment of any participant; (3) an Association team assists employer supervisory staff in the first weeks of training. The placement service reports that 80 percent of employers are "cooperative" or "very cooperative."

Although the RGAH program is funded mostly from state and local sources, there are some fees for services.¹⁰

Career Development Laboratory, Human Resources Center.

Created in 1961 and located in Albertson, New York, the Laboratory provides vocational evaluation, training, counseling, and placement services to over 200 participants a year—a majority in the 14-21 age group. The Laboratory strives to coordinate these services, along with family counseling, and extensive follow-up with employers after placement. The staff stresses this coordination, the pre-vocational evaluation, and their excellent rapport with industry as reasons for the Laboratory's success. In a typical year, approximately 100 participants might be placed in competitive employment as file clerks, switchboard operators, bookkeepers, stock clerks, centrex operators, dispatchers, and administrative assistants.¹¹

LaPorte County Sheltered Workshop.

Despite the title, LaPorte County's facility (located in Michigan City, Indiana) is more than just a sheltered workshop. A participant of LaPorte will first go through excessive evaluation, which will yield written objectives designed to develop appropriate work behaviors and attitudes. Second is work adjustment training and counseling. Next a participant enters the sheltered workshop, where he (or she) will work on subcontracts and be paid at a piece rate equal to his (or her) productivity. Subcontracts are jobs, awarded the agency by competitive bid, to produce items for sale to consumers or other businesses. Workshop jobs include collecting, packaging, and assembling of any number of products. The agency attempts to work closely with schools and employers; it does have a job placement service.¹²

State/Federal Vocational Rehabilitation Programs.

State agencies operate under the guidance of the Rehabilitation Services Administration of the U.S. Department of Health and Human Services. Although active since 1920, the state programs got a major impetus from Title I of the Rehabilitation Act of 1973 (as amended), which authorized federal grants for state rehabilitation programs. These programs are designed to ready the handicapped for employment through the full range of services described earlier in this chapter. A significant feature is the Individualized Written, Rehabilitation Plan (IWRP)—a composite of participant information, vocational goals, intermediate objectives, and evaluation pro-

cedures. The **IWRP** is jointly developed by the participant and the rehabilitation counselor; the rehabilitation counselor stays with the participant through training, placement, and post-employment follow-up.¹³

There are 79 state agencies (including the District of Columbia) administering the programs through a network of over 1,000 district and local offices. In recent years over 300,000 disabled persons are rehabilitated and placed in jobs every year.¹⁴ As we mentioned earlier, the state agency or local office might be the best place for an employer to begin tapping the potential of the handicapped worker.

Mainstream, Inc.

Mainstream is a nonprofit organization based in Washington, D.C. It was founded in 1975 to aid handicapped individuals by helping employers create an accessible environment for the handicapped and meet compliance demands of recent legislation. Mainstream's compliance consultation services include accessibility surveys of facilities. They have found that many barriers have nothing to do with accessibility; that is, costs to employers are usually far less than assumed—perhaps as low as one cent per square foot. (Many firms spend 13 cents per square foot on cleaning and polishing their vinyl floors.)¹⁵

Mainstream provides a national referral service available to employers and handicapped individuals. They also teach organizations how to use job analyses to match up the abilities of potential employees with the job, instead of redefining the job. And they are a sound source of information on qualified handicapped applicants. Information services of the organization include a quarterly newsletter, a hotline for compliance questions, national and regional conferences on hiring, and seminars on interview techniques and human relations training.¹⁶

By now one enormous advantage of using rehabilitation agencies should be obvious: potential employees are thoroughly evaluated; they are job motivated and job ready. In a real sense, handicapped people hired through agencies such as these are double screened—first by the agency and second by your personnel apparatus. Extensive evaluations and screening are accomplished by the agencies through a number of techniques. One of the most effective methods is called "work sampling"—the value of which has gone unnoticed by many human resource professionals. We wish to present this concept in detail.

WORK SAMPLING

Work sampling is just one of the tools of vocational evaluation, but it is particularly useful with the handicapped population. Simply put, a work sample is a specifically defined activity involving tasks, materials, and tools identical or similar to those used in an actual job.¹⁷ It is in essence a laboratory or classroom version of on-the-job evaluation—in a sense, a preemployment tryout.

Work sampling falls approximately in the middle of the continuum of evaluation techniques, with on-the-job evaluation as the most experiential and psychological testing as the most abstract or academic. On-the-job evaluations assess the potential employee in real work situations: in an actual job site (in the industry/company), in a training program (at the company or at an agency facility), in a simulated job station (at an agency facility), in a sheltered workshop (at an agency facility).¹⁸ Psychological tests (psychometrics) are usually paper and pencil affairs that can reveal cognitive abilities, aptitudes, and interests. These tests tend to be abstract rather than job specific.¹⁹

A CASE HISTORY

All of these procedures, of course, have their values and limitations. Therefore, no one method is likely to be used in isolation. Consider the case of Richard J.:

Richard J. is a 20-year old arrested hydrocephalic... As a result, he is paralyzed from the waist down, which requires him to wear braces and use crutches to get around. He has had many surgical operations which, combined with long-term institutional living, have retarded his educational development. At the time he was referred to the Gateway evaluation program by the Wisconsin Division of Vocational Rehabilitation, he was working in sheltered employment doing assembly work. He was depressed and apathetic. Referral indicated an IQ of 78.

When Richard expressed a liking for arithmetic, he was given a Wide Range Achievement test that showed his reading to be at the fifth-grade level and his arithmetic at the sixth-grade level. During evaluation he completed a variety of work samples including office and sales work, cooking and baking, and assembly work. Although slow in his work, he performed above average in quality.

He did not like assembly work, and cooking and baking were out because of the standing and walking required. Office work was, however, possible. As a result, Richard was allowed to try out two types of calculators, and was given classroom tryouts in typing and

calculator operation. In both cases, the instructor reported favorably. The outcome was to identify a one-year Account Clerk training program as a future goal, to be preceded by remedial work in reading and arithmetic, and with the recommendation that Richard get his General Educational Development diploma. Gateway Technical Institute was able to provide all of these services within its vocational-technical adult programming.

Because of his low reading ability, Richard went through no interest tests, only work samples and classroom tryouts.²⁰

Several points are significant in Richard's case history. First of all, a variety of evaluation techniques (interviewing, workshop, achievement tests, work sampling, tryouts) were used. Second, emphasis was placed on Richard's abilities and interests: what he could do and what he wanted to do. Third, Richard himself was able to see what he could or couldn't do. Fourth, when training is completed some employer will have a person with realistic vocational goals and matching skills, providing a good opportunity for success. And finally, in terms of the value of work sampling, Richard was able to work with real equipment and not be limited to abstract testing—the kind of pen and paper, abstract testing outside the experience and range of many disabled people.

JOB ANALYSIS

A work sample can be a very simple task (stuffing envelopes) or much more complex (operating machinery). It might take anywhere from a few minutes to a few hours to complete.²¹ The complexity of the sample will depend upon the nature of the job(s) under consideration. *To be successful, a work sample must begin with a detailed job analysis of all the individual conditions, materials, and activities of a particular job.* The sample will want to reproduce those factors as faithfully as possible.²²

We have already discussed work sampling as part of the evaluation process of the potential employee—a part that attempts to analyze job-related abilities. To match up those abilities with a real job in competitive employment, that job analysis just described must be accurate; that is, it must be broken down into behaviors, tasks, actions that are *actually required*. Ideal qualities or nonessential functions must be eliminated from the job description—job evaluation—for the person evaluation to be valid—to be valuable as a placement tool.

And as a prelude of what is to come in this book, we would like to point out that a discussion of job analysis as a standard element of

good management practice—for nonhandicapped as well as handicapped personnel evaluation—is presented in the next chapter under recruitment. Again, those functions that allow you to successfully employ qualified handicapped people (and live with the law) also provide opportunities for you to solve personnel and productivity problems.

TYPES OF WORK SAMPLING

Assuming now a wealth of accurate job analyses, a variety of work samples are possible. They are usually classified as: actual job samples, simulated job samples, single trait samples, and cluster trait samples.²³

An actual job sample is taken in its entirety from a place of work and moved into a place of evaluation. The advantage of this type of sample is that the participant's performance can be directly compared to standards (if known) of actual workers. One disadvantage is that the sample relates to only one job; developments in technology, for instance, could change the job or make it obsolete. For that reason and because of the costs of producing individual job samples, the trend now is to construct samples that correspond to several related jobs.

A simulated job sample attempts to replicate critical elements of a job without reproducing all the factors that affect it. For example, the mechanical functioning of a job can be duplicated, but the environmental conditions (noise, distractions, coworkers, supervisors) might be more difficult.

As is evident from the name, a single trait sample assesses the functioning of a single ability or characteristic. (Finger dexterity, might be an example.) The trait could be relevant to a single job or many jobs, which is an advantage. The disadvantage is that single traits are hard to isolate and therefore are difficult to accurately measure. In addition, this type of sample becomes more like a test than an actual work experience, thereby working against its purpose.

Cluster trait samples would, obviously, be less prone to the disadvantages of single trait samples. They can be designed to match the collection of traits used in a job or a variety of jobs.

ADVANTAGES AND DISADVANTAGES

The preceding analysis of types of work sampling tends to highlight the disadvantages. Those limitations occur when the process is unable to accurately and completely replicate the actual

job experience. Despite that, it is well to recall that work sampling does come as close to the reality of work as possible with a controlled setting. It does provide exposure to and experience with an actual job (or several jobs) and thus allows for evaluation of work skills. In addition, work sampling allows participants to respond naturally to a job and thus reveals their interest in, motivation towards, and attitudes about the job. Finally, work sampling can eliminate some cultural, educational, and language barriers that exist in more abstract psychological testing.²⁴

SYSTEMS OF WORK SAMPLING

As we mentioned earlier, the trend in work sampling development is to produce samples that can be used in several related jobs. In fact, there are several batteries of work samples—known as work sample systems—available commercially. Rehabilitation agencies often purchase one or several of these systems and adopt them for their own use. Some of the better known and more widely used systems include:

- McCarron-Dial Work Evaluation System
- Jewish Employment and Vocational Service System
- Singer Vocational Evaluation System—Singer Work Stations—Singer/Graflex System
- Talent Assessment Program (TAP)
- Tower System (TOWER)—Institute of the Crippled and Disabled (New York City)
- Wide Range Employment Sample Test (WREST)
- Hester Evaluation System (HES)
- Valpar (Corporation) Component Work Sample Series

PROJECTS WITH INDUSTRY (PWIs)

Projects With Industry is the common name given to programs cooperatively administered by private industry and rehabilitation agencies. These programs could involve any aspect of the rehabilitation process that we've just described, but they tend to focus on the pragmatic endpoints of work adjustment and actual job placement. The Projects began in 1970 with funding from HE W's (now Health and Human Services) Rehabilitation Services Administration (RSA). By 1977 there were 32 PWIs and 20 "satellite" programs, with new programs springing up all the time.²⁶ Today there are over one hundred across the nation.

One of the biggest and best PWIs is sponsored by Goodwill Industries of America (we met their Tacoma branch earlier in the chapter). A success story of their Honolulu operation is representative of Goodwill and PWIs everywhere.

Besides the agency, this case involves Ida Hashiro and the Bank of Hawaii. Hashiro is a young woman with cerebral palsy of sufficient severity to require her to use crutches to walk. She had clinical training in college but no employer who could look past her disability. The Honolulu Goodwill PWI helped her develop good job interviewing skills and put her in touch with the Bank of Hawaii. The Bank took her on as a secretary; the only accommodation they had to make was to lower her desk. Ida declined the Bank's offers of flexible scheduling to avoid rush-hour traffic: "I don't want any special accommodations," she insisted, "It's great to be a regular employee like everyone else."²⁷

Several points stand out in this case history. First, the agency and the employer cooperated easily together for the benefit of all parties. Second, only trivial accommodations were required for even a fairly severe handicap. Finally, all the new employee wanted was to do a good job and be treated like everyone else.

And please don't think that banks and other employers involved with PWI hire disabled employees out of pity or some sort of tokenism. Doubtless industry sponsors are aware of the positive public image that comes from hiring the visibly handicapped, and doubtless the initial involvement of *some* industries was motivated by a feeling of social obligation (the road to heaven might also be paved with good intentions, after all). Yet, to quote again Mr. Paul Scher of Sears, "rehabilitation is a business, not a charity."²⁸ The training is costly and it takes time. And, as we have seen already, the rehabilitation process involves many operations—from early evaluation through post-employment follow-up.

Rehabilitation is also coming to encompass the people already employed by a corporation or organization: Employer benefits often include rehabilitation services as a means of "loss control" and some hospitalization plans include rehabilitation provisions. Indeed, more progressive corporations are providing opportunities for their employees to seek aid for family problems, alcoholism, and other stressful situations. That is all part of an increased concern for safety, an old term, and "wellness" (as opposed to illness), a new term.²⁹

Such social aspects of personnel administration (including rehabilitation services) are part of the total human resource management. Employees are the most valuable asset of a business or organization: potential employees are, thus, potential assets.

Rehabilitation of individual employees helps promote adjustment to work requirements, harmony within the organization, and (consequently) efficiency. PWIs, thus, are now being perceived as a means of "self-help" for industry and for disabled employees (and potential employees). Rehabilitation has become a *right* for the individual and a *necessity* for the employer.³⁰

ASSUMPTIONS

The notion that a partnership between industry and service agencies in rehabilitation is both right and necessary is based on four major perceptions:³¹

1. Actual work settings provide the most reliable arena for evaluating the skills and aptitudes of potential employees. Also, the worksite evaluations prepare the participants for competitive employment.
2. The employer, as well as the handicapped worker, needs help in the process of hiring and training. PWIs create a mechanism for successful, long-term employment.
3. Employers are the best resources for identifying jobs for handicapped workers, defining the qualifications for those jobs, and designing training programs for employees to meet those qualifications.
4. It is in industry's best interests to institute handicapped employment practices. Industry partnership with the service agencies is the best method for promoting such practices internally and among other employers.³¹

BASIC CHARACTERISTICS

There are an enormous variety of programs with different foci of attention in all parts of the country. Yet all PWIs seem to have two basic characteristics.³² They are:

1. Industry and rehabilitation personnel work closely together to achieve their common goals. Whether the industry is involved in hiring handicapped workers, providing training, developing training materials, acting as an advocate for the handicapped in the community, or performing some other function, there is an immediate link with the rehabilitation service.

2. The ultimate goal of every project is the competitive employment of the disabled individuals involved. The project may concentrate on: developing proper work attitudes and behaviors, providing job training, developing appropriate jobs, or actually placing qualified individuals; it, nevertheless, is laboring toward that final achievement of lasting and satisfactory employment.

Taken together, the system of Projects With Industry are, thus, performing three important and related functions:

1. It creates an active and effective partnership of business, industry, and service agencies in the rehabilitation process.
2. It makes rehabilitation services more responsive to the needs of employers.
3. It facilitates the utilization of the great untapped potential of handicapped human resources.

MODELS

As we have mentioned, there are hundreds of PWIs across the nation and many variations in the programs. To help focus on the possibilities, we will briefly look at four basic program models: the job placement model, the work adjustment model, the skills training model, and the linkage model. The first three involve areas of direct service; the last is a referral system.³³

Job Placement.

Projects in this category (the majority of all PWIs) attempt to place job-ready or nearly job-ready handicapped workers in positions with business or industry. The major components of this model include: participant selection (determining which individuals are ready for placement), multiple placements of participants (usually within large companies), and follow-up support services to employers and employees (also called job coaching). The feature that most distinguishes this PWI model from the others is that the participant is ready for immediate placement—to become an actual employee of the company and no longer an agency client.

Obviously, the job placement model requires ready access to and very close cooperation with employers. PWI staff must be thoroughly familiar with employers' procedures, policies, and supervisory personnel. They must understand completely the qualities and skills demanded by positions under investigation within the

various companies and to match those positions with the handicapped workers in their charge. And just as obviously, company personnel staff will have to provide accurate, up-to-date, precise job descriptions for the placement process to work.³⁴

The Jewish Vocational Service (JVS) PWI illustrates this model. We will examine the JVS program in detail in the next section of this chapter.

Work Adjustment.

Work adjustment programs involve teaching disabled individuals appropriate work attitudes and behaviors in the actual industrial or business setting. Participants in programs in this category are only partially job ready: able to handle part-time schedules at entry level jobs. The goal of such PWIs is to bring the participant to complete job readiness by keeping such a limited schedule (but at real work for real wages) with the active aid of rehabilitation personnel.

The major features of this model are:

1. It offers work experience for three to six months in entry level positions that do not require much training.
2. It provides support services to the participants, including the constant availability of a rehabilitation counselor.
3. It engenders a close, trusting relationship between agency and employers, usually one of longstanding.

The work experience offers the handicapped worker the opportunity to practice promptness and reliability, to associate with fellow workers, and generally to get accustomed to work procedures. The participant may or may not be hired by the company; in any case, the work adjustment slot is kept open for new participants in the program.

Although the employer may not get permanent employees from this arrangement, he is assured of a steady supply of workers for positions of high turnover. The disabled trainee is kept on agency payroll (because he is still receiving services) and the agency is reimbursed by the company, thus simplifying the bookkeeping. Further, employer participation satisfies affirmative action requirements and provides some public relations benefits.³⁵

Skills Training.

The previous two models concentrate on occupational areas that do not require highly specialized skills. The purpose of the skills

training model, on the other hand, is to equip handicapped people to enter specific occupations that are financially rewarding and that require technical abilities. This model assumes the trainee has mastered basic work skills and has developed appropriate work attitudes and behaviors.

The defining features of the skills training model are (1) the recruitment of participants who already have a relatively high level of functioning, (2) group classroom instruction in technical fields for positions already identified and open, and (3) the recruitment of the private sector to function as advisors to the program (for occupational trends, specific skill requirements, and manpower needs) and as employers of graduates of the training sessions.

It is evident that this model puts more demands on an employer. However, that employer is able to hire from the PWI program highly trained individuals to meet specifically defined needs. In addition, as with other models, the program offers affirmative action compliance and opportunities for good public relations.³⁶

Those interested in a more detailed breakdown of the features distinguishing these three direct service models should consult Table 3.1. The table should provide a good overview of the range of possibilities.

Linkage.

This model aims at job placement of disabled workers within one industry through a nationwide referral system that matches potential employees (their skills and abilities) with open positions (their requirements). The PWI supplies the communications network needed for the system to function.³⁷ The prototype for this is the Electronic Industries Foundation (EIF). We will examine their program in the next section of this chapter.

The EIF is a private, industry-run project. It is, however, only one of several PWIs not to be administered by a rehabilitation facility. PWIs are also sponsored by a restaurant association, a university, a correspondence school, a pre-vocational training center, and various state vocational rehabilitation offices. Many rehabilitation facilities are applying the PWI concept without federal agency sponsorship or funding.³⁸ The trend is definitely toward more private industry involvement and more private industry control.

In the following section we will examine two significant PWI programs: (1) the JVS/MABRI (a long-time social agency with a now independent PWI) and (2) the private EIF program.

TABLE 3.1

Factors Differentiating PWI Models

Factor	Job Placement Model	Work Adjustment Model	Skills Training Model
Primary Goal	Job placement	Work adjustment	Skills training
Type of Client	Average functioning ³ or above Work-ready , need some support	Lower-functioning Partially work-ready, need work adjustment	Higher-functioning Work-ready
Screening/Evaluation	Careful screening/evaluation, guarantee employer that clients are screened	Broad limits for admission, employer is guaranteed the work station will be covered	Clear objective criteria, some testing, evidence of abilities
Cooperation with Other Agencies	Good cooperation and understanding with referral sources	Good cooperation and understanding with referral sources	Good cooperation between training facility and employers
Employer Linkage	Stable employer relations Individual or multiple placements Employer involvement primarily through individual contacts	Stable, long-standing employer relations Group placements Employer involvement primarily through individual contacts	Current job market information from employers Group training, individual or multiple placements Employer involvement primarily through advisory board activity
Primary Change Agent	Rehabilitation counselor/job coach	Rehabilitation counselor	Training instructor
Services	Placement Follow-along service on job site Referral to other services as necessary	Temporary placement Constant or frequent intervention on job site Close association with concurrent supportive services	Scheduled instruction Placement or referral for placement

Source Program Models for Protects with Industry, Research Utilization Laboratory, Jewish Vocational Service, May 1978, p 5

Functioning level refers to general social adjustment and personal management
Possesses acceptable work attitudes and behaviors

*JEWISH VOCATIONAL SERVICE (JVS)***Staff**

The Chicago JVS Project With Industry is a small part of this large and venerable agency. The current staff consists of a Project director, three vocational rehabilitation counselors, one job coach, and one Project secretary. The counselors are responsible for evaluation, job development, placement, follow-up, and company-PWI relations. The counselor and the job coach are also responsible for the on-the-job training and job retention of all PWI-placed employees.³⁹

Operations

Referrals of participants to the program come to the Operations Committee from the Illinois Department of Rehabilitation Services (IDORS), from local rehabilitation facilities, and from the business community. The Operations Committee consists of Project staff and IDORS placement officials, field counselors, and placement counselors. The committee meets once a week to accept referrals. Once accepted, a participant is assigned to a PWI counselor and comes in for a personal interview. The counselor evaluates the participant's employment potential, and together they establish a tentative vocational objective.⁴⁰

The PWI counselors develop placement opportunities for their "clients." Counselors are assigned to specific companies and visit those companies regularly. Once a client is placed, both the counselor and the job coach also visit the line supervisor every week to check the new employee's progress—the initial work adjustment period (30 days) is the most crucial. PWI staff consider this close contact with the employer and their crisis intervention service (24 hours a day, 7 days a week) to be the key to the success of the program.⁴¹

Employers.

The JVS in Chicago has a continuing relationship with over 5,000 local employers, who place orders for the Service's sheltered workshop. Of those, 51 committed themselves to a PWI relationship in fiscal year 1980. (Another 20 or so firms accepted placements for individuals with special employment needs.) Many of the 51 employers have hired multiple PWI participants, and some of the companies have hired over 95 participants since beginning their PWI experience. As you can see from Figure 3.1, JVS-PWI employers represent a wide range of industries. And, significantly, they represent a wide range of *sizes* of companies; one does not have to be a giant to participate.⁴²

Figure 3.1. Employers Associated with JVS-PWI

Advance Transformer	Kemper Insurance
Argonne National Laboratories	Kraft, Inc.
Bankers Life and Casualty Company	LaSalle National Bank
Blue Cross Blue Shield	Loretto Hospital
Charles Levy Circulating Co.	Magid Glove
CNA Insurance	Marvel Metal Products Co.
Continental Bank & Trust Co.	Midwest Film Corporation
Federal Reserve Bank	Presbyterian St. Lukes Hospital
Felt Products Mfg. Co.	Prudential Life Insurance
The First National Bank of Chicago	Sears Catalog Distribution Center
Flick-Reedy Corporation - Miller Fluid Fluid Products	Sears, Roebuck & Co. (SearsTower)
Guardian Electric	Stone Container Corporation (Cameo Division)
Harvey Cole Restaurants	Sweetheart Cup Corporation
Inland Steel	Traso Envelope Co.
Insurance Company of North America	The Wrigley Co.
Intercraft Industries Corporation	

Source: JVS-PWI. *Progress Report*, 1980, p. 5.

Employer Selection Criteria.

Companies and placement positions are selected by PWI staff with great care. Each worksite has to meet the following criteria:

- The position must involve real training with full-time regular employment available to a successful trainee/employee.
- PWI supportive staff must have access to company production staff, line supervisors, and clients on a regular basis at the job.
- Each client must begin at the same wage rate as permanent employees doing the same job and receive any earned raises according to permanent employee standards.
- Participating companies are asked to support the program by reviewing hiring standards, providing a representation to the PWI Advisory Council, enlisting union support (when there is a collective bargaining agreement).

Employers are not requested to make a firm commitment of job openings, but they are encouraged to consider referrals on an individual, case by case, basis. The PWI program is interested in placing handicapped workers without any rigid quota system.⁴³

Affirmative Action.

The PWI has the expertise and experience to help participating companies implement their affirmative action programs for the handicapped (remember Sections 503 and 504 of the Rehabilitation Act of 1973, as amended?). JVS-PWI has assisted Sears, Kraft, Blue Cross Blue Shield, Honeywell, and others in the past.⁴⁴

Employer Advisory Council.

The Council monitors the progress of the Project and provides leadership and direction for the PWI staff. The Council consists of:

1. PWI employers
2. Chicago Association of Commerce and Industry
3. AFL-CIO Human Resources Development Institute
4. The North Business and Industrial Council of Chicago
5. Illinois Department of Rehabilitation Services
6. Chicago JVS

An outgrowth of the Advisory Council's work has been JVS-PWI's transformation into a new, independent, not-for-profit corporation, registered in Illinois as the Midwest Association of Business, Rehabilitation, and Industry (MABRI).⁴⁵

Midwest Association of Business, Rehabilitation, and Industry.

MABRI was born in stages (incorporation, operation, tax status) in 1980. Like the JVS-PWI, it will strive to train and place handicapped persons. The full range of services from recruitment and evaluation through follow-up will continue to be offered, along with implementation of affirmative action programs. In addition, MABRI envisions operating "troubled employee programs" for existing employees. These programs will deal with managing stress, personal problems, alcoholism, drug abuse, and disability. And finally, seminars and other learning activities will be provided to assist management, supervisors, and workers to understand the meaning of disability and the capabilities of handicapped people.⁴⁶

MABRI is still very much in the growth and development stage. But it started well; its charter members are:⁴⁷

- Bankers Life and Casualty Company
- Blue Cross Blue Shield
- CNA Insurance
- Felt Products Mfg. Co.
- The First National Bank of Chicago
- Intercraft Industries Corporation

- Kraft, Inc.
- LaSalle National Bank
- Sears, Roebuck and Co.

People Served

The employer/membership lists are impressive, certainly, but the most vital feature of any PWI has to be people it is designed to serve—handicapped workers. The following is a report of the people served by MABRI-PWI in fiscal 1980; some of the figures are estimates based on concrete data for the first nine months of the completed year.⁴⁸

An estimated 265 individuals began the MABRI-PWI program in 1980. Referrals came from 40 different agencies in the Chicago area. Of that 265, 45 dropped out, 17 are suspended (waiting for evaluation by the state agency), and 53 are in process (in workshops or being evaluated by PWI personnel). Of the remaining 150 ready for placement, 111 (74 percent) were placed by PWI. In addition, approximately 150 disabled workers placed in previous years continue to receive regular follow-up services.

The characteristics of those placed are interesting. Approximately 63 percent are between the ages of 18 and 34. Education evaluation indicates that 34 percent were unable to complete high school, and employment data reveals that 62 percent were either unemployed for 12 months or more or have never held a full-time competitive job. We have, thus, a picture of chronically unemployed, young, largely uneducated people successfully entering the market place.

The disability groups are represented as follows, in order of most frequently serviced:

1. Mentally ill (26 percent)
2. Orthopedically or physically disabled (20 percent)
3. Deaf or hearing impaired (18 percent)
4. Neurologically disabled (14 percent)

The last group increased from 1 percent the year before. The increase is attributed by MABRI to more auto and motorcycle accidents that cause permanent brain damage and to an increase in the number of stroke or cerebral vascular accident victims being referred for job placement services. Perhaps the greatest significance is that *all*, the placable individuals are considered to have "severe" disabilities (as defined by the Rehabilitation Services Administration). Also, 43 percent of those individuals have a secondary disability as well.

Of those individuals placed, 96 percent maintained employment for more than 30 days—the crucial adjustment period. In the first nine months of the reporting period (the time for which data was available) 83 percent of the PWI placements were still employed. The job retention rate reflects workers with good motivation and skills well matched to the job.

Costs **and** Benefits.

Analysis by the PWI staff for the first nine months of 1980 indicates the total earnings of placed employees to be \$553,221 for the period. Besides putting money into the economy, that income generates an estimated \$110,644 in federal and state income taxes and social security payments. In addition, 44 new employees had been on welfare, providing a welfare reduction savings of \$108,585 for nine months. Since it cost \$101,250 to provide service for nine months, the ratio of costs to value returned was better than one to seven and a half. More precisely, for every dollar spent to provide service, the Project returned \$7.62.⁴⁹

PWI obviously is a good *social* investment: society gets a good return on its dollar. But what are the costs and benefits to the company to invest in this kind of labor? For MABRI the annual membership fee is \$1,000 and covers the full range of services.⁵⁰ There also is some personnel time and involvement, job analysis, etc. The benefits? Well, companies get involved with PWI for several reasons:

1. They get good people who want to work.
2. They receive valuable support and follow-up services from the agency (including help with affirmative action compliance).
3. They have an opportunity to help the community and to project a good public image.
4. They can take control of their own personnel needs and not wait for the government to get involved.

MABRI is only one PWI program, albeit a very successful one. Before concluding our discussion of Projects With Industry, we are going to examine a different approach.

ELECTRONIC INDUSTRIES FOUNDATION (EIF)

Before we can talk about the EIF-PWI we must mention another set of initials, the EIA or Electronic Industries Association. The Association (founded in 1924) has approximately 300 electronic

industry companies nationwide, producing approximately 30,000 different products. The Board of Trustees has people from such corporations as Zenith, GTE, North American Phillips, Sola Electric, and The Chase Manhattan Bank. EIA created EIF (a nonprofit organization) in 1975 to perform a variety of research and public education functions—including a national Projects With Industry program. EIF-PWI is administered by the Association, but it is funded by the federal government.⁵¹

Essentially, as we mentioned earlier, EIF-PWI is a referral service; it attempts to match the national manpower needs of an industry with the employment needs of disabled individuals. EIF is subdivided into five geographic areas with high concentrations of electronic companies: Los Angeles (office in Panorama City), San Francisco Bay (office in Palo Alto), Massachusetts (office in Waltham), Minnesota (office in Minneapolis), and Chicago. Referrals come to the area offices from state rehabilitation agencies, private rehabilitation agencies, vocational schools, colleges, individuals, and other sources.⁵²

Assumptions.

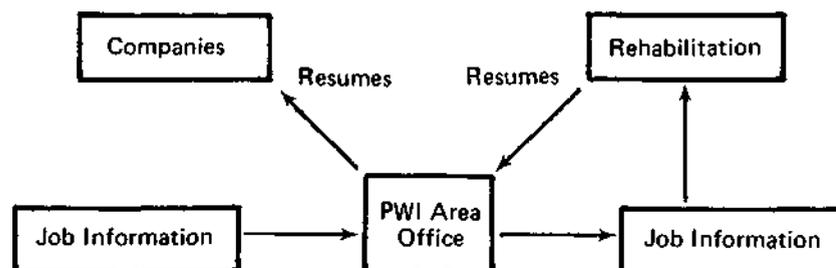
The Project operates under the assumption that the industry, the rehabilitation community, and handicapped workers have compatible needs. Specifically that:

- The industry needs qualified employees.
- Handicapped individuals need jobs.
- Rehabilitation agencies have placement needs.
- Handicapped individuals (rehabilitation agency clients) can meet the industry needs.
- The EIF-PWI can coordinate efforts to meet the needs of all three populations.⁵³

Operations.

The employment specialists in the area offices maintain close contact with electronic companies in their area, matching resumes of qualified applicants with job openings. The jobs are varied, including: electronic assemblers and technicians, engineers, computer programmers and operators, metal fabricators, secretaries and clerks, bookkeepers and accountants, sales and marketing personnel, and others. The PWI specialists send resumes to the companies and add a personal contact by phone or a visit. If the company is interested, an interview is arranged, at which point the regular company personnel process takes over. The PWI staff will, however, follow up to monitor results.⁵⁴

Figure 3.2. EIF-PWI Process



Source: Adapted from "Electronic Industries Foundation, Massachusetts Project with Industry." Brochure.

A diagrammatic representation of the process is shown in Figure 3.2. The participating companies submit job information to the PWI area office, where the information is reviewed and sent on to rehabilitation agencies. From the other direction, rehabilitation agencies identify qualified applicants and send their resumes to the PWI office for review. The PWI office matches applicant and job, makes a referral to the company, and notifies applicant and agency. At this point, as described above, standard personnel arrangements begin.⁵⁵

The direct communication between company personnel staff, PWI specialists, and rehabilitation professionals is of great help to the success of the project. We were told of one meeting in which an employer complained to a rehabilitation counselor that the counselor was only telling him what the applicant *couldn't* do instead of what he *could*. ("Instead of telling me the person *can't* lift 30 pounds, why don't you tell me he *can* lift 29?")⁵⁶

The employer at that meeting was talking about effective marketing. The EIF-PWI prefers to describe their program as a "marketing model" (perhaps more descriptive than "linkage model"). Their point is that marketing implies identifying and filling consumer needs for products or services and that their program markets handicapped workers to private employers. As such, the positive qualities (skills, abilities) of a handicapped individual must be emphasized.⁵⁷

The functions of the EIF-PWI staff, as you would expect, involve more than passing paper back and forth. EIF has staff specialists who work with industry to sensitize employers to the qualities of disabled workers and other staff to alert rehabilitation people to the precise work requirements of industry. And besides these place-

ment and educational activities, there are area task forces involved in training.

Training.

Early in the Project a national assessment led to two conclusions: (1) more jobs were available than there were qualified, disabled workers to fill them; (2) most disabled applicants lacked marketable job skills. The obvious response was for the EIF-PWI to become involved in job training.⁵⁸

The EIF approach is to make training specific to local job openings. To do this EIF-PWI employs industry advisors and industry technicians to: (1) help assess the needs of the disabled persons and the participating companies, (2) review existing training programs, (3) develop new curricula as needed, (4) develop training selection criteria, (5) help select sites and implement programs, (6) be involved in the decision making throughout the training process.⁵⁹

Structure.

The EIF-PWI is a large, national program. And, as we have just seen, it has well-developed, autonomous area offices. National coordination of the regional operations—including extensive data collection and publication—is the responsibility of the national staff (at the home base in Washington, D.C.). We don't think a detailed discussion is needed here of the organizational structure. Such a discussion is available as part of a remarkable complete volume assembled by James R. Galetka on how to develop an industrywide **PWI** such as the EIF-PWI. (Bibliographic information is supplied in note 57.)

Benefits.

In addition to finding good jobs for hundreds of handicapped individuals, the EIF-PWI provides useful services for the rehabilitation community and the electronics industry as well.

For the rehabilitation people, EIF

- Is a central source of current job openings.
- Increases job opportunities for disabled individuals.
- Expands contacts with employers.
- Provides job market forecasts to aid in planning.

For the industry, EIF

- Is a central source of qualified handicapped workers.

- Is an effective outreach mechanism.
- Provides information on the needs of handicapped employees.
- Facilitates communication with rehabilitation resources.⁶⁰

With these contributions in mind, we would like to endorse the comments of James Galetka, EIF Program Manager, substituting any industry or business for "electronics":

...handicapped workers will be accepted in the electronics industry not only because it's just and moral to provide equal opportunity, or because it's the law. Rather, they will be sought after for the contribution they make to society, and because it's good business!⁶¹

ACTION CHECKLISTS

The following information comes under the heading of inside advice. We constructed two checklists—one for the rehabilitation community, one for business and industry—of things to do/know to get along in the disabled employment business. We sought rehabilitation advice from experienced and successful rehabilitation professionals and employer advice from experienced and successful employers. We kept out of it—except for the moral at the end.

REHABILITATION PROFESSIONALS

Counselors and job development and placement personnel might keep in mind (and take to heart):

1. Job placement requires more than a few phone calls from a desk-bound counselor; it takes time, patience, and dialogue with employers.
2. Do not repeatedly push the law on the employers; they know it's there.
3. Find out what employers' human resource needs are and then show them how you help them meet those needs.
4. Be knowledgeable about the local labor market: who is hiring and who is not? What kinds of talents are they seeking? (Do not try to train people for nonexistent jobs.)
5. Avoid rehabilitation jargon. Your tone should be helpful.

6. Find out what you can about the nature of the employers' businesses. What are their problems?
7. Be flexible; tailor your counseling' skills to meet the needs of the business community.
8. Make yourself credible and professional. Back up your words with action; employers want quick service.
9. Rely on a team effort in placement: rehabilitation counselor, placement specialist, employer.
10. Don't assume employer bad faith or discrimination for any failure to place clients (don't be a "bleeding heart"). A combative attitude does little for the employers, nothing for the handicapped, and destroys your credibility. Make sure your client is job ready.
11. Don't oversell or "undersell" a client. Be honest about skills and limitations: an accommodation can be found.

EMPLOYERS

Human resource specialists, executives, supervisors, and personnel officers might well consider:

1. Be aware that there are good and bad agencies just as there are good and bad businesses. Don't lump all agencies in one group and dismiss their services.
2. Talk to your fellow executives in other companies to get their experiences with rehabilitation agencies.
3. View the rehabilitation professionals as resource persons. Give them frank and specific information about your personnel requirements.
4. Rehabilitation people are not government agents or compliance officials (or local sheriffs). They are there to help you to meet your needs.
5. Utilize the rehabilitation screening and follow-up services. Some agencies provide 7 days a week, 24 hours a day service, which can be helpful in employee retention.
6. Get involved in a PWI program; it is an excellent way to nurture a community resource.

7. Recognize that many counselors and job placement specialists are highly qualified, professional people in a position to serve you.

8. Keep an ongoing relationship with selected agency personnel. Educate them about the distinctive properties of your business.

9. Recognize rehabilitation professionals as partners. Many of them work long hard hours to meet your needs (and remain unrecognized).

10. Get rehabilitation people involved with your team to get an additional perspective on job analysis, accommodations, job restructuring, etc. They can be very helpful.

The moral of the two sets of inside advice is the same as the moral for this chapter—our advice to rehabilitation personnel and employers: talk to each other, get to know what you can do for each other, trust (and use) each other.

LOOKING BACK: QUESTIONS TO CONSIDER

1. How do rehabilitation projects often return more money than they cost? What are the monetary benefits?
2. What are some of the services provided by rehabilitation agencies?
3. Which of the agencies reviewed impresses you most? Why? How would you find an effective agency in your area?
4. What is work sampling? What are the major types?
5. What are the advantages of work sampling in relation to other methods of evaluation?
6. What are Projects With Industry? What are the major types or models?
7. What are the significant aspects of the JVS/MABRI Project With Industry?
8. What does the EIF-PWI do?
9. What are the benefits to employers and to rehabilitation services of Projects With Industry?

10. What is the moral of the "action checklists" (and the theme of the chapter)?

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Chapter 4

Recruitment and Placement

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"The common sense approach of providing jobs for the disabled is good for business, the economy, and the disabled... by simply giving them a 'hand up' instead of a 'hand out'."

—William J. Flynn, Xerox Corporation and
Executive Vice President, U.S. Council for the
International Year of Disabled Persons

Our essential assertion remains that the talents of the handicapped are underemployed. We are talking not only about individuals outside the organization but also those who are present employees having hidden handicaps that have gone undetected. Such individuals are in every organization; they need to be discovered. Initially it may be difficult to locate them. However, as an organization's human resource system gains credibility and its managers create an accommodating tone, these employees will come forward and identify themselves. And when they do, they should be carefully handled through the systems we will describe in the next two chapters. Such a program will benefit both the employees and the organization.

In Chapter 3 we told you where to find qualified handicapped workers—through rehabilitation agencies and Projects With Industry. In this Chapter we will begin to answer some of the "how" questions. For instance:

- How does a worker confined to a wheelchair make good on the assembly line?
- How does a deaf person demonstrate superior performance in a heavy noise area?
- How does a blind person inspect fine instrument parts, program a computer, or function as an executive?
- How does a person without arms type and perform other office functions?
- How can handicapped workers be as productive and dependable as their nonhandicapped counterparts?

The answer to "how" is **selective placement**. Selective placement is simply the matching of an individual's abilities with the requirements of the job. Every personnel officer practices it to some degree, though in certain cases the degree is small enough to be classified as "hit or miss." For handicapped individuals selective placement requires a more precise analysis of the demands of the position and the abilities of the applicants.¹ As we have seen, the rehabilitation community can be of enormous help with the people; it is the employers who must analyze the job.

And, of course, once that is done the employer has a workable set of standards for nonhandicapped applicants as well—with a much better chance of placing them in the appropriate job. Thus, when done well, job analysis and selective placement eliminate the handicapped distinction; we have one population of employees. **When an individual is placed in a job for which he is fitted he is no longer job-handicapped.**

In fact, when this extra care is given to the person-job matching process, work becomes a source of satisfaction for the employees. A worker satisfied with the job yields dividends for the employer in terms of: more production, fewer accidents, less tardiness, and less absenteeism. Again, this relationship between well-placed employees and productivity holds for nonhandicapped, as well as handicapped, workers.

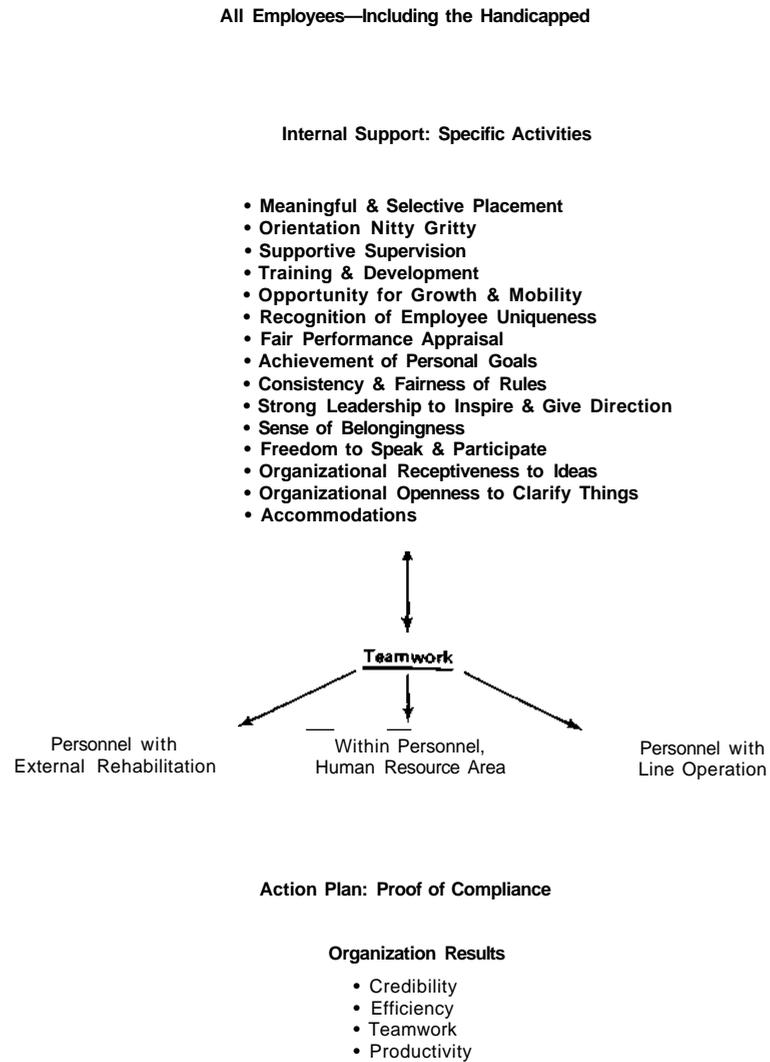
Consider the model of human resource management presented in Figure 4.1. All employees (handicapped and nonhandicapped alike) are supported internally by certain human resource activities. The only two for which handicapped workers receive any special consideration involve selective placement and accommodations. Selective placement—the precise and detailed matching of abilities of the applicant to skills needed for the job—is essential for the handicapped population and highly desirable for the non-disabled (some would also say essential). Here, however, the handicapped employees (and the employer) have an advantage: the handicapped have been evaluated twice. They are first thoroughly dissected by the vocational rehabilitation agencies and then scrutinized again when they are made available to an organization for placement.

Accommodations is a subject we will look at in detail later. Suffice it for now to say that extensive redesigning of jobs is not necessary and that extensive modifications of work environments are not needed.

For the personnel support activities to function effectively there must be teamwork: with rehabilitation people, with line management, and within the human resource system. In terms of the handicapped, the product of this teamwork is the affirmative action plan—satisfactory proof of compliance with the law. In terms of the organization, the results are greater efficiency and productivity.

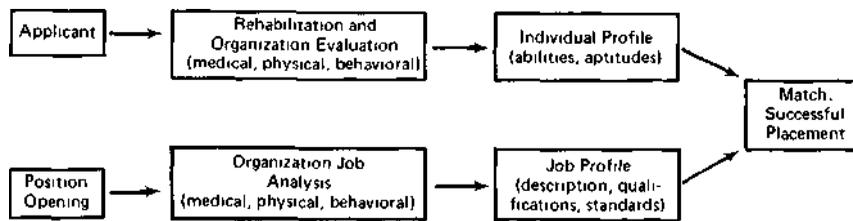
We have mentioned that potential handicapped employees are evaluated by the rehabilitation service and by the organization's personnel apparatus. The result is a detailed profile of the applicant: medical needs, physical skills, and work behaviors and attitudes. For the applicant to be successfully (selectively) placed, that profile must be matched with a job profile containing the same elements: physical requirements, job skills, behavioral skills (See Figure 4.2). Such a profile can only come from a specific and detailed analysis of what an employee at a specific job must do, what tools must be used, what movements made, what decisions made, and what the desired product should be (the job's purpose). That is, all criteria—medical, physical, behavioral—must be quantifiable and job specific. Once the job profile is completed a match

Figure 4.1. Human Resource Management Model: Internal Support



with the potential employee (either handicapped or not) can be made.

If selective placement is good, sound personnel procedure, why is it not more consistently applied to the handicapped population? The answer seems to rest with some basic employer concerns.

Figure 4.2. Overview of Selective Placement Process

EMPLOYER CONCERNS

It has long been a truism in the rehabilitation field that the major barrier to employing the handicapped is the negative attitudes (nurtured by the twin bogeys—fear and ignorance) of the employers. Since "old truths" tend to decay into "old falsehoods" or "old half-truths" over time, we will look at two studies that examined employer attitudes about the handicapped.

Surprise! The old truth remains just that.

The *Journal of Contemporary Business (JCB)* conducted an attitude survey in conjunction with their Special Issue on employing the handicapped. *JCB* sent letters and questionnaires to the Fortune 500 companies asking for confidential information; a total of 43 responded, 38 in manufacturing. The responses provided the following data:

1. The number of handicapped persons currently employed by the companies.
2. The number of handicapped persons likely to be employed in the future.
3. The factors that would influence future decisions to hire disabled workers.²

Of the 43 companies reporting, 12 said that 1-4 percent of their workforce was handicapped; 11 did not know the percentage; 10 made no response. The employers did demonstrate a willingness to consider hiring: 95 percent for physically disabled workers, including 93 percent for the hearing impaired. As the handicaps became more visible and more severe, the percentages dropped off dramatically: 39 percent for severe physical and 20 percent for severe mental.

Of course that sounds "natural" doesn't it? But remember: just because a disability is severe it does not mean that disabled individual cannot do a good job if selectively placed. As we have seen, the good vocational rehabilitation services will not attempt to place individuals unless they are job ready.

But the final category of response elicits the most hope. The companies identified five factors (of 26) that would influence their decision to hire a handicapped person. In our opinion each factor either favors or does not discriminate against qualified handicapped workers. In order of preference, they are: ability to perform the job, productivity, compliance with affirmative action, absenteeism, positive public relations. The first two—performance and productivity—were way out in front.³

The senior authors of this book decided to modify the *JCB* survey, add some more questions, and try to get detailed responses from companies with PWI experience. In October 1980 we sent questionnaires to two manufacturing companies, two service organizations, and one research and development firm. The companies were located across the country and were of various sizes (i.e., employing 1,750 + 100 + 3,000 + 2,700 + 475 = 8,025 people).

Our smaller but more precisely selected sample replicated the *JCB* findings:

1. All the employers would consider hiring qualified handicapped persons—with somewhat higher percentages (than *JCB*) for the milder disabilities, probably because these employers have positive PWI experience. Again, the severe handicaps fared less well (60 percent for physical, 40 percent for mental).

2. The factors that would influence the hiring of disabled workers were also the same as *JCB*: all five cited performance and productivity, and four of five cited availability of suitable jobs, turnover rate, and absenteeism.

Our survey's response to the PWI programs was heartening:

1. All five said that PWI helped them locate qualified people.
2. Five cited employee counseling as a useful service; four cited the follow-up service; three each cited employee evaluation and employee placement.
3. Four reported that only minor accommodations were required; one said all that was necessary was "accommodation of simple understanding."

4. All five asserted that Projects With Industry should be used by more organizations.

And the answer to our original question about employer attitude? The responses of our survey item on "the real barriers to the employment of the handicapped people" were 100 percent for two items: lack of information and fear. Nothing else was close.

The surveys indicate that employers would consider hiring qualified disabled workers but have anxieties about doing so (the greater the severity of the disability, the greater the anxiety). The surveys also reveal that the companies' criteria for employment are performance and productivity.

The best way to overcome fear of the unknown and to also acquire competent, productive workers is a close partnership with a good rehabilitation service and good internal teamwork—as we have already delineated—for a selective placement program. For the remainder of this chapter we will discuss in detail the five major components of such a program:

1. Recruitment and outreach.
2. Job analysis.
3. Medical examinations.
4. Placement with accommodations.
5. Follow-up.

RECRUITMENT AND OUTREACH

Before we can apply our selective placement model (see Figures 4.1 and 4.2) we have to acquire a pool of qualified applicants—potential employees. The first thing to realize is that traditional methods of recruitment will not be adequate (the corporate version of "putting a sign in the window" will not be enough). Luckily, any company wishing to employ the handicapped has a potential willing partner—a local vocational rehabilitation agency. The best approach is to develop a working relationship with one a small select group of agencies.

Once the agencies have been located, a company can invite the agency counselors to visit the company operation and, thereby, acquire a first-hand understanding of how the company works, what technology is used, the variety of positions available, etc. Counselors will need to talk with the line managers and personnel staff as well to develop as comprehensive and detailed a picture of the company's needs as possible. Continued energetic teamwork,

and a little creativity, will be necessary to select those agency clients (the disabled workers) that will make up the applicant pool.⁴

While a close relationship with one or more agencies is the best, that is not the only place to go. A company needs to consider all possible sources, external and internal.

EXTERNAL SOURCES

An organization's personnel apparatus can establish and maintain contact with as many of the following sources as practical:

1. The state employment service.
2. Organizations providing services for the handicapped and for disabled veterans.
3. State vocational rehabilitation agencies.
4. Private rehabilitation facilities.
5. Training schools for the handicapped.
6. College and university placement services.
7. United Way agencies.
8. Unions.
9. Sheltered workshops.
10. Local or regional Veterans' Administration offices.
11. Churches.
12. Public school systems with work-study programs.
13. CETA.
14. PWI programs.⁵

INTERNAL SOURCES

The organization itself may be a good source of handicapped workers; after all, most organizations want to promote and train from within. Any company is likely to have disabled people it doesn't realize are disabled simply because they are reluctant to identify themselves. A company with an honest commitment to utilize handicapped workers can locate them in its own organization—as we discussed in earlier chapters.

In addition, there are an increasing number of disabled employees the company *does* know about. Employees become injured on the job, are disabled on off-the-job accidents, or develop medical conditions. Indeed, the cost to employers of these disabilities has prompted some interesting programs. Consider the following.

TVA's Disability Program.

The Tennessee Valley Authority is a quasi-government corporation with a lifelong history of concern for its employees. By the

mid-1970s TVA was discovering that more and more employees were disabled and off the job—at a high people and employer cost. TVA developed a program to address three specific concerns:

1. Formerly-productive people were becoming invalids.
2. TVA was losing valuable, trained employees.
3. The Authority's compensation costs were escalating alarmingly (e.g., \$13 million for fiscal 1976).⁶

The components of the TVA program are detailed in Figure 4.3. The Authority decided to appoint a full-time coordinator for selective placement—a path that any large organization might want to follow. (Smaller organizations would likely have to rely more on external rehabilitation services.)

TVA's program was successful on three major fronts:

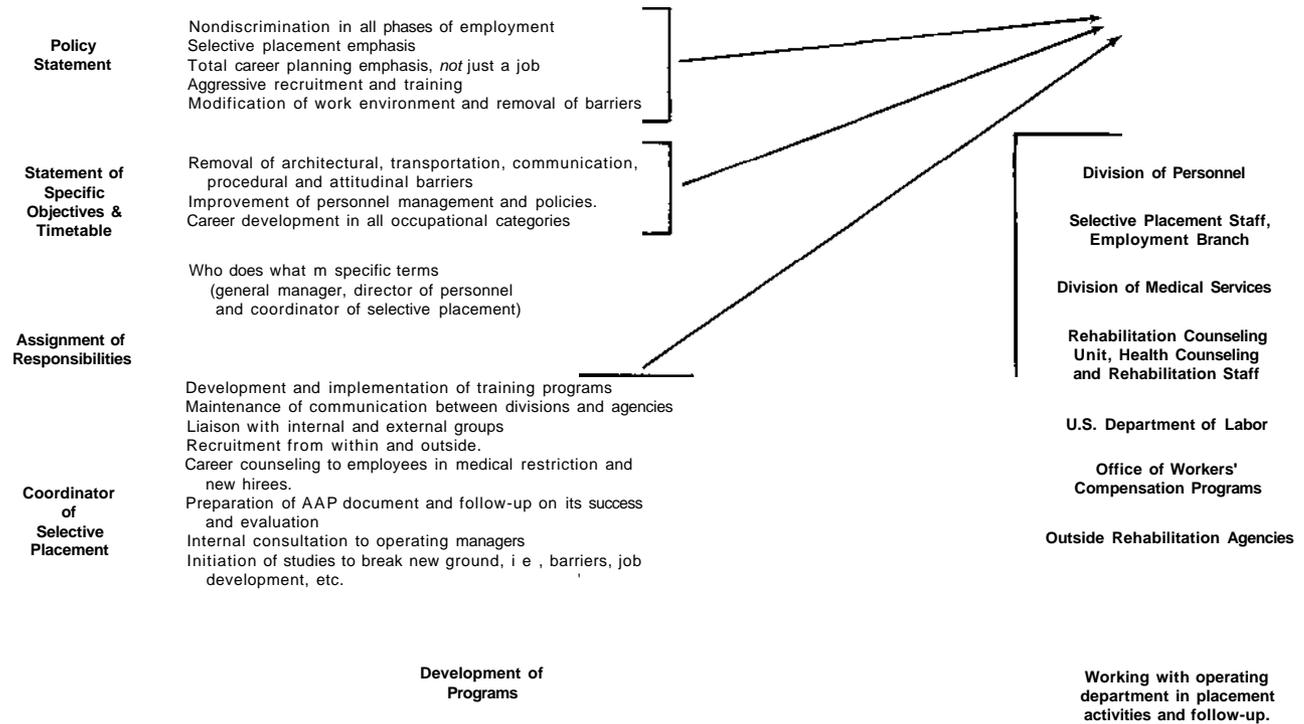
1. It modified personnel and medical procedures to better accommodate handicapped persons and to create closer working relationships with other departments.
2. It assessed and removed architectural barriers at several sites.
3. It implemented training programs for managers.

Essentially the system continues to work as follows. When an employee applies for disability retirement, every employing division is required to search for a job that the disabled worker might perform. Only when medical information clearly indicates the impaired worker can no longer work or be retrained without injury to his health is the worker retired with disability. Figure 4.4 outlines the return-to-work process; it requires several related services:

1. Interviewing and counseling to determine the individual's needs and problems.
2. Evaluating the individual's vocational assets and liabilities.
3. Developing a plan of action that will lead to job placement.
4. Identifying appropriate job openings.
5. Placing the individual in a job.
6. Following up on the individual's progress and adaptation.⁷

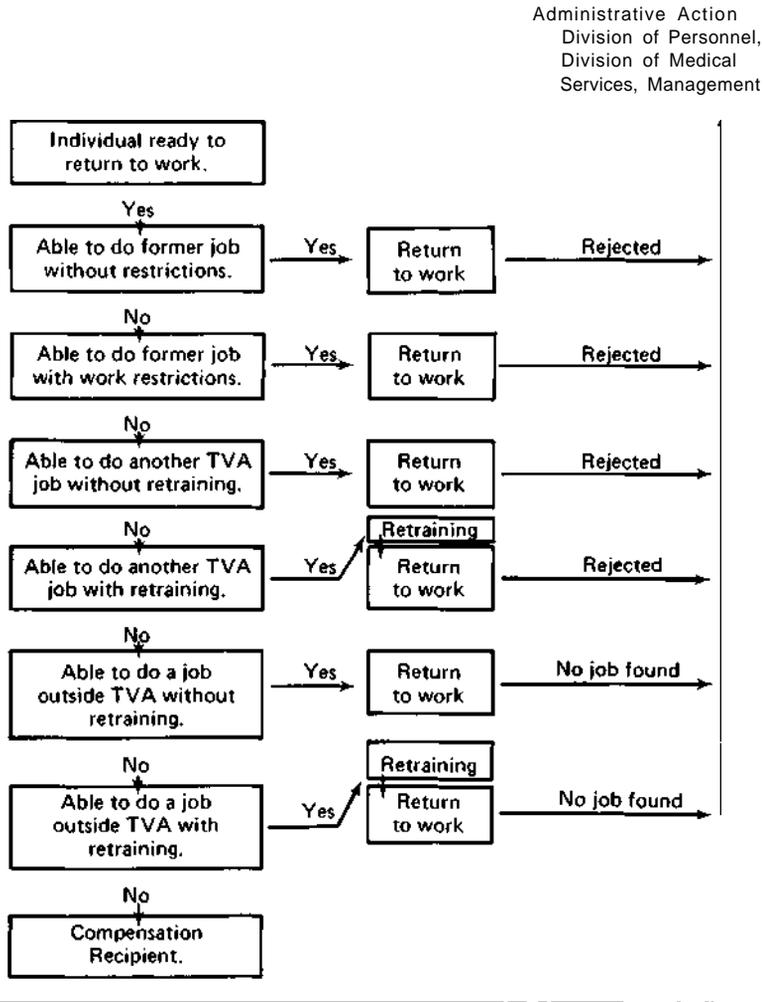
TVA's success was the result of two critical factors: first, the top management made an honest commitment to rehabilitation; second, the personnel, medical, and rehabilitation people developed an

Figure 4.3. Major Components of TVA's Disability Program



Source: Gopal C. Pati and Edward F. Hilton, Jr., "A Comprehensive Model for an Affirmative Action Program," *Personnel Journal* (February 1980): 103

Figure 4.4. TVA's Return-to-Work Process for the Handicapped



Source: Gopal C. Pati and Edward F. Hilton, Jr., "A Comprehensive Model for an Affirmative Action Program" *Personnel Journal* (February 1980) 103

effective system and worked closely together. The TVA experience can be duplicated if those two criteria are met.

Now that we have a pool of well-evaluated potential applicants, we have to match them with the specific criteria of open positions. To do that, we must go through the process of job analysis.

JOB ANALYSIS

A job analysis will indicate the tasks performed, the setting in which the tasks are performed, and the tools and equipment needed. Many organizations would find it helpful to use a worksheet to aid in asking the correct sort of precise questions. Such a worksheet—here adapted from Human Resources Center⁸—might include:

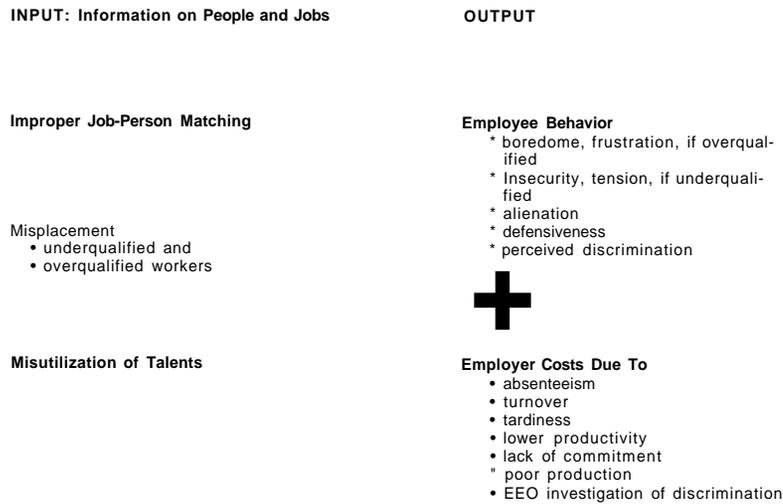
- Physical demands of the job:
 - walking
 - standing
 - stooping
 - carrying
 - bending
 - lifting
 - hearing
 - seeing
- Mental factors:
 - reading
 - writing
 - color discrimination
 - judgement
 - math skills
- Stress factors:
 - repetition
 - high pressure
 - hazards
 - fatigue
 - boredom
- Breakdown of job: listing of steps in sequence, with physical and time requirements for each step.
- Tools and machines involved
- Work environment
 - noise
 - ventilation
 - lighting
 - temperature-climate
 - dirt or dust
 - density of people
- Hazards: existing and potential

In a world where products, technologies, methods, knowledge, and human values are constantly changing, jobs will be changing as well. When jobs change, the descriptions *should* change—and with

them the qualifications of the people who perform the jobs. If, for instance, a job that was thought to require a high school diploma or its equivalent 10 years ago does not demand any formal education today, it could be filled by a trained, moderately handicapped person. A job that required high physical strength 10 years ago might have far fewer physical demands today because of technological changes.

Handicapped and nonhandicapped people alike are frequently screened out or misplaced because of outdated, vague, or inaccurate job descriptions. Such job misplacement has a heavy price tag—high costs to employers as a result of turnover, absenteeism, accidents, bad employee attitudes, low productivity. Figure 4.5 presents this sorry state pictorially.

Figure 4.5. The Evils of Misplacement



Once a job is defined, the qualifications of the employee can be established; the product is known as the job specifications or the employee specifications. The specifications must be precise and they must be job related—as we have mentioned more than once before. And, obviously, the job analysis must be revised periodically—with the resultant job descriptions/specifications also revised.

Job analysis is nothing new. Nonetheless, periodic job analysis is essential today. Large organizations have staff who do just that—on a continuing basis. Smaller or even medium-sized organizations may not have such a system and, thus, no up-to-date job descriptions. Those smaller organizations may look for help from the

rehabilitation agencies—especially with regards to accommodating handicapped people.

To summarize, accurate job descriptions from rigorous job analysts can produce many benefits:

- They help an employer get the right people for their jobs.
- They assist in identifying only job-related qualifications, thereby helping to meet EEO standards.
- They facilitate career planning by identifying job-related tasks and relationships between groups of jobs.
- They aid in developing appropriate training and development activities.
- They help to make wage and salary structures more equitable and performance evaluations more relevant.
- They provide a documentation of an organization's good faith attempts to be fair.
- They help make job accommodation and job revision easier.
- They eliminate unnecessary medical standards.

In addition to the material published by the Human Resource Center (see note 8), a good source of information on conducting job analysis is the Manpower Administration of the U.S. Department of Labor's *Handbook for Analysing Jobs*, published in 1972 and available from the U.S. Government Printing Office in Washington, D.C.

A large organization, which wishes to remain unnamed to protect the confidentiality of the information, has provided us with its book of job descriptions—produced after a thorough and detailed program of job analysis. Figure 4.6 is a job description of a fairly common position—customer service clerk. This organization divides its descriptions into three categories: task analysis, physical demands analysis, and environmental conditions analysis. Each numbered entry (e.g., "20. REACHING") is precisely defined (e.g., "extending either or both hands and arms in any direction and reaching above or below shoulder height") in a special section of the book and applied precisely to the specific job in the description.

Job descriptions of that precision and accuracy are invaluable in selective placement; they greatly enhance the employer's chances of matching the position with the abilities and requirements of a qualified applicant. And, of course, job descriptions can change when any element is found to be no longer relevant.

Figure 4.6. Example of a Job Description after Job Analysis

I. TASK ANALYSIS

JOB TITLE: Customer Service Clerk
JOB CODE: 3606
DEPARTMENT: Division Operations—Customer Service
LOCATION: Service Center

Task	Typical Percent of Time Spent
Preprocessing and postprocessing order books	50%
Filing of work orders, microfische	30%
Answering phones	2%
Destruction of records and upkeep	2%
Operating terminal	10%
Miscellaneous duties: preparing statements of account, assisting cashier	6%

Physical Strength Demand: *Light* Environment: *Inside*

Overall Consequences of Inappropriate Behavior:

Damage to computer equipment; injury to himself and others; damage to office furniture; poor customer/employee relations; incorrect processing of work.

One job description (for a different company) of a spinner lathe operator included the necessity of "walking, prolonged standing, pulling, hammering, bending, and lifting 25 to 50 pounds." Analysis by the Human Resources Center found that light metals could be spun easily on the lathe by an operator seated in a wheelchair. They also discovered the lifting requirements to be greatly in excess of the actual demands of the job. (As it turned out, the paraplegic who got the job had, as is usual, sufficient muscle development to handle even the unrealistic requirements.)⁹

As is evident from that last example, it is not easy to separate the physical aspects of the job description from the medical considerations. Just what physical abilities should an applicant have? And what role should the medical department have in determining them?

Figure 4.6. Example of a Job Description after Job Analysis

II PHYSICAL DEMANDS ANALYSIS

Demand Codes Blank = Not Present
 (D C) Q = Occasional - Up to 1/3 of time
 F = Frequent - 1/3 to 2/3 of time
 V = Very Infrequent - 1 to 2 times a week
 C = Constant - More than 2/3 of time

Illustrative Work Situations	Physical Factors	D	C	
1 STANDING While performing various filing functions, working in storage area on the statements etc	Standing Stationary	1	D	
2 MOVING ABOUT Securing information from other personnel and files	Moving About	2	F	
3 SITTING At desk while filing processing order books, working on terminals etc	Sitting	3	F	
4-13 LIFTING, CARRYING, PUSHING AND PULLING File drawers, billing registers, order boxes	PHYSICAL STRENGTH DEMANDS Lifting Push & Pull while stationary	Semi-Sedentary Up to 10 lbs	4	F
16-18 STOOPING, KNEELING, AND CROUCHING While working in lower file drawers to file and secure work orders		Light Work 10 to 20 lbs	5	O
20 REACHING Both above and below shoulders, to answer phones and reach billing registers from shelves		Medium Work 20 to 50 lbs	6	
21-22 HANDLING AND FINGERING Sorting sheets, work orders, billing registers microfiche etc		Heavy Work 50 to 100 lbs	7	
24-25 TALKING AND HEARING Instructions, meetings, customer calls other employees		Very Heavy Work Over 100 lbs	8	
26-31 SEEING Ability to read (near, depth accommodation) while processing order books etc	PHYSICAL STRENGTH DEMANDS Lifting Push & Pull while moving about	Semi-Sedentary Up to 10 lbs	9	F
33 WALKING Inter and intra office departments		Light Work 10 to 20 lbs	10	O
34 READING Instructions, order books, orders video terminals, microfiche, viewers etc		Medium Work 20 to 50 lbs	11	
		Heavy Work 50 to 100 lbs	12	
		Very Heavy Work Over 100 lbs	13	
	Climbing	14		
	Balancing	15		
	Stooping	16	F	
	Kneeling	17	F	
	Crouching	18	F	
	Crawling	19		
	Reaching	20	O	
	Handling	21	C	
	Fingering	22	C	
	Feeling	23	V	
	Talking	24	C	
	Hearing	25	C	
	SEEING	Near Vision	26	C
		Far Vision	27	O
		Depth Perception	28	V
		Accommodation	29	
		Color Vision	30	V
	Field of Vision	31	C	
	Smelling	32		
	Walking	33	C	
	Reading	34	C	
	Driving	35		
	Other	36	F	

WEIGHTS OF TYPICAL TOOLS, MATERIAL AND EQUIPMENT

Billing Registers (not applicable after 1/79)	10-20 lbs
Microfiche viewer)
Customer Service forms) None over
Pen or Pencil) 10 lbs
Order Books)

MEDICAL EXAMINATIONS

THE PROBLEM/THE SOLUTION

No matter how gifted, knowledgeable, or experienced a physician may be, he can only make his own diagnosis of worker health conditions.

And even after a diagnosis, what exactly is a manager going to do with imprecise statements like: "He has a medical condition that limits the use of his back," or "He has a medical condition that may affect his judgment and ability to accept responsibility."¹⁰

Even granting that a physician is an expert on human ailments, he is not likely to be an expert on job placement. **No member of an**

Figure 4.6. Example of a Job Description after Job Analysis

III ENVIRONMENTAL CONDITIONS ANALYSIS

Demand Codes Blank - Not Present
(DC) O = Occasional - Up to 1/3 of time
F - Frequent - 1/3 to 2/3 of time
V = Very Infrequent - 1 to 2 times a week
C = Constant - More than 2/3

Illustrative Work Situations		Environmental Factors		D	C
37	WORKS ALONE	In an office environment	Works Alone	37	V
38	WORKS WITH OTHERS	In all three categories apply	Works With Others	38	C
39	WORKS AROUND OTHERS	depending on job functions	Works Around Others	39	C
40	CUSTOMER/PUBLIC CONTACT	Checking on inactive equipment showing use and during emergencies by telephone	Customer/Public Contact	40	O
			Shift Work	41	
42	EXTENDED DAY	May occur when emergency arises	Extended Day	42	
			Inside	43	O
49-50	NOISE AND VIBRATION	Typewriters, printers, other conversations, telephones	Outside	44	
			Confined Areas	45	
51	MECHANICAL EQUIPMENT	Terminals, calculators, viewers, printers	Extreme Hot	46	
			Extreme Cold	47	
			Wet and/or Humid	48	
61	GASES	Fluorescent light ballasts	Noise	49	O
			Vibration	50	
			Mechanical Equipment	51	O
			Electrical Equipment	52	
			Pneumatized Equipment	53	
			Burning Material/Equipment	54	
			Explosive Material/Equipment	55	
			Rotating Energy	56	
			Moving Objects	57	
			High Places	58	
			Fumes/Odors	59	
			Dirt/Dust	60	
	Protective Clothing and Devices		Gases	61	V
	None		Other	62	

organization's medical staff, no company doctor, should make an employment decision. A doctor should be part of a team that identifies the condition of the job applicant, or the injured worker, or the employee seeking disability retirement. The doctor provides only some of the technical input: a judgement of the physical abilities and limitations of the applicant/employee.

The team process can work very well. One steel company, for example, has developed two simple procedures. For new hires with possible disability problems, the company convenes an ad hoc committee consisting of a medical officer, a personnel representative with thorough knowledge of the job description, an industrial engineer, and a department head. The committee nearly always resolves any difficulties easily. For an existing employee with a personal physician in disagreement with the company physician, the doctors refer the case to a mutually agreed upon third physician for resolution.¹¹

Unfortunately, in the past and even today in other organizations, many employers inadvertently rely on the company physician to make employment-related decisions for them. We feel this must change. Even though employers may have apprehensions and concerns about certain illnesses or disabilities, they must discipline themselves, and their staffs, to answering four specific questions:

1. Will the employee's condition affect his job performance.
2. Will the condition affect his coworkers?
3. Will the condition pose hazards to any employee?
4. Will the condition create additional liability for the employer? (*Don't be too quick with this one; remember the insurance myths refuted in Chapter 1.*)

It is the manager's job to take the medical data, the job description, and other information from his colleagues—to answer those questions—and to make the placement decision. Obviously, if the answers to the above questions are all no, then there is no reason to hinder or restrict placement.

MEDICAL TRENDS

Many physicians are beginning to realize the impact their recommendations can have on people's careers. They also are becoming more sensitive to personnel concerns. As a result, we are beginning to see some interesting developments.

Research

The Center for Labor Research and Studies at Florida International University began a study in 1979 on job-related physical capacities. Born out of a realization that handicapped individuals are channeled into stereotypical occupations, the study is attempting to develop a system that will "define job tasks in measurable physical capacity terms and physical capacities in job-task terms." Now in its early stages, this investigation strives to eventually be able to compare objectively-measured job requirements and individual physical abilities to identify matches and near matches. Near matches of job and person would "provide the basis for therapeutic goals, development of modifications and assistive devices, etc." It might also provide objective job criteria and performance standards.

Of interest to the actual ongoing personnel/medical struggle in organizations is the problem the Center is having in "linking physical capacities measurements and job analysis terms. At present, each field uses vastly different languages."¹² Which is why (we moralize) a team approach is necessary—and effective.

Diabetes Guidelines

Recently the medical department of National Steel Corporation (Portage, Indiana) revised their guidelines for the occupational

physician concerning diabetes. The goals of the doctors' investigation were to (1) "provide guidance for hiring and proper job placement of diabetics," and (2) "help to ensure a safe work environment for both diabetics and nondiabetics."¹³

The guidelines define diabetes explicitly in medical terms and point out that "a definitive diagnosis of diabetes cannot be made on the basis of random blood or urine sugar test results." They further assert that "any diabetic whose disease is well controlled is employable." They go on to define acceptable control as follows:

1. The employee has insulin reactions only infrequently and none severe enough to require help from others.
2. The employee would suffer occurrences of symptomatic hyperglycemia only infrequently.
3. The employee is under satisfactory supervision by a personal physician.
4. The disease has no complications that would interfere with job performance or attendance.¹⁴

Job placement would be influenced by the type or category of diabetes. The categories are determined by treatment:

1. *Treatment with diet alone:* The diabetic is capable of performing any job for which he is qualified.
2. *Treatment with oral blood-sugar-lowering agents:* The diabetic is capable of performing any job for which he is qualified.
3. *Treatment with insulin:* The diabetic may be restricted from assignments where it is difficult or hazardous to stop the operation in order to treat even a mild reaction. Frequent shift changes or split shifts might interfere with the control of the disease.
4. *Significant complications regardless of treatment:* The diabetic may have the same restrictions as those with diseases of the cardiovascular, visual, renal, or nervous systems.

A review of the existing studies leads the doctors for National Steel to conclude that absenteeism for diabetics should be about the same as for nondiabetics. Further, the working diabetic is more able today to control the disease and lead a normal worklife.¹⁵

Medical Standards Project

During 1975-76, the San Bernardino County, California personnel department reviewed its medical hiring standards—in what came to be known as the Medical Standards Project. The Project discovered right away that the county's applicant selection standards were not job related, nor were they empirically validated. The Project has attempted to do both.¹⁶

A refinement to the strict standards approach that was considered by the Project (and which we feel is well worth consideration) is to base standards on job classification requirements (that is, a set of like positions) and then make reasonable accommodations for those not quite fitting into the classification standard. But, irrespective of any "fine tuning," the Project's work reflected several significant issues:

1. If an applicant is placed in a position right for his physical abilities, he will not only function productively, but he will be less likely to be injured or to injure others. Increased productivity and reduced workers' compensation and disability retirement costs should result.

2. Recent legislation requires that an applicant be selected for a position before a medical examination can be required. The legislation is in response to the historical effect of preemployment physicals: they tended to unnecessarily screen people out of employment. *Meeting job-related medical standards is, however, still required for final placement.*

3. While it does cost an employer something to operate a medical unit and to develop precise and fair standards, such a program has economic benefits in terms of applying good management/personnel practices and avoiding legal problems from discrimination charges.

4. All medical standards must be job related. Medical examinations should be directed toward an applicant's job-related skills—as required by the particular job in question. This focus stresses ability rather than disability.

5. Standards should be stated positively (e.g., condition x is acceptable; or condition y is acceptable, provided...). The objectives of such standards are to (a) accept the maximum number of qualified handicapped applicants, (b) place applicants so that there will be no occupational health risk, and (c) imply, or state directly, a means of reasonable accommodation.

6. The physical abilities and environmental tolerances (to such things as noise, dust, crowds, etc.) should be objectively measured and matched with the objective measurement of physical requirements and environmental stresses of the job.¹⁷

BACKPAIN

Disability due to backpain is a special case. It is difficult to objectively measure and fit into the kind of medical standards system we have been describing. Quite possibly, backpain is a motivational, rather than a medical, issue.

Because back problems are so hard to accurately diagnose and treat, and because backaches can be very debilitating, we have bred a small legion of chronic fakes. Besides the vast majority of workers who really do hurt and who need help, there are those who take advantage of employers by faking backpain and collecting disability. When the disability payments are spent they return to work and "hurt" their back again.

We see four possible solutions to this problem:

1. If the company doctor and the employee's doctor are at odds, have them select a third physician to act as referee.

2. Require that the employee enter a rehabilitation program. If he refuses, he can be terminated on the basis of inadequate job performance. If the organization is unionized, the union should be involved at this point. (Union members don't particularly like fakes either.)

3. If the complaint is legitimate, restructure the employee's job to reduce strain on the back.

4. Again, if the complaint is justified, transfer the employee to a job that will not be as physically demanding.

Actually, even if the backpain is motivational, either of the last two solutions might be good for all concerned. There is a chance that the employee was misplaced from the beginning and needs a new start.

We now have a fully-evaluated pool of applicants and a series of job descriptions and specifications, with job-related medical standards. The next step is to begin placing people and making accommodations as needed.

PLACEMENT WITH ACCOMMODATIONS

The temptation here is to become philosophical and say something like: life is an accommodation, or, all anyone can expect from life is a reasonable accommodation. But, philosophy aside, reasonable accommodations for disabled employees have a lot of people worried—needlessly so. Our experience is that accommodations are easier and cheaper than most employers fear. One sometimes gets the impression that executives expect 200 paraplegic persons to show up looking for jobs at the same time, or that 500 dwarfs will march into their building and demand that all elevator buttons and light switches be lowered.¹⁸

Rest easy. As the U.S. Office of Personnel Management points out, "accommodations are nothing new in an employment situation." Employers make accommodations when they buy new equipment, rearrange furniture, allow flexible scheduling, or alter the work environment in any way.¹⁹ (Incidentally, we recommend most highly the excellent little 12-page booklet just cited in note 19; as with many government publications, it is inexpensive and written to the point.)

Accommodations should be determined on an individual basis—flexibility and reasonableness are the keys. In considering an accommodation, one needs to ask:

- Is it necessary for performance of duties?
- What effect will it have on the company's operations and the employee's performance?
- To what extent does it compensate for the handicapped person's limitations?
- Will it give the disabled worker the chance to function on a more equal basis with coworkers?
- Will it benefit others (nonhandicapped and/or handicapped)?
- Are there alternatives that would accomplish the same purpose?²⁰

ACCOMMODATION AREAS

There are many creative ways to accommodate qualified handicapped employees. We'll briefly review 10 basic areas here and enlarge upon one of them (job restructuring) shortly.

1. Modifying written examinations. The goal is to equalize conditions not give preferential treatment: reading for blind persons, writing for persons who have difficulty using their hands, etc.

2. Modifying worksites. Review work locations with supervisors, rehabilitation counselors, disabled workers. Most modifications are simple: rearranging files or shelves, widening access areas, adding braille labels, adapting equipment controls for hand or foot operation, installing touch-tone telephones, installing holding devices on desks, machines, or benches, and so on.

3. Making facilities accessible. Major obstacles to disabled employees that prevent them from getting to work should be removed as much as practical. Provide ramps, wider doorways, elevators, handrails. Often these changes make the facility more usable by all employees.

4. Adjusting work schedules. Some disabled workers may have mobility troubles during rush hour; some may have conditions (diabetes) that won't allow irregular shifts; some may need flexibility for regular medical treatment. Extended rest periods and work at home can also be useful accommodations to extend worker productivity.

5. Restructuring jobs. Restructuring does not alter the essential function of the job, it allows disabled workers to perform these functions. Restructuring might entail reassigning nonessential duties or altering the method of doing something. Here, especially, precise job analysis is vital.

6. Providing assistive devices. Technology is developing ways for disabled persons to perform new tasks (see Chapter 6). It is best to consult closely with the handicapped worker to see precisely what aids are needed—if any are needed at all.

7. Providing readers and interpreters. Often a very small part of another employee's workday can provide reading services to blind workers. In many instances this aid would come from clerical or secretarial workers already assigned to (or already working with) the blind employee. Similarly, for most daily communication needs a coworker who has learned basic sign language is sufficient aid for a deaf employee. For more elaborate conferences or meetings outside help is available.

8. Adopting flexible leave policies. Policies concerning administrative leave and leave without pay could incorporate flexibility for: training on assistive devices, traveling through inclement weather (e.g., blizzards), retraining employees who have become disabled, etc.

9. Reassigning and retraining employees. Employees who become disabled can still be productive forces in the organization if they are trained for a position similar to what they held or are assigned to something different.

10. Eliminating transportation barriers. An organization can help employees get to the worksite by aiding in the formation of carpools, providing parking spaces close to the facility, and agitating the local transportation authority for good, accessible bus service (see Chapter 7).²¹

As you can see, a little imagination and a little planning with all parties concerned (supervisors, disabled workers) can make the necessary accommodations. Table 4.1 (adapted from a publication on veterans, but applicable to all handicapped) provides several additional examples of accommodations.

JOB RESTRUCTURING

Job restructuring (adaptation, engineering, redesigning, etc.) is a process through which "one combines, eliminates, redistributes, adds, or isolates tasks from one or more jobs within the same job family to form part-time or full-time positions."²²

Again, this concept is nothing new. Job restructuring is frequently done as a result of changes in products, demands for the products, technology, manufacturing processes, or business necessities. Now we are suggesting it be done for another vital production resource: competent and motivated people.

As with so many aspects of selective placement, job analysis is necessary. Once a job is analyzed in terms of (1) specific tasks, (2) tools, equipment, and human elements involved, (3) education and skill requirements, and (4) physical and environmental demands, that job can be modified for better efficiency and better worker utilization. Consequently, such analysis and redesign is of benefit to the company in areas other than handicapped placement.

However, the basic principle for adapting jobs for handicapped persons is to remove (or reduce to tolerable levels) job demands they cannot meet. This basic principle can be translated into four working principles.

1. If the job requires actions that use a part of the body that the disabled worker cannot use adequately (and the action cannot be eliminated from the job), then the action might be

TABLE 4.1 (Cont.)

Accommodations for Disabled Workers, Some Examples

Nature of Special Arrangement	Job Held	Main Disability and VA Rating
"I was working on print layouts and had people help me when I was fitting the pipes"	Pipe fitter	Paralysis of shoulder and arm (60%)
Flexibility of Hours		
"One half hour less per day to fit in my dialysis schedule"	Collection manager at bank	Chronic nephritis (100%)
"Made it possible for me to make my VA appointments, take my medication and make my physical examinations"	Gas station attendant	Schizophrenic reaction (50%)
"I didn't have to worry about my losing my job if I missed work"	Bartender	Duodenal ulcer (70%)
"When I had my operation, they extended my leave without-pay status"	Clerk	Limitation of motion of spine (40%)
"Part time work instead of usual full time"	Bookkeeper	Varricose veins (20%)
"Because of the cold, my arm and hand would pain me, so I would be able to take the winter off and come back in the summer"	Truck driver	Loss of movement of one hand (100%)
Change of Duties		
"I was hired as an installer, but was then offered an inside job because of disability"	Telephone repairman	Injuries to hip muscles (50%)
"I've been changed from some operations which require greater dexterity than I possess"	Machinist	Paralysis of hand (70%)

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transferred to another part of the body, or a less demanding means of using the disabled part might be designed.

2. If action has to be taken in response to signals received through a defective sense (vision, hearing), it may be possible to carry the signals in a different way (braille, signing) or provide aids to compensate for the weakness.

3. If the disabled worker has impaired decision-making ability, it may be possible to simplify the decisions or reorganize the work so that someone else makes them.

4. If the work environment involves intolerable stresses, it may be possible to remove the source or protect the worker from them.²³

Unions

If an organization is unionized, the union officials should be involved in any job restructuring. Most unions seem to have cooperative attitudes; unfortunately, some contract provisions stand in the way of accommodations. A provision of sequence promotion, whereby an employee would have to put in time in job A before entering job B, causes difficulties when a disabled worker can function in B but not A. Seniority clauses pose the same problem. Perhaps labor and management could agree to provide exceptions to these systems, without seriously violating the union's obligation to protect the rights of incumbent employees.²⁴ We can only promote flexibility and hope good sense will rule.

In our experience, cooperation among fellow workers (nonhandicapped and handicapped) has always been very good when tasks in a job performed by a group are reassigned or redistributed. For instance:

1. An employee with a disability involving the legs can sit, instead of stand, to do the necessary duties of the job.

2. A person with a heart condition can do the light lifting, instead of the heavy lifting.

3. A moderately retarded person can do routine tasks, while his coworkers perform any chores requiring higher cognition.

4. In a data-processing department, the work of computer data entry and retrieval can be done through remote control by

a homebound paraplegic, while coworkers perform other duties requiring more mobility.

5. Secretarial work can be divided so that a blind person can do most of the typing of dictated material, while other typists do the work from copy.

Another Example

Consider the case of a manual press operator who became permanently disabled because of a car accident:

1. He could perform normal handwork, but he could exert very little force with his arms.
2. His close vision was impaired to the point that he could not easily locate openings into which his job required that he guide tools.
3. His ability to count was reduced.
4. He suffered headaches and reduced working speed from loud noises.

The firm was able to restructure the job to accommodate him:

1. The need to use strong force with the arms was reduced by transferring the action of the press manipulation to two foot pedals that could be operated from a sitting position.
2. A simple, inexpensive locking system was constructed to enable him to locate openings for tools by feel rather than sight.
3. The need to count was eliminated by placing an inexpensive frame of precise size near the machinery.
4. He was given some earplugs to reduce the machine shop noise.

The firm was able to retain a skilled, experienced employee for less than \$250. His replacement and training would probably have cost as much.²⁵

Job restructuring has enormous possibilities. Here again, it requires teamwork between personnel officers, rehabilitation counselors, selective placement specialists, operation managers—and often the disabled and their fellow workers.

FOLLOW-UP

The follow-up procedure includes—now that all the jobs are analyzed and the people have been screened and placed—those housekeeping chores that insure the whole recruitment/placement system continues to function as it should.

Under this heading we want to describe how to evaluate three aspects of hiring the handicapped that have been known to cause difficulties: application forms, records of employee disposition, and interviewing.

APPLICATION FORMS

The forms for employment should state clearly the company's policies regarding affirmative action and disability. Those need not be elaborate or lengthy. It is most important, however, that **all questions be job related**. Simply, do not ask for disability/physical-related information you do not really need.

Figure 4.7 is a part of Sears' standard application form; it covers the ground perfectly.

Figure 4.7. Application Form, Sears, Roebuck and Co.

SEARS, ROEBUCK AND CO.						Date _____
APPLICATION FOR EMPLOYMENT PLEASE PRINT INFORMATION REQUESTED IN INK.						SEARS IS AN EQUAL OPPORTUNITY EMPLOYER and fully subscribes to the principles of Equal Employment Opportunity. Sears has adopted an Affirmative Action Program to ensure that all applicants and employees are considered for hire, promotion and job status, without regard to race, color, religion, national origin, age or sex.
						To protect the interests of all concerned, applicants for certain job assignments must pass a physical examination before they are hired. Alternative placement of an applicant who does not meet the physical standards of the job for which he/she was originally considered is permitted.
NOTE: This application will be considered active for 90 days. If you have not been employed within this period and are still interested in employment at Sears, please contact the office where you applied and request that your application be reactivated.						
Name _____			Social Security Number _____		(Please present your Social Security Card for review.)	
Address _____			City _____		State _____ Zip Code _____	
County _____			Current phone or nearest phone _____			
Previous Address _____			City _____		State _____ Zip Code _____	
If hired, can you furnish proof of age? <input type="checkbox"/> YES <input type="checkbox"/> NO			(Answer only if position for which you are applying requires driving.)			
U.S. Citizen <input type="checkbox"/> YES <input type="checkbox"/> NO or Resident Alien <input type="checkbox"/> YES <input type="checkbox"/> NO			Licensed to drive car? <input type="checkbox"/> YES <input type="checkbox"/> NO			
			Is license valid in this state? <input type="checkbox"/> YES <input type="checkbox"/> NO			
Have you ever been employed by Sears? <input type="checkbox"/> YES <input type="checkbox"/> NO			If so, when and where last employed? _____		Position _____	
Former employees of Sears and certain Subsidiaries may be entitled to service credit under the Pension Plan based on prior employment with Sears, Roebuck and Co., Homart Development Co., Sears Investment Management Co., Sears Roebuck Acceptance Corp., Sears, Roebuck de Puerto Rico, Inc., Sears Roebuck Overseas, Inc., Terminal Freight Handling Co., Abetate Insurance Company and their Subsidiaries, Lifetime Foam Products, Pacific Installers, and Sears, S.A. (Central America).						
Have you a relative in the employ of Sears in the store or unit to which you are applying? _____						
A PHYSICAL DISABILITY OR HANDICAP WILL NOT CAUSE REJECTION IF IN SEARS MEDICAL OPINION YOU ARE ABLE TO SATISFACTORILY PERFORM IN THE POSITION FOR WHICH YOU ARE BEING CONSIDERED.						
Do you have any physical condition which may limit your ability to perform the job applied for? If so, please give details. _____						

DISPOSITION RECORDS

Keeping good records of the fate of applicants—especially disabled applicants—is very useful for compliance purposes.

Keeping good records is just one aspect of internal review. Any organization needs to document (when and why) promotions, demotions, and transfers. Since the government is watching, this procedure is especially necessary with regards to disabled employees. You want to be sure there are no barriers to equal opportunity and no requirements that are not job related.

INTERVIEWING

With regard to the interview procedure for disabled applicants, there are four basic principles to follow:

1. The same methods prevail in interviewing a handicapped as a nonhandicapped applicant. Remember, the employer is seeking abilities, not disabilities.
2. If an applicant has been referred by a rehabilitation service, the interviewer will already have considerable background information on the disability—and the applicant's abilities. There should be no surprises.
3. Interviewers should be experienced people from the organization; they should know the job and have credibility with supervisors and department heads. Inexperienced interviewers will make mistakes at precisely the critical point where the selective placement process must function correctly.
4. Interviewers must have some sensitivity for, some understanding about, the world of the disabled (their anxieties and frustrations). Of course, this does not mean giving preferential treatment out of sympathy.

Paul L. Scher is the corporate manager in charge of selective placement at Sears, Roebuck. He is highly regarded in both the rehabilitation and the business communities. We asked Mr. Scher for his advice to interviewers of disabled applicants. He made the following recommendations:

1. Look for the individual's job qualifications. Focus on the question: Can he do the job?

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2. If you know ahead of time that an applicant is disabled you can (a) give him a copy of your selective placement service program in advance to review, (b) assist him in filling out the application form, if necessary, or mail the application to him so he can complete it at home.
3. Ask the applicant if he needs assistance filling out the application. Find out how you can help.
4. Describe the job precisely and ask him directly if he can handle it.
5. Ask the applicant if he has any questions.
6. You can also solicit the applicant's opinion on the kind of assistance he might need to do the job better.
7. Discuss openings and career planning freely. Encourage the applicant to ask questions or make comments.
8. At the end of the interview, project a warm feeling—a feeling that the applicant is needed.

ONE LAST EXAMPLE

U.S. Steel has been involved in selectively placing handicapped individuals for some time. They think it is good business. Among other places, they have recruited employees from the National Technical Institute for the Deaf (Rochester, New York)—which surprised the Institute more than a little.

But whether anyone else knows it or not, the corporation is proud of its record. The following is one of the many case histories they offer:

Neil Persson was hired as a laborer at the Geneva Works of U.S. Steel in Provo, Utah in 1968. He was subsequently drafted into the army and wounded in Vietnam—losing both legs above the knees and one arm below the elbow. He returned to Geneva in 1974 as a transcriber in the accounting department. He has taken an educational leave of absence to work toward a degree in accounting.²⁶

....And one last quotation—this from the Board of Directors of the National Association of Manufacturers:

"Employers know from experience that the handicapped individual when matched to the requirements of the job is no longer handicapped."²⁷

LOOKING BACK: QUESTIONS TO CONSIDER

1. What is selective placement? Why is it good personnel policy?
2. What two negative attitudes impede hiring disabled workers? How might they be overcome?
3. What are the five major components of a selective placement program?
4. What is the best way to recruit qualified, disabled employees? What are some other sources?
5. How does TVA's disability program work? Is it a useful model for you?
6. What is job analysis? What sort of information about a job is necessary for workable job descriptions?
7. What are the consequences of misplacement?
8. What are the benefits of good job analysis/job descriptions?
9. What is the proper role of employee medical examinations and medical standards? Who should make the personnel decisions?
10. What questions need to be asked about any job accommodation?
11. Can you identify the 10 basic areas of possible accommodations?
12. What is job restructuring? What are the basic principles involved?
13. What roles can the unions play in job accommodations? Who should be involved in the accommodations team?
14. What questions are appropriate for a job application form? What sort of records should you keep?
15. What are the good tenets of interviewing disabled applicants?
16. When is a handicapped individual no longer handicapped?

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26. "Disability/Inability...Not Synonymous." *U.S. Steel News* 40 (July-August 1975):14-15.

27. *Hiring Handicapped People*. Booklet printed by the National Association of Manufacturers, 1964, p. 2.

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"The handicapped worker does a good job. Any operator or manager who doesn't want to put time and effort into working with the handicapped isn't really interested in success."

—Bill Taylor, owner/operator
of a McDonald's restaurant
in Elizabeth, North Carolina

Programs to employ disabled people did not begin with the government regulations of the 1970s. In fact, large-scale work with the handicapped (in terms of employment) really got started in the 1940s when thousands of disabled veterans began returning home. Yet, as we have insisted throughout this book, organizations are involved—and have been involved for many years—because it is in their best interests to do so.

In this chapter we will investigate in some detail programs for employing the handicapped in corporations, private agencies, public agencies, and unions. We present them as models for your organization; they are programs that work. (For an overview of the elements highlighted, see Table 5.1)

TABLE 5.1

Overview of Programs Highlighted

Organization	Aspects Highlighted
Pennsylvania Power & Light	<ul style="list-style-type: none"> • Projects With Industry • Outreach innovations
National Restaurant Association and Food Service Industry	<ul style="list-style-type: none"> • Projects With Industry • Recruitment, training, placement • Answers to turnover problems
Continental Bank of Chicago	<ul style="list-style-type: none"> • Outreach • Training • Career planning • Counseling
3M	<ul style="list-style-type: none"> • In-house rehabilitation and selective placement • Rehabilitation committee • Innovative transportation • Recreation programs
Control Data Corporation	<ul style="list-style-type: none"> • PLATO educational system • Homebound employees ("Homework")
Human Resources Development Institute (AFL-CIO)	<ul style="list-style-type: none"> • Projects With Industry • Job placement model • Job development
Amalgamated Clothing and Textile Workers Union	<ul style="list-style-type: none"> • Linkage model • Supportive services • Social services

*This is far from an inclusive survey. We have not attempted here to describe all aspects of every organization's program.

TABLE 5.1 (continued)**Overview of Programs Highlighted**

Organization	Aspects Highlighted
Alta Products	<ul style="list-style-type: none"> • Recruitment for small business needs
McDonnell Douglas	<ul style="list-style-type: none"> • Employing the deaf • Programs since the 1940s
Sears, Roebuck and Co.	<ul style="list-style-type: none"> • Selective placement • Innovative AAP • Accommodations
Tennessee Valley Authority	<ul style="list-style-type: none"> • Communication • Management training • Job search for the blind • Interpreter services
Edison Electric Institute	<ul style="list-style-type: none"> • AAP programs • Task force • Awareness seminars
Public Programs -Pennsylvania	<ul style="list-style-type: none"> • Job readiness program • Job-seeking skills • Follow-up
-Indiana	<ul style="list-style-type: none"> • Computer training program • Cooperation with industry • Internships
Illinois	<ul style="list-style-type: none"> • Utilization of CETA • Client assessment and placement

PENNSYLVANIA POWER & LIGHT COMPANY (PP&L)

PP&L has been involved since 1974 in seeking disabled people to fill positions in the company. According to Charles Sauder, supervisor of personnel placement, the company has employed (or is employing) people who are blind, deaf and speechless, orthopedically handicapped, rehabilitated alcoholics, diabetic, or epileptic. These employees have worked as clerical staff, construction laborers, keypunch operators, typists, engineers, and so on. In addition, PP&L has had a leadership position in the Edison Electric Institute and, thus, a national influence. (We'll look at the Institute in more detail later.)

The program we want to examine, however, is PP&L's cooperative venture with the Good Shepherd Vocational Services Center of Allentown, Pennsylvania.¹ This particular Project With Industry was designed to find permanent part-time employment for several disabled workers in the company's cash receipts operation.

The Project was generated from a manpower needs analysis by the company's finance department that indicated 12 additional part-time employees would be required to handle an anticipated increase in work volume. The increase would occur in the cash receipts department, where customer payments are received and recorded daily, because of a change from bimonthly to monthly billing.

Charles Sauder and Chester Collyer (treasurer) at PP&L offered a contract with Carl Odhner, director of Good Shepherd, which stipulated that the agency would hire, train, and supervise—with assistance from the company—the employees needed at cash receipts. Because Good Shepherd had only experience with sheltered workshops, it insisted on a two-month pilot project.

Joseph Henry, the agency's case services specialist, worked closely with James Miller, the company's supervisor of cash receipts, to learn the specific job tasks and skills the employees would need. From data supplied by the company he developed written study materials for training the employees.

The agency's goal was to train its disabled clients to perform the job as well as the company's present, nonhandicapped employees. To meet that goal, Good Shepherd began a rigorous testing and evaluation process to select individuals with the necessary skills and abilities. From nearly 60 possibilities, the agency chose 12 with sufficient manual dexterity and coordination, clerical perception, and ability to perform high-volume, repetitious work under time deadlines. The employees selected went through a training period at the agency using the special study materials and an on-the-job session at PP&L.

The initial work team in December 1978 had four employees. That total grew to 11 the next month and has varied between 12 and 16 since then.² Supervision is provided by the agency.

Each employee is responsible for his or her own transportation to the worksite. Employees complete a 7 a.m. to noon workday. The group handles over 100,000 pieces of mail—checks, cash, customer notes, billing stubs—on the average each week.³

Evaluations of the group are made each month by the company. Supervisors tabulate the percentage of errors made by the group and compare the figures to performances by non-Project personnel.

Some months have found the Project's employees to have more errors; some months they have been better.⁴

But statistics do not tell the whole story. The team takes pride in its work and all parties involved believe the Project has met its goals: the company has successfully filled positions with competent workers, the agency has placed people and gained valuable PWI experience, and handicapped workers have new job skills, experience, better self-images. Some employees have already gone on to better jobs.

The PP&L/Good Shepherd Project With Industry is rare in that an industry and a community rehabilitation facility are working together in a direct relationship *without government financing*.⁵ However, in more ways than that it is the norm:

1. The Project was developed carefully, with a limited trial period.
2. It was designed to meet a specific need of the company.
3. It involved close teamwork between the agency and the supervisor of the department involved.
4. It had measurable positive results for all parties concerned.

NATIONAL RESTAURANT ASSOCIATION/ FOOD SERVICE INDUSTRY

Perhaps we have inadvertently given the impression that only large corporations or organizations can be successful with a selective placement program. Not so. Businesses of all sizes in the food service industry have been taking advantage of this opportunity for years.

NRA

Many businesses get organizational help from the human resources department of the National Restaurant Association (NRA). The NRA works with 40 state associations to develop training programs in state vocational rehabilitation agencies and in private facilities such as Goodwill Industries. The goal is to provide a pool of trained workers to meet the employment needs of the industry. According to the NRA one of the biggest problems of any food service operation is hiring, training, and keeping good employees.⁶

Walter Ashcraft, director of NRA's human resource department feels that, despite the extensive PWI activity, the industry has

not yet developed the potential of the handicapped human resource. According to Ashcraft, "the selling point of the (PWI) program is productivity. Among handicapped workers there are lower absenteeism and turnover rates. This benefits the restaurant operator by reducing labor costs and gives the worker a chance to prove himself."⁷

The recruitment/training/placement process of this PWI follows perfectly the model we described in Chapters 3 and 4. The training facility (e.g., state agency or Goodwill) evaluates potential employees and makes sure they are job ready. Restaurateurs and facility personnel work as a team to make the training job related; actual on-the-job training is provided whenever possible. A placement specialist is available to the employer throughout the hiring and initial stages of employment—helping to insure that the employee is properly placed and giving him or her a better chance to succeed on the job.⁸

The prototype of this sort of program was started by the Florida Restaurant Association in 1972. It worked so well that the national association began its own project soon after with a five-year grant from HEW. At this writing the NRA is considering funding the Project from industry sources and becoming independent of the government. State chapters in Wisconsin, Texas, and New Jersey also have programs of their own.

Local Programs

The beneficiaries of these PWIs are the local food service organizations, which get good employees. Handicapped people work in all aspects of food service in the Woodward/Lothrop department store in Washington, D.C. According to the personnel manager there (Fred Thompson) "these employees have proved to be invaluable. Supervisors ask for them and employment has stabilized." In particular, retarded individuals have found niches at entry level positions. Connie Klier, a supervisor at Woodward/Lothrop, is convinced that "this is a good way to fill jobs that are not stimulating to the average person day after day. Turnover has decreased by 30 percent."⁹

Another restaurant with a successful program is The Great Crepe in San Rafael, California. The restaurant is also a work therapy facility connected with Marin Lodge, which treats young adults with emotional disabilities. The Great Crepe also employs people referred by CETA and has counselors on the premises at all times. Many of the employees move on to bigger jobs in the industry, and the restaurant is doing well enough to be considering expansion.

Similar success stories—for employers and employees—are occurring throughout the country: the Grand Teton Lodge in

Jackson Hole, Wyoming, the Montgomery Ward's company cafeteria in Chicago, and the Goodwill training center in Atlanta are examples. The latter facility specializes in involving company representatives with the training to break down attitude barriers. Atlanta Goodwill graduates are placed in the industry throughout the area.¹⁰

Why are the NRA and its affiliates so involved? Not because of charity, but because they realize it's good business. As Walter Ashcraft says concerning the handicapped: "we have a need and they can fill it."¹¹

OTHER FOOD SERVICE PROGRAMS

Other food service organizations are looking to the handicapped population for solutions to their problems at high turnover and a lack of reliable workers. McDonald's is involved at the corporate level and actively encourages its store managers and licensees (small autonomous businesses within the large corporate structure) to hire qualified handicapped workers. According to Edward Schmitt, president of the corporation, McDonald's has a disabled hiring program "because we have repeatedly seen how handicapped workers have found satisfying employment with McDonald's and have substantially contributed to our success."

McDonald's boasts about:

- Dick Shierling, a man without a right arm, who owns and operates two McDonald's restaurants in Quincy, Illinois.
- Caesar Burke, another man with two restaurants—and one leg.
- Rita Simpkins, a fry cook and a deaf mute.
- Roger McDonald, an epileptic and valuable all-purpose employee at a McDonald's in North Carolina.
- Bill Buell, a man with a disabled left arm, who started as a bookkeeper at McDonald's and became a store manager because he wanted more challenge, activity, and opportunity.¹²

The University of Illinois at Urbana-Champaign is also involved. Frank Rusch, assistant professor of special education, is directing a training program for mentally handicapped adults at one of the university residence hall's cafeterias. Trainees are taught basic skills and are employed at university rates and with univer-

sity benefits. The employees learn specific subtasks in a sequence established by program coordinator Deborah Lamson after she spent several weeks identifying all the tasks required of a kitchen laborer. A trainee is considered to have mastered a task when he or she can perform it satisfactorily at a rate equal to that of an established professional laborer. Progress is analyzed regularly. The program so far has pleased the cafeteria supervisor, who now has dependable workers in positions that are hard to keep filled. It also has pleased the employees, who now are independent workers and not Social Security beneficiaries.¹³

Since 1975 over 100 disabled individuals have been trained in kitchen-work skills at Triton Community College in River Grove, Illinois (near Chicago). Funding for the project comes from CETA; facilities for the training are provided by the college. Approximately 90 percent of the students completing the training program find employment in community food service operations.¹⁴

The NRA and McDonald's are certainly large organizations, but the individual members that comprise the Association or the corporation are not large. Most of the hiring is done, and most of the benefits are reaped, in small food service businesses in small communities across the country. An organization of any size can tap the handicapped resource.

CONTINENTAL BANK OF CHICAGO

Continental Bank is a major employer in its home city of Chicago and is into hiring handicapped people in a large way. The bank has a full-time coordinator of affirmative action for the handicapped. The coordinator and other officers are active in area job fairs, seminars, conferences, association meetings, and programs sponsored by rehabilitation agencies, universities, veterans' associations, and business councils.

But all this activity is not random. It is part of an affirmative action program that is based on the principles of:

- Taking a creative approach to employment problems.
- Realistically evaluating job requirements.
- Educating managers and supervisors.
- Encouraging employees in career planning.
- Hiring a specialist to implement the program.
- Working with local rehabilitation agencies.¹⁵

RECRUITMENT

Continental actively recruits qualified physically and mentally impaired applicants. At this writing, over 65 handicapped persons hold a variety of jobs with the organization—over 30 are people with hearing disabilities.¹⁶

Continental tries to tap as many sources as possible for its recruitment program. They maintain contact with the Illinois State Employment Service, state vocational agencies, and several private rehabilitation services. They post jobs with the National Alliance of Businessmen especially to reach veterans. The bank is also involved in a cooperative program with a network of city colleges whereby handicapped students who complete special courses are invited to apply for positions open at Continental.¹⁷

OUTREACH

Continental's coordinator of handicapped employment seems to be everywhere in Chicago where anything having to do with the subject is happening. Jacquelyn Chaplin can be seen addressing the National Alliance of Businessmen, attending a Rehabilitation Institute of Chicago job fair, lecturing in industrial workshops, participating in state rehabilitation panels, speaking at youth corps programs (Lighthouse for the Blind), representing the bank as sponsor of industrial employment conferences, joining university placement seminars. Small wonder that Ms. Chaplin was honored in 1975 with a Certificate of Appreciation from the Illinois Division of Vocational Rehabilitation.

That same year, the same organization honored Continental Bank for its affirmative action program. Continental has also been honored by the National Alliance of Businessmen and the Rehabilitation Institute of Chicago. The bank has also frequently been recognized in the area media for its physical accommodations for handicapped customers (a \$35,000 wheelchair door) and its cultural activities (the bank's choral group has employees who perform Christmas carols in sign language).¹⁸

Continental has supported and/or been represented on advisory boards for the Chicago Lighthouse for the Blind, the Jewish Vocational Services' PWI, and the Chicago Rehabilitation Institute's Access Chicago. The bank's Foundation has made financial contributions to the Chicago School and Workshop for the Retarded, the Chicago Rehabilitation Institute, and the Hadley School for the Blind.¹⁹

NEW PROGRAMS

In addition to the ongoing activities described above, Continental began two new modest programs in the winter of 1980/81. The bank formed a contract with the City Colleges of Chicago to provide on-site clerical training for 12 disabled adults. After four months of training, one applicant dropped out, but at least nine have passed the preliminary evaluation and are continuing. Expectations of the personnel department are that several trainees will be offered jobs. At this point Continental expects to continue the program with a new group of students.

A second program provided data entry training to two hearing impaired employees—an adaptation of an earlier audio program. Both participants learned the equipment: one accepted a promotion to an operator's position; the other decided for personal reasons to remain at her current position. Continental believes the program has potential, but that further preliminary employee counseling is necessary to insure commitment.²⁰

MINNESOTA MINING & MANUFACTURING (3M)

We've mentioned that, more and more, private industry is taking direct control over its rehabilitation and disabled hiring procedures—on the theory that it's better to do it your way, to your advantage, than to wait for the government to tell you how to do it. In 1972, 3M got involved in a big way when they hired Paul Ashton, a licensed psychologist and certified rehabilitation counselor, to supervise their rehabilitation program. The following is adapted from Mr. Ashton's account of the 3M program.²¹

THE PROGRAM

3M established its own in-house rehabilitation program for the same reasons that other companies are:

1. An in-house rehabilitation staff is always available and can more readily identify employees who need help.
2. An in-house staff has a better knowledge of company structure and an easier access to information.
3. An in-house staff can more easily provide follow-up services to rehabilitated employees.

3M continues to use outside government and private agencies—as coordinated by their own specialist. It is efficient for larger companies. A firm employing fewer than 1,000 people, on the other hand, would be unlikely to need its own in-house program. Smaller companies should contract with private agencies (as we have described earlier) to provide rehabilitation services.

Still, a large diversified company like 3M has need of private rehabilitation services to augment its own. The decision to use outside help is usually made on a case-by-case basis. Such assistance is useful, if not mandatory, for specialized functions outside the expertise of company personnel staff, such as conducting a work-adjustment program. No matter how the tasks are divided, the most important element is teamwork—internal and external services functioning together.

The internal rehabilitation service is of benefit to employee and employer. The employee wants to be compensated while incapacitated and to get back on the job. The employer wants to reduce its insurance rates and keep up production. The objective of both, then, is to have employees who become disabled receive the necessary therapeutic and rehabilitative help, so that they can stay on the payroll and work to full capacity.

To meet that objective, 3M's rehabilitation services include disabled employees, evaluating their abilities and interests, and helping them find jobs that match those abilities and interests. Individuals might be retrained and remain in the same locale or be transferred to a site where there is a suitable opening. (3M has 91 plant locations and 131 sales offices in 45 states.)

The 3M program is run by Paul Ashton and a rehabilitation committee composed of representatives of people-related departments:

- Employee benefits and services.
- Medical department.
- Personnel administration.
- Staffing and employee resources (including recruitment and assessment).
- Personnel resources and research (including testing and evaluation).
- Employee relations.
- General insurance.
- Group insurance and pension.
- Public or private rehabilitation services (temporary, ex-officio, on a case-by-case basis).

The rehabilitation process usually proceeds in five stages:

1. The employee may contact the rehabilitation counselor for help or may be referred by a supervisor, coworker, or family member.
2. The employee is interviewed by the counselor to determine: extent and nature of the disability, additional related problems, work experience, aptitudes, interests, etc.
3. The rehabilitation committee reviews the counselor's assessment and decides how to proceed. Frequently, additional testing is necessary.
4. The counselor reviews the job possibilities for the employee. He wants to determine whether the individual can return to the original job with the aid of special equipment or job modifications. Alternate jobs are assessed to see if they are appropriate for the employee's existing interests and skills. If a match is not possible, the employee is retained.
5. The counselor follows up on the employee's progress in the new job by meeting with the employee and the supervisor. Problems are resolved, or, if necessary, step 4 is repeated to accomplish a better placement.

SOME EXAMPLES

In 1976 Robert Schroeder injured his back and hip at his job on the warehouse loading dock. After analyzing the abilities of this 19-year veteran of the company, 3M sent him to school. There he learned enough to become a raw materials analyst at 3M, earning more (after two promotions) than he did as a warehouseman. The company estimates that it spent \$50,000 on Schroeder's retraining and rehabilitation, kept a good man with the company, and saved \$100,000 in insurance payments that did not have to be made. In fact, 3M estimates that it saved \$300,000 in workmen's compensation payments in the first 18 months of the program.²²

Another 3M employee, Sandy Hanson, was thrown from a horse and suffered a broken back. She was able to return to her position as salary analyst, although she was now a paraplegic. She and 3M made adjustments. She learned to drive a car with hand controls; the company renovated her immediate work area (raising the desk was the major item) to accommodate her wheelchair.²³

Mary Rude was a secretary at 3M for only six months before she developed multiple sclerosis. The disease damaged her nerves and

ruined her finger dexterity. Her counselor, Paul Ashton, was able to place her as an operator of a key-pulse console in the company's telephone services department. She was able to handle the job well with no physical problems.²⁴

SPECIAL AIDS AND SERVICES

3M has something called a "Handivan," which is used to transport disabled employees to and from work and to appointments with doctors and therapists. Vehicles of this type are not uncommon; they have a lower floor and an electric lift to board people in wheelchairs. The company's van can carry six employees, including two in wheelchairs. Drivers are supplied by 3M's mail services department. Motorized scooters are also available to employees with mobility problems.

In addition to these and other aids (e.g., amplified telephones and optacon readers—see Chapter 6), the rehabilitation committee can provide the following services:

1. Family consultation to any member of the family of a handicapped employee who has difficulty adjusting to the situation.
2. Chemical dependency counseling for employees with alcohol or drug abuse problems.
3. Recreational activities—either adaptations to old sports and hobbies or advice on new ones—are encouraged and supported, when necessary, by special equipment.
4. Regular classes in hand sign language for supervisors and coworkers who wish to learn to communicate more fluently with deaf employees. These classes are well attended and in great demand.²⁵

IMPLICATIONS FOR OTHER ORGANIZATIONS

3M has publically offered information on its rehabilitation program to anyone interested. It has received over 300 inquiries from companies and over 700 from institutions, agencies, and individuals. From the volume and nature of the questions and requests, Paul Ashton has concluded that:

1. Internal rehabilitation programs represent an idea whose time has come.
2. Internal programs are probably only efficient for companies that employ over 1,000 people.
3. Private rehabilitation services are a valuable supplementary resource for internal programs.
4. A team approach coordinating internal and external sources is essential.
5. Smaller firms can profitably use private agencies to supply rehabilitation services.
6. An internal program can be cost effective in terms of both expenditures and productivity.²⁵

CONTROL DATA CORPORATION

"HOMEWORK"

Another Midwestern giant corporation (3M is headquartered in St. Paul; Control Data's home is in Minneapolis) has put its own technology to good use for itself and its disabled employees. Control Data has developed a program called "Homework" for severely disabled homebound employees.

Homework is designed to provide, first, training and, then, employment through the technology at the PLATO system. PLATO is a computer-based educational system that utilizes a computer screen and keyboard. A PLATO terminal can be installed in anyone's home and linked to terminals at the office, or nearly any other location.²⁷

The project began in 1978 with 12 trainees who were disabled employees of the corporation. Each had a terminal installed in his or her home. For a year they were trained to become PLATO courseware writers. The trainees proved the success of the venture by writing a course that teaches programmers how to write in Pascal, a computer language.

Control Data was sufficiently pleased with the initial project to begin two more: one will train 14 disabled employees to be business application programmers; the second will teach other disabled workers to become tutors in the rather extensive Control Data Institute (CDI) educational program, which also uses the PLATO system. Thus, CDI tutors (like Carol Anderson, an original course-

writer trainee) can still remain at home and provide instant feedback to students via their terminals in an instruction center.²⁸

William Norris, chairman and chief executive officer of Control Data, believes the Homework concept has a significant future. He points out that "there are more than two million Americans classified as being homebound because of a severe mental and/or physical disability." Further, Norris envisions that the Homework and programs like it "will become an employment alternative, not only for the disabled population, but also the able-bodied."²⁹

Control Data's involvement in social issues—including seeking employment outlets for the disabled—stems from a point of view that might also be of general interest. Again, we quote William Norris:

The time is long overdue when business should take the initiative, in conjunction with government and other sectors of society, in addressing these problems as profitable business opportunities, with an appropriate sharing of costs between the private sector and government.³⁰

SELECTIVE PLACEMENT

Since 1975 Control Data has employed a rehabilitation counselor, much in the mold of Paul Ashton of 3M. Again, the purpose is to rehabilitate and selectively place disabled employees in suitable jobs. The objectives are to not waste human resources, to maintain productivity, and to save on disability payments. (To that last objective, Control Data estimates that its rehabilitation program has saved several hundred thousand dollars.)³¹

Stephen Wastvedt, of the personnel office of Control Data, has provided us with two examples of their selective placement program. The first is an epileptic applicant, whose medication slowed his mental faculties somewhat. Recognizing that his slowness did not negate his basic reliability and competence, the corporation found him a job he could handle—cleaning computer tapes. Since then he has been promoted to process control aid and is doing well.

The second case involves an applicant who was close to a degree in computer science and who had cerebral palsy. Mr. Wastvedt was able to find the applicant an internship, so that he could finish his degree. He became a permanent employee (computer programmer) when Wastvedt was able to locate a position that did not put excessive demands upon the employee's limited communication abilities. The placement is considered a success by both employee and corporation.³²

HUMAN RESOURCES DEVELOPMENT INSTITUTE (HRDI) OF THE AFL-CIO

The **HRDI** acted on a resolution of the Executive Council of the AFL-CIO in 1977 when it obtained a Projects With Industry grant from HEW. At that time Projects were instituted in Birmingham, Alabama; East Chicago, Indiana; Harrisburg, Pennsylvania; and Oakland, California. Later, a grant from the Department of Labor initiated Projects in Detroit, Houston, Kansas City, Seattle, and Norfolk (Virginia).

Each city Project has a handicapped placement specialist to organize training and placement programs for as many disabled individuals as possible. Through May 1980, the nine-city program has placed over 1,700 people. Of these:

- 28 percent had less than a high school education.
- 21 percent were under 21 years of age.
- 40 percent were from minority groups.
- Over 90 percent were unemployed.³³

OBJECTIVES

In each of the nine city Projects, HRDI is attempting to:

1. Develop permanent union jobs for handicapped individuals.
2. Develop training programs to upgrade job skills.
3. Work with community rehabilitation agencies in recruiting applicants and developing training programs.
4. Recruit disabled veterans by cooperating with local veteran's organizations.
5. Encourage unions and employers to adapt jobs and training for handicapped workers.
6. Expand referral sources by linking up with national agencies and organizations.

STATE PROGRAMS

HRDI is working to promote programs for the AFL-CIO state federations as well. The Institute helped develop a million-dollar placement and training program for the Kentucky state federation. In Indiana, recruitment services of the Gary Targeted Outreach Program helped HRDI get five deaf individuals into carpenter's apprenticeship positions. In regional (with more than one state

involved) federation matters, HRDI organized an educational program that involved close communication between vocational rehabilitation officials and organized labor. The goal was to provide opportunities for each group to learn about the other's problems and concerns.

PROGRAM ACTIVITIES

The handicapped placement specialists in the nine Project cities have a variety of activities to perform and coordinate to meet the goals of the program. In sequence they are:

1. Obtain a pool of resources for services. They usually include: the state vocational rehabilitation agency, the state employment service, health organizations, private organizations and agencies, educational institutions, business organizations, unions.
2. Make sure the referrals become job ready. The specialist will work with the agencies in this regard, providing testing, counseling, training, and supplying equipment aids as needed.
3. Survey and analyze the community job needs and job trends. The specialist would identify employers with openings and unions that can help. The specialist might have to provide technical assistance in job modifications and union contract modifications.
4. Aid in placement of applicants. The specialist will prepare applicants for interviews and identify applicants for employers. Unions also are notified.
5. Follow-up on the new employee's progress. Good relationships with the employer and the union need to be maintained to help the new employee adjust and to pave the way for future placements. The specialist can also aid in solving transportation problems of handicapped employees.

WHY ARE UNIONS INVOLVED?

Trade unions have a history of concern for disabled workers. Traditionally the goal was compensation; now the focus is on rehabilitation—perhaps an outgrowth of the recognition that people have psychological as well as monetary needs.

While the unions assert that management has the primary responsibility for placing the handicapped, they recognize that they have an important responsibility to promote acceptance of the handicapped employee by coworkers and immediate supervisors. It is basic union policy that no handicapped person be denied the opportunity of earning a living.

One can speculate that such a policy is in part an outgrowth of the tremendous increase in disabled individuals—both already employed and unemployed. (See Chapter 1.) Statements by the AFL-CIO indicate an understanding that the national economy is advantaged (and thus labor benefited) when disabled people are working, paying taxes, and increasing productivity rather than living on welfare.

The AFL-CIO is aware that some aspects of union contracts involving seniority and sequential promotion (see Chapter 4 under "accommodations") can retard placement of handicapped individuals. The national organization, at least, is dedicated to removing barriers and has pledged flexibility and cooperation.³⁴

In short, unions are involved for the same reason that corporations are involved: it is the right thing to do and it is in their best interest to do it.

We'll look at the program of one major union in the next section.

AMALGAMATED CLOTHING AND TEXTILE WORKERS UNION (ACTWU)

The ACTWU has branches in Canada and the United States with an estimated membership of one-half million—most of whom are employed in male apparel manufacturing, textiles, retail stores, laundries, dry cleaning services, and the manufacture of office duplicating machines.

In 1977 the union received a grant from the Rehabilitation Services Administration to design and test a service program for disabled employees and applicants. The program is analyzed below.

The ACTWU program is designed to meet three goals:

1. To maintain present members in the workforce after disability.
2. To return to the workforce members who have left because of disability.
3. To promote the entry of disabled persons into unionized jobs.

The union developed a model to achieve these goals by stressing teamwork between unions, employers, and rehabilitation agencies. The process consists of four basic functions: case identification, social services, education and publicity, and union-management activities.

CASE IDENTIFICATION

The most effective methods of identifying disabled members have been the in-plant survey of presently-employed members and lists of ACTWU insurance claimants supplied by the union's insurance carriers. Referrals also come from a variety of other sources: shop stewards, employers, coworkers, family members, community agencies, and union health centers.

As of 1979, more than 200 cases had been identified from one of four test sites: New York, Chicago, Los Angeles, and Allentown (Pennsylvania).

SOCIAL SERVICES

At each site a part-time coordinator works with the referred individuals to develop a plan. The process involves several stages:

- Members who decide to participate are interviewed.
- The coordinator attempts to identify all available alternatives of potential benefit to the member.
- The member and the coordinator decide on a plan or strategy.
- The plan is implemented: the coordinator works with rehabilitation agencies, medical staff, insurance officers, and ACTWU business agents—depending on the services needed.

EDUCATION AND PUBLICITY

The union works to disseminate information about disabilities, rehabilitation, and labor's contribution to the process to the membership, to other unions and the AFL-CIO, and to other organizations and interest groups. This function is accomplished by newspaper articles, stories in test-site newsletters, brochures, presentations at union meetings and national conferences, tours for business agents, and direct mailings.

UNION MANAGEMENT ACTIVITIES

Besides the in-plant surveys designed to identify incumbent disabled workers, this component of the program includes accommodations and attempts to hire new disabled workers for union positions. All in-plant activities involved union business agents, who are full-time salaried union staff members.

Accommodations usually have been very simple. (It was discovered early that minor accommodations had been made routinely long before affirmative action.) Accommodations include: altering the height of chairs, making work schedules more flexible, providing a temporary interpreter for deaf workers, and transferring a worker with transportation problems to a shop closer to home.

At present only a few new placements have been made because business in the apparel industry has been sluggish and more workers (with or without disabilities) have been laid off than hired.

Nevertheless, ACTWU's involvement and progress has to be considered a positive trend.

GOODWILL INDUSTRIES/WEST BAKING COMPANY AND ALTA PRODUCTS CORPORATION

We have put these two programs together because they are excellent examples of small companies working successfully with rehabilitation agencies. They also could be applied to the conditions of any number of smaller firms.

GOODWILL/WEST BAKING

We've met Goodwill Industries several times already in this book. Their central Indiana branch has teamed up with the West Baking Company (headquarters in Indianapolis) to create the "Commercial Baking/Industrial Trades Vocational Training Program." The program is a cooperative effort designed to prepare disabled people for positions in competitive industry. The driving force for the program has been Richard West, president of the company and a longtime member of Goodwill's board of directors.³⁶

Although all the training occurs at a commercial bakery, the participants are acquiring the general skills needed to gain employment in many different industrial settings. Participants were evaluated thoroughly by Goodwill before they were accepted into the program. Those trainees who needed them were instructed

in basic work habits, again with the goal of seeking competitive employment in any industrial setting always in mind.

Specifically, the training program consists of:

- 90 percent hands-on experience in an actual industry setting(a bakery)using actual industrial equipment(baking).
- 10 percent classroom instruction in industrial safety, use of tools and equipment, and job readiness.
- Four to six months of working/learning.
- A supervisor to trainee ratio of 1 to 5.
- Instruction in job seeking skills and placement assistance.
- Instruction in basic living skills (e.g., money and time management and health care).

Each trainee works at several different work stations, so that he or she will have been trained in a wide variety of jobs and in the operation of many different machines.

Of course, that general industrial training is accomplished through the specific training acquired from working in the commercial bakery—that is, West Baking Company's fully automated unit that was completed in 1980. The bakery is located about five miles from Goodwill's main facility. It produces English muffins for McDonald's restaurants, but it also has the capacity to produce bread and other bakery specialty items.

Other than some management and supervisory roles, all production work at this West bakery is done by the trainees in the Goodwill program. All trainees earn wages above the federal minimum and are eligible for raises based on their individual capabilities. The training program operates without any subsidy from government agencies. Costs of the program are borne by West Baking Company and Goodwill Industries.

All instruction and training is done by staff from the company or Goodwill. A full-time instructor from Goodwill's rehabilitation department is responsible for classroom teaching, record keeping, counseling, and liaison work with the company. Most of the actual production training is provided by management and supervisory staff of West Baking Company.

After completing the program, trainees are considered to be qualified as:

- Assembly line workers.
- Quality control inspectors.
- High speed, automated packagers.

- Automated machine operators.
- Warehousemen.
- Dough mixers.
- Industrial sanitation workers.
- Shipping and receiving clerks.
- Forklift operators.

And, of course, they were satisfactory bakery employees or Mr. West (whatever his affiliation with Goodwill) would not be continuing with the program.

ALTA PRODUCTS CORPORATION

Norman Friedman, president of Alta, didn't have the same personal involvement with one special agency to inspire his company's interest. As he described it to us, there were several factors to be carefully considered:³⁷

- Alta had heard about the opportunities and advantages of hiring handicapped people from their local bureau of the State Employment Security Office and the Greater Wilkes Barre (Pennsylvania) Employ the Handicapped Committee.
- They analyzed their shoe manufacturing operations and decided that disabled individuals could be trained to do many of the required jobs.
- They inquired of other local shoe industries and were advised that good performances could be expected of qualified handicapped personnel.
- Alta was aware of assistance available within the community from: United Rehabilitation Services, Bureau of Vocational Rehabilitation, "W.I.N." Program, (welfare recipient) Consortium Program, United Way member agencies, and others.
- They made a realistic evaluation of local shoe industry wages and the response to those wages from people on unemployment.
- They made a realistic evaluation of their own ability to sincerely undertake the program.

Alta decided to make the commitment, and over the years they have had many successful employees with a wide variety of

disabilities (hearing loss, partial vision loss, limb loss, diabetes, cerebral palsy, mental retardation, and so on). The company is satisfied with their evaluations:

- The safety record is very good. Alta's ratio is one handicapped employee accident to 25 nonhandicapped.
- Turnover has been well below average. Alta's turnover ratio is one to 30, handicapped to nonhandicapped.
- The productivity has been good. Quality standards are maintained at a rate at least equal to nonhandicapped employees, with average or less than average supervision.
- Attendance has been excellent. Handicapped employee absenteeism is 3.4 percent as compared to a nonhandicapped rate of 13.9 percent.

Mr. Friedman also asserts that handicapped employees have not caused his insurance rates to increase. He reports, as well, that the union cooperates with the rehabilitation services and that the disabled workers participate fully in the union.

Quite understandably, Alta Products is pleased with its program of placing the handicapped.

MCDONNELL DOUGLAS CORPORATION (MDC)

In truth, there is nothing really special about MDC's formal program of employing handicapped individuals. We feature them because handicapped employment is a routine part of their personnel system and because their "informal" program originated with the company in 1940. Our information comes from D.F. Waters', director of personnel, responses to our questions.³⁸

McDonnell Douglas employs qualified handicapped people for the same reasons that we've seen throughout this book: (1) they believe it is good business, and (2) they think it is the right thing to do. According to Mr. Waters, MDC recognizes that there are disabled people who have skills and abilities that would contribute toward the success of the corporation. Since skilled labor is not always abundant where you want it and when you want it, the corporation cannot afford to overlook any element of the skilled labor force, including, of course, handicapped workers.

MDC considers it their corporate responsibility to give at least equal attention to the handicapped population. Like any modern corporation they have an affirmative action program. (It may be that "modern" times will come to be thought of as beginning with affirmative action.) Indeed, they admit that their "formal" program began in 1973 with the legislation we discussed in Chapter 2.

As we mentioned, their "informal" program began in 1940. You'll recall that many companies sought out and accommodated disabled workers in the 1940s, when the labor force returning from war had so many altered components. MCD is aware (as Xerox is aware, as the electronics industry is aware, etc.) that a shortage of *skilled* workers puts us today in an analogous situation to 1945—we cannot afford to overlook any part of the skilled labor pool, or any element that could be effectively trained.

But the longevity of McDonnell Douglas' informal program has another aspect worthy of attention. They have a little difficulty identifying the number of disabled workers they employ. Part of the problem rests with the legal definition of "handicapped" and the increasing willingness of employees to so identify themselves (see Chapter 1). Part of the problem is that with proper selective placement no one is job-handicapped (see Chapter 4).

MDC's best estimate was that they had approximately 2,200 employees who would fit the definition (in 1977), amounting to just about 8 percent of their workforce. To our question about work evaluation, they replied that supervisor ratings of handicapped employees (work output, work quality, work knowledge, work habits, work interest, resourcefulness, attendance, relationships) were slightly into the above average classification.

While McDonnell Douglas looks for handicapped applicants with existing skills, they do make accommodations and they do place people in training programs specific to their needs, and on an individual basis to meet the needs of a particular employee. They rely on outside agencies for general skills training: Missouri Division of Vocational Rehabilitation, National Technical Institute for the Deaf, St. Louis County Special School District (MDC's headquarters is in St. Louis), and others.

Their only special program is also fairly routine: an ongoing seminar for supervisors that is designed to promote understanding of discrimination toward individuals because of race, sex, age, or disability. As they are elsewhere, such seminars are very effective in breaking down some attitudinal barriers—the most formidable kind of barrier.

Still, McDonnell Douglas has a good attitude about employing qualified handicapped individuals. It is just routine.

SEARS, ROEBUCK AND CO.

We've encountered Sears, Roebuck before in this book—mostly through their corporate manager for handicapped employment, Paul Scher. Like McDonnell Douglas, Sears has been involved in employing people with disabilities for a long time, since 1947. Their reasons for involvement sound a lot like MDC's as well.

Sears believes that in competitive industry it is vital to use the skills and abilities of qualified people, whether they be disabled or not. They feel they cannot afford to put up barriers to employment to anyone who might be qualified. Their affirmative action policy statement delineates some other factors:

- The best possible return on the investment of taxes for rehabilitation and employee benefit costs is for disabled people to find productive jobs that allow them to support themselves.
- The disabled are not an alien population; Sears employees are as prone to disabling accident and disease as anyone. A commitment to rehabilitation allows the corporation to retain the benefits of employee experience and talents—without incurring the costs of disability payments.
- The program yields direct benefits to employees and to the corporation.
- Selective placement is the sort of action a good corporate citizen should undertake.

That policy review was adapted from Sears' excellent *Selective Placement Program and Manual*. The Manual is given to Sears managers and supervisors. Its purpose is to:

1. Provide those in management with the practical information required to implement the selective placement program.
2. Describe the procedures necessary to collect information for internal use in furthering the program.
3. Document Sears' compliance with equal opportunity laws.³⁹

Sears stresses early in the Manual that, while the program and the commitment should be anything but secret, the information

about an individual's specific disability is confidential. It may be used only when (1) supervisors or managers need to know about medical restrictions or necessary accommodations, or (2) first aid and safety personnel must be aware of special emergency treatment an employee could potentially require.

In the next couple pages we will describe the Sears Manual, thus demonstrating how the program is implemented. The "how" is what is significant in this case because the process reveals the thoroughness and the commitment that make the program work.

STRUCTURE

Sears' Manual is divided into nine major sections:

1. *Policy highlights.* We've already seen these. Managers are encouraged to use this section in explaining the program.
2. *Recruitment.* Provides sources for and methods of getting good people.
3. *Interviewing/hiring.* A discussion of the whole process, from applications to follow-up. We gave you Sears' application form and interviewing tips in Chapter 4.
4. *Record keeping.* Explains the purpose of the forms and how to use them.
5. *Audits/reviews.* By Sears or by the government—how to prepare.
6. *Affirmative action plan.* The official document.
7. *Unit doctor's guide.* Defines the special cases that require physical examinations.
8. *Accessibility.* The program that lets disabled employees and customers get into and around in the buildings.
9. *Unit formation.* A filing section for the managers: newsletters, bulletins, news stories about handicapped employees, and information about specific disabilities.

It seems to us that this guide has two characteristics worth emulation: (1) It is thorough; (2) It is practical for managers concerned with day-to-day activities.

We'll look briefly at a few topics and subtopics.

EMPLOYEES INCLUDED IN THE PROGRAM

Sears makes a distinction between disability and handicap similar to one that we made in Chapter 1. To use their example: an

amputee is disabled; he would be handicapped in a foot race but should not be handicapped (by artificial barriers) in employment in the retail sales department (as an example).

The point is that Sears' program is for disabled people; handicaps are avoided by selective placement—with job modifications in some cases. And the program is for those people who voluntarily participate. Accordingly, they emphasize self-identification.

- Current employees were given an opportunity to identify themselves through the "Selective Placement Survey."
- Applicants have the program described to them and are invited to identify disabilities.
- When applicants become new employees they, too, have a chance to identify disabilities when completing the "Survey."

RECRUITMENT

Managers are advised that they will have to supplement their usual channels by making contacts with rehabilitation agencies—a general list is provided. They are further advised that that list must be augmented by personal knowledge of local agencies and groups. Managers are encouraged to participate in job fairs and cooperative education programs, both of which allow employers to meet employees personally.

RECORD KEEPING

The "Selective Placement Survey," which all employees complete, contains items that can be coded for disability and accommodation. First, a two-digit number signifying a physical or mental impairment is assigned to a listed disability. Next, a single letter is assigned to represent an accommodation. A disability code of 82C, for example, would signify impaired hearing (82) that required use of special equipment (C). This information is for internal placement records only—and only for employees who voluntarily participate.

ACCOMMODATIONS

Accommodations might be what Sears does best. (Incidentally, for internal record keeping purposes, an accommodation form is completed whenever an accommodation is made for an employee.) Accommodations can be grouped into three major categories:

1. *Use of special equipment:* telephone amplifiers for deaf employees, tape cassettes for training the blind, typewriter shields (they prevent more than one letter being struck at a time) for employees with motor coordination problems, training courses in sign language for supervisors.

2. *Modification of physical facilities:* widening of doors and aisles for wheelchairs, lowering or raising of workbenches or desks, installing ramps, padding sharp edges, providing a dog run for guide dogs for the blind.

3. *Modification of normal job duties, routines, etc.:* establishing flexible schedules for employees who must avoid traffic or regularly take medication, having a sighted employee read for a blind one, have sign language interpreters for deaf employees at conferences.

Most accommodations entail little expense for the employer (many employees provide their own equipment—see 1. above). Paul Scher provided us with a few examples in Sears' history:⁴⁰

- A salesperson with a bad back was transferred from hardware to men's furnishings to avoid heavy lifting. There was no cost involved, but there was an added payroll expense.

- A supervisor with arthritis severe enough to limit work capacity had his job duties modified to let him sit a majority of the time. No cost was involved.

- An installation clerk received an injury to his spine that resulted in paraplegia. His desk is set up on blocks and the only entrance to the building with an accessible ramp is left unlocked for him. He writes in his time on the timecard because the timeclock is too high to reach. No cost was involved in any of these accommodations.

- A sales representative has circulatory problems that require her to be off her feet completely. The job site was modified so that she would not need to stand or walk. There is no ongoing expense to this change.

- A service clerk with impaired hearing was provided with an amplified telephone receiver. There was a one-time expense of \$40.

- A telephone sales representative cannot drive at night because of vision impairment. Her schedule was altered so that

she seldom has to work nights. When she does, her supervisor takes her home. No additional costs were involved.

The list could go on and on. Time, however, to get on to another organization we have met before: TVA.

TENNESSEE VALLEY AUTHORITY

We reviewed the motivations behind TVA's involvement and their admirable rehabilitation system in sufficient detail in Chapter 4. What we would like to do here is describe some of their special programs or accomplishments.

WORKERS' COMPENSATION PROGRAMS

Workers' compensation for civilian employees of the federal government is administered by the Department of Labor's Office of Workers' Compensation Programs (OWCP). In 1977 the DOL formed a committee comprised mainly of TVA and OWCP people to evaluate OWCP procedures. Committee recommendations led to an agreement between OWCP and TVA that has had several beneficial results: It cleared jurisdictional problems, reduced agency overlaps, improved communications, reduced delays in processing benefit payments, and gave autonomy to TVA's placement service. The bottom line is better cooperation between agencies and, subsequently, better service for disabled workers.⁴¹

TRAINING PROGRAMS FOR MANAGERS

The educational focus of these programs is to provide specific information relative to effective employment of the handicapped and to foster positive attitudes about hiring handicapped individuals. Three different programs have been implemented.

- The *top management briefing program* for policy makers defines the requirements of the law and explains the process of accommodation.
- The *personnel officers' training program* gives special instruction in: recruitment, selective placement, interviewing, job analysis, community resources, barriers, relevant legislation, and the positive factors of hiring handicapped workers.

- The *supervisors' training program* specifically explains to first-line supervisors how to select and use disabled workers. It defines in direct terms the supervisor's role and what they need to know about what handicapped people can and cannot do, the nature of various disabilities, what modifications are necessary, and where to go for help.

All three programs are considered effective, but TVA believes the last to be especially valuable.⁴²

COMMUNICATIONS AND ADDITIONAL SERVICES

To make this kind of program work, you have to publicize it and make it creditable. That is, employees and applicants must know what the employer is willing to do for them and believe that the employer will do it. Besides spreading the word, TVA has instituted some services that are designed to instill a feeling that they care.

Career Assistance

In 1977 the personnel division hired a full-time career development specialist with handicapped counseling experience to work with all employees. This specialist provides individualized service, including redirecting employees' career goals when their plans have been derailed by disability.

Classes in Sign Language

The first class was established shortly after TVA began hiring deaf individuals in 1971. It was arranged with the help of the University of Tennessee's special education department and the Tennessee Division of Vocational Rehabilitation. The first graduates of the class (35 people) noticed an improved ability to communicate with and improved attitudes about deaf employees. Classes have continued, and enrollments are increasing.

Information Services

Because the rehabilitation process is most effective if the employee comes to it soon after the disabling disease or condition occurs, the medical services division of TVA publishes an extensive brochure that describes in detail the services available to the handicapped.

Similarly, TVA has developed a complete and up-to-the-minute information and reporting system to facilitate AAP implemen-

tation. The system includes a quarterly report of the medical status of rehabilitating employees. Good record keeping helps prevent employees from being lost in the process and out of the mainstream of work and social contacts.⁴³

JOB SEARCH FOR THE BLIND

Through a Projects With Industry grant from HEW, Patti Kent, placement specialist from the Arkansas Enterprises for the Blind, spent five days in November 1978 at TVA. Her task was to make a survey of jobs that might be performed by visually handicapped individuals (i.e., people with visual acuity of 20/200 or less).

Ms. Kent was able to determine that the following opportunities were available:

- Receptionist switchboard operator.
- Word processor operator.
- Computer programmer.
- Tool room attendant.
- Training officer.
- Personnel recruiter.
- Personnel interviewer.
- Computer operator.
- Career counselor.
- Public information officer.

In sum, the investigator found potential for hundreds of jobs to be available to visually impaired workers. The selective placement office is in the process of implementing her suggestions.⁴⁴

EDISON ELECTRIC INSTITUTE (EEI)

EEI is a federation of independent electric companies. The organization is of interest here because of its attempt to promote affirmative action within its members.

Not long ago EEI organized a "task force" on handicapped employment. The task force surveyed the member companies about their programs.⁴⁵ The response was good (98 companies); the reports were mixed, though mostly positive.

Of these 98 responding, 66 had an AAP for the handicapped, 32 did not. Some of the second group did, however, provide training programs for the disabled. Many Edison companies have done a

good job of adapting facilities for handicapped employees. The survey revealed that they have: lowered desks, restructured rest rooms, cut curbs to accommodate wheelchairs, lowered elevator controls and added braille labels, redesigned furniture and lowered pay phones. Architectural barriers for customers have been removed as well.

One EEI member company, for example, has restructured certain jobs, provided special tools and equipment, conducted surveys to learn which employees know sign language, replaced a keypuncher warning bell with a flashing light for hearing-impaired employees, and adopted a policy permitting handicapped employees to work shorter hours.

In its efforts to encourage hiring disabled individuals EEI's task force conducted a special seminar early in 1979. The seminar probed the issues of: (1) developing medical standards relative to specific positions, (2) meeting legal requirements, (3) establishing good relations with unions, (4) restructuring jobs, (5) training supervisors, and (6) recruiting qualified applicants.

Perhaps the most useful project EEI undertook was to produce what they called a "Working Guide" for member companies to follow in developing their own formal affirmative action program for the handicapped. EEI's materials are not as comprehensive as Sears' (which could enforce specific policies, EEI has to lead and suggest), but the Guide does cover the necessary ground and it does provide precise examples. Topics include:

- A statement of policy.
- Delineation of responsibilities.
- Establishment of job qualifications.
- Reasonable accommodations.
- Outreach and recruitment.
- Internal and external dissemination of policy.⁴⁶

One would expect EEI's efforts and commitment to become increasingly more productive as more member companies become more active and discover the benefits of employing qualified handicapped persons.

PUBLIC PROGRAMS

In this final section we will examine three government-directed or government-sponsored programs that have noteworthy character-

istics. We will look at operations in Harrisburg, Pennsylvania; Indianapolis, Indiana; and Cook County, Illinois.

PENNSYLVANIA: JOB-SEEKING SKILLS

As part of a major effort to generate positions for the increasing number of disabled applicants, the Pennsylvania Bureau of Vocational Rehabilitation (BVR) developed and energized an extensive placement operation. The particular aspect of the operation with which we are concerned involves increasing applicant placeability, specifically the job preparation program.

This program was developed by placement counselors Ronald Kirby and Jack Snodgrass and training supervisor John Miller of the BVR's Harrisburg office. The objectives of the program are to help (usually) already qualified people increase their self-confidence, job-seeking skills, and knowledge of potential employers—all factors requisite to actually getting a job.

The program is similar to those run privately for executives. It is offered monthly for 15 participants in five, one-half day sessions. Placement counselors Kirby and Snodgrass, who run the program with John Miller, keep track of the progress of the participants. If requested by employers, they also do job analyses and make suggestions for job-site modifications.⁴⁷

The job preparation program materials make interesting reading. Participants get a handbook that provides specific guidelines on pursuing a career (knowing yourself, your community, your potential employers, the position you want, and how to be assertive) and resource materials (sources of job leads, lists of employers, problem questions exercises, resumes, job applications, letters, etc.).

But the best parts of the program are the sessions themselves; they give participants guided hands-on experience. The program begins with a statement of philosophy: the responsibility of getting a job belongs to the applicant. Specific session activities follow. They include:

- Making a personal data sheet.
- Developing a potential employer list.
- Using the telephone to make contacts and appointments.
- Completing applications.
- Compiling a resume.
- Keeping a record of employer contacts.
- Preparing for the interview.⁴⁸

Participants are guided through all these steps, **but the essential element is that they practice all of them.** In this way they not only develop essential skills, but they develop just-as-essential self-confidence.

The Harrisburg, Pennsylvania B VR expects the payoff to come in more successful job placements.

INDIANA: COMPUTER PROGRAMMER TRAINING

The Crossroads Rehabilitation Center in Indianapolis has a PWI (now two years old) with the Federal Systems Division of IBM. The corporation utilized a grant from the Rehabilitation Services Administration to set up over a dozen Projects nationally to identify, train, and place severely physically disabled persons as computer programmers. The Project requires cooperation between the rehabilitation center, the state rehabilitation service, IBM, and several members of the local business community.

The Project was established in Indiana when it was determined that the community had a need for skilled programmers. Computer programming is a profession that permits disabled people to function competitively: physical mobility is not a significant element of the job. Considering that the demand is increasing, all graduates of the program are expected to find positions.

Once the Project is initiated, IBM fades into the background and the local rehabilitation agency and the local business people take over. The first step is identification and screening of potential participants at Crossroads—including a one-week vocational evaluation and discussions with professional computer programmers. The second step is the nine-month instruction in computer and programming techniques. The third step is a six-week internship for the participants with an Indianapolis firm or some neighboring Indiana company. The final step is placement.

Throughout this process one sees the invaluable efforts of the Business Advisory Council for the Project. The Council consists of 25 representatives from large central Indiana firms that regularly use computers in their business. The firms include banks, manufacturing concerns, farm cooperatives, public utilities, insurance companies, hospitals, colleges, and state and federal agencies. The Council provides assistance in grant preparation curriculum development, facilities planning, instructional staff recruitment, student selection, and technology.⁴⁹

This intimate cooperation between local businesses and the rehabilitation community makes it worthy of study and emulation. It has also made the program effective.

ILLINOIS: JOB BOUND PROGRAM

The point of our including the following study is to look at an agency under attack. As we shall see, despite budget cuts that will reduce its effectiveness, CETA will continue to function.

The study alluded to was made by the Job Bound Program in conjunction with Morton College and the Cook County (Illinois) office of Manpower Services. It was designed to identify the extent of services to the handicapped population of west suburban Cook County.⁵⁰

CETA exists to serve the economically disadvantaged. Because poverty contributes to disabling conditions (chronic illness, emotional problems, mental retardation), new legislation has targeted disabled persons as eligible under CETA. Thus, the Job Bound Program services CETA participants—that is the connection.

The study found that the Job Bound Program has increased average earnings for handicapped workers at a rate that would allow them to keep up with inflation. The program had a 230 percent increase in referrals—due to the community's awareness of the program's success. It also had a 25 percent decrease in actual services provided (assessments and placements) as a result of budget cuts.

The director of the organization that houses Job Bound (and author of the report), Warren Birch, anticipates that more budget cuts will be made in the assessment and placement programs and there will be a consequent decrease in employment for handicapped and nonhandicapped CETA participants. He hopes that, when the new administration realizes that Job Bound runs a low cost, efficient program that places needy people in unsubsidized jobs, the CETA budget cuts will be restored.

WHAT HAVE WE LEARNED?

We have tried to present a variety of programs of small and large corporations, unions, and private and public agencies that are designed to facilitate the employment of qualified handicapped people. We hope that you've found a model (or models) somewhere that you can use. Any of the organizations mentioned would gladly respond with more details.

It remains only for us to draw some conclusions, to pull together what we have learned from the programs that work.

COOPERATION AND TEAMWORK

When employers and the rehabilitation community work together affirmative action for the handicapped becomes a routine part of doing business. Organizations effectively use all their people at the same time that they conform to the laws. Affirmative action is not a burden.

Our illustrative programs reveal that some organizations have been practicing selective placement for a long time. In some cases the antidiscrimination legislation has simply given them a push to make their programs formal. In other cases, the laws are causing needless worry. As we've said many times, employers could better invest their energy in selective placement than in worry.

SELECTIVE PLACEMENT

Larger organizations typically have their own rehabilitation experts for selective placement. Smaller and medium sized organizations can work with external rehabilitation services to meet their needs. In either case, internal teamwork within the system is requisite.

RECRUITMENT

"Outreach" efforts to get the right person for a job involve knowing what the precise requirements of the job are ahead of time. Job analysis and specific job descriptions are invaluable tools in the selection process. Traditional recruitment efforts will not be enough.

TRAINING

Managers and supervisors must be sensitized to the needs of the disabled population; they must appreciate that disability does not mean inability. In other words, they must have human relations abilities as well as technical skills.

COMMUNITY RELATIONS

Successful programs seem to have a large degree of community involvement, which, in turn, helps to promote a good public image. PWIs are evidence of commitment; that aura of caring is valuable

for the organization's relationship within the community and for the tone of relationships within the organization itself.

ACCOMMODATIONS

Despite their fears, employers have found it both easy and inexpensive to make the accommodations some disabled workers require.

ACCESSIBILITY

No institution is really barrier free, nor will any ever be barrier free given the wide diversity of the handicapped population. However, accessibility to facilities is within easy reach of any organization.

LABOR-MANAGEMENT COOPERATION

Despite the traditional antagonisms, we are beginning to see significant union-management cooperation in selective placement programs. Recent union attitudes and programs are encouraging.

INTERNAL MANAGEMENT PROCEDURES

More and more employers are realizing that their personnel systems, procedures, and methods need to be reorganized and revitalized. Outdated practices and attitudes only create problems. Hiring the handicapped requires more than slogans; it involves a complete audit and internal review. The best way to go about that process is to do it yourself—without the help from government or advocacy groups. And remember, examination and reorganization will be worth the trouble—it will increase efficiency and productivity.

OVERALL HUMAN RESOURCE PLANNING

Rehabilitation is a fairly new area that offers all sorts of exciting opportunities for the personnel division. Personnel executives can take positive leadership roles to meet the needs of the employees and the organization. Human resource managers are adding new dimensions to their jobs. They are the new rising

corporate stars; they are in the mainstream of corporate success. At the same time, they have the opportunity (and the need) to meet the challenge of governmental and societal expectations.

LOOKING BACK: QUESTIONS TO CONSIDER

1. In what respects is PP&L's program with Good Shepherd representative of a good Project With Industry? How is the financing unusual?
2. What does the National Restaurant Association example reveal about what a national organization can accomplish in handicapped employment? Why do retarded individuals often make good food service employees?
3. What are the basic principles of Continental Bank's program? How do they apply those precepts?
4. How does 3M's rehabilitation coordinator make the program work? What are the advantages of an internal program?
5. How does Control Data Corporation's "Homework" program work?
6. Why are unions getting involved in hiring disabled individuals? What have the HRDI and ACTWU programs accomplished?
7. What do the West Baking and Alta Products examples reveal about local, small business programs?
8. Why is McDonnell Douglas' selective placement process worthy of note?
9. What impresses you about Sears' affirmative action Manual? Can any part of their organization be applied to your situation?
10. What are some special services that TVA provides?
11. What is significant about the Edison Electric Institute example?
12. What special programs are the Pennsylvania and Indiana state rehabilitation agencies providing? How is CETA functioning in Cook County, Illinois?

13. What are some of the conclusions we can draw from the programs described in this chapter? Why are so many corporations involved?

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"Getting around independently means to me the realization of that which has been said very frequently by others, that life is movement and involvement and that one needs to be able to move about, in and out, and for me at least, to be self-directing in that movement—to go where I want to go, -when I want to go, how I want to go."

Social scientist blinded in World War II¹

IBM: COMPUTERS AND THE DEAF

In the summer of 1974, IBM initiated a work-experience program providing computer-related orientation to selected deaf college students who were preparing for programming careers.²

There are those advocates who argue that the ability of deaf programmers to concentrate without auditory distractions more than compensates in job performance for the other consequences of their hearing disability. Whether or not this argument is valid, there are few fields involving so many professionals that place less emphasis on the ability to hear than does computer programming.

If this is the case, then why are there so few deaf programmers? Steven Jamison, who documented IBM's program, notes four primary reasons:

1. Relatively few deaf people (compared with the blind or the nonhandicapped) obtain college educations and thus qualify for professional careers.
2. Of those who become college students, many have not been made adequately aware of computer programming as a potential career field.
3. Of those who are pursuing a course of study directed toward programming, many are naive regarding the real work environment for which they are preparing.

4. Of those who do become academically qualified, many encounter greater than usual difficulty obtaining their first programmer's job because of a lack of understanding or biases on the part of many potential employers.

The IBM work-experience program for deaf college students addresses these four factors. It is also an objective of IBM that this program contribute in a meaningful way to the projects to which the deaf students are assigned. In other words, the students and the corporation benefit; the work engaged in is *real work*, the training undertaken is *real training*.

When the decision was made to examine ways IBM resources could be utilized to assist deaf people seeking careers in programming, a number of various alternatives were formulated, assessed, and eliminated before the current program was arrived at. For example, initial plans for a *training* program were jettisoned in favor of a *work-experience* program. In addition, since there were few IBM personnel who were experienced communicators with the deaf, program planners had originally hoped to hire for the summer period a faculty member competent both in computing technologies and communications skills with the deaf.

When the program received management approval, however, it was too late to locate an appropriate technical coordinator. Instead, IBM contacted key people at four major universities serving deaf students: Gallaudet College, Rochester Institute of Technology, California State University at Northridge, and Utah State University. With their help, IBM obtained applications, resumes, and letters of recommendation from eight students. The corporation was able to offer jobs in Palo Alto, California to five of the eight.

Each accepted the position of Student Associate, a designation used by IBM for college students who are preprofessional, temporary employees. The five were paid the standard hourly rate for their positions. IBM compensated the students for travel expenses from their homes to Palo Alto and return; each student was responsible for his housing, meals, local travel, laundry, and so forth. Stanford University Housing turned out to be the most appropriate of the numerous alternatives in and around Palo Alto.

Jamison stresses the fact that it was fortunate for all concerned IBM was not able to locate a technical coordinator to communicate with the students. Why? Since beginning the program, IBM has been convinced that such a work-experience undertaking should provide an environment that represents a close approximation to actual work situations. In particular, the IBM personnel who

managed the summer students found that adequate communication could be achieved without involving a third party in the employee/manager relationship.

Although several people were involved in the administration of this program, the major day-to-day responsibility rested with the individual managers of the departments in which the summer employees were placed. These managers were chosen with care, primary emphasis being given to personal characteristics and good reputations for being developers of people. An important additional consideration was that meaningful work existed in the associated project area that was reasonable to assign to a summer employee.

Most of the IBM personnel involved in the program had little prior exposure to deaf people and only a limited understanding of the implications of deafness. Hence, before the program began, a special orientation meeting was conducted for managers and staff who would be participating, covering such topics as: residual hearing and hearing aids, speech difficulties, and language difficulties. At the request of the managers, similar orientation meetings were held with other IBM staff who would be working with the summer employees. Jamison notes that these orientation sessions greatly facilitated the integration of the deaf students into the various project groupings.

The morning of the first day was devoted to providing the summer employees with an orientation to the program (its structure and objectives), to the IBM Company (its policies and products), to the Palo Alto Development Center (its projects and activities), and to programming generally in IBM. No two students worked on the same project or for the same manager. Hence, the work assignments varied a great deal, although all generally fell under the heading of Systems Programming. Many of the assignments required the student to learn a new programming language (e.g., APL, Assembly Language, or PL/I) and to develop programs in those languages to test the features and performance characteristics of systems programs under development.

The specific work assignments provided the students an opportunity to gain significant experience but were of limited scope. To provide additional breadth and perspective on computing and on IBM, seminars were conducted on several afternoons for one or two hours. An afternoon tour of the IBM San Jose plant site was also included. Two of these seminars were given by deaf IBM employees; interpreters were provided for the others.

Before they terminated their employment, each student received a form on which to comment about various aspects of the work-experience program. At the same time, each of the participating

managers likewise filled out forms evaluating the students and the overall program.

As a result of these experiences reported by students and managers, IBM arrived at the following set of recommendations:

- *Continuity:* The 1974 program was judged to be an overall success by the summer students, their managers, and other administrative personnel associated with it. Therefore, although some "fine-tuning" was in order, the general format of the program should be maintained.

- *Timing:* Approval of the program should be firmed up early in the year. This will provide the time necessary for a more careful selection of work assignments and students.

- *Assignments:* Like most university students taking computer-related courses, deaf applicants for summer employment are likely to have little orientation to systems programming. Since this is a difficult area to learn in a limited time, most assignments should involve applications or those aspects of testing that do not require deep systems knowledge. Care should be exercised in selecting and defining assignments that will provide relevant learning experiences for the student and contribute meaningfully to project objectives.

- *Students:* Prospective summer employees deserve to know more about the nature of the work for which they are applying, and the company could benefit from more input about the applicant. On-campus interviews should be used to facilitate this interchange of information. The personnel department should seek the advice of the identified project managers in the review of applications and the selection of participating students.

- *Management:* Managers should spend the time required to effect good communication with the summer employee: to be sure he understands his assignment and what is expected, to let him know how he is doing and how he could improve, to explain the relevance of his assignment to the project and to the company.

- *Seminars:* Increased care should be exercised in the selection of interpreters for seminars, meetings, tours, etc. The value of these functions is highly dependent on the skill of the interpreter.

- *Communication:* An orientation to deafness prior to the start of the program contributes increased understanding and acceptance. Such an orientation should be available to all people in the selected project areas as well as to the managers.

The overall success of the 1974 IBM program did much to guarantee that it would be repeated. Moreover, several IBM divisions followed suit in subsequent years, employing even more deaf students (11 students were hired in the summer of 1975, and 14 in 1976).

The IBM work-experience program represents one of the best examples of how mutually beneficial the employment of the handicapped can be both for corporations and the handicapped persons hired.

The observation of the blind social scientist quoted at the beginning of this chapter brings squarely into focus one of the most important issues facing not only the blind, but most handicapped persons—*mobility*. By the term mobility, we refer to both *physical* and *intellectual* movement. In the not-too-distant past, the physical and intellectual options available to the physically and mentally impaired were indeed limited. This chapter details how science and technology are broadening those options and making it increasingly possible for the handicapped to pursue new and exciting physical and intellectual goals.

Why is mobility for the handicapped important for managers, supervisors, and others involved in business and industry? The answer is fairly straightforward. Advanced technology, particularly sophisticated electronic aids, are making it not only feasible, but *practical*, for the handicapped to safely and efficiently work in professions and fields considered only a decade ago to be out of the question. For a modest investment in most cases, an employer can purchase technical aids capable of either upgrading the skills and performance of existing handicapped workers, or rendering those jobs formerly placed out of bounds accessible to those disabled individuals who meet other employment criteria.

THE DEAF AND HEARING IMPAIRED

The decade of the 1970s witnessed great innovations in adapting telecommunications so that deaf individuals could equally share in the cultural revolution engendered by radio, telephone, and television. Yet, despite these significant strides, that technological progress has not brought the nation's deaf to parity with the general

community. The average deaf person cannot use the radio, has inordinate difficulties with the telephone, and seldom enjoys television. All too often, the brilliant engineering remains in the laboratory. Companion ingenuity in applying technology to the problems of the deaf has, as yet, not been fully realized.³

One of the reasons for this disparity is an industry failure to recognize how many people require accommodations because of hearing impairments. There may be 1.8 million people unable to hear or understand speech; but there are likely 3 million (or many more) who have lesser hearing problems and need technical help. Noted authorities, Jerome Schein and Ronald Hamilton, assert that a low estimation of this population depresses research, keeps distribution low and costs high, and delays implementation of beneficial technology.⁴

We hope and the industry can watch for breakthroughs in equipment and techniques for the deaf in the 1980s. Before the end of this decade, the handicap imposed on the deaf by the relative inaccessibility to them of telecommunications as now configured can be alleviated or possibly eliminated altogether.

There is, indeed, a great deal going on. In the next several pages we will look at the technology available and the devices soon to come.

BROADCAST TELEVISION AND THE DEAF

There are no technical reasons for the exclusion of deaf persons from participating in the enjoyment of television. Two principal techniques have been developed and are available for making the audible portions of television programming visible. **Captioning** (adding the dialogue in print on the television raster) has the widest appeal. In addition, the dialogue can be visually represented by a **sign-language interpreter** whose image is inserted on the screen. The most common technique today is captioning.

When captions are shown as part of the regular broadcast and appear on all television screens they are called *open captions*. When they appear only on sets equipped with special decoders they are known as *closed captions*.⁵

Open Captions.

Most Americans have seen captions on motion picture screens and on their television sets. Foreign films often print a version of a spoken dialogue near the lower portion of the screen in the appropriate language of the viewing audience, or until the voice track is dubbed in the correct language. Television, too, has used captions. For example, during broadcasts of sports events, relevant

statistics and averages are frequently shown on the raster. In news broadcasts, various headings may be shown over whatever pictures occupy the screen.

No technical problems exist, note Schein and Hamilton, in superimposing captions on the television image. All of the required equipment and techniques are readily available. Captions are not regularly provided for two reasons. First, broadcasters are fearful that captions will be objectionable to hearing viewers, despite the fact that there is very little research in this area to corroborate such an assumption. Second, writing captions for television is tedious and using them involves additional expense.⁶

Closed Captions

In 1974 PBS began experimenting with close captioning. In 1980 shortly thereafter, ABC and NBC agreed to join with PBS in the process.

The closed captioning system makes use of integrated circuitry that permits the decoding of a signal carried on Line 21 of the vertical blanking interval of a normal television signal. The circuitry is contained in a decoder (also referred to as the "black box"), which is either attached to or directly built into the television receiver.

Once retrieved by the decoder, the broadcast signals are superimposed on the picture being simultaneously broadcast. This superimposition allows maximum view of the broadcast images and requires no blanking or matting of the frame. Both the size and font of the caption characters are selected by the broadcast source and adjustment of that signal by the viewer is limited much as the adjustment of the picture quality is limited on most standard home television receivers.

Broadcasting closed signals on Line 21 causes no interference of the regular broadcast. Without a decoder, the captions are invisible. Even with the decoder, the viewer has the option of either displaying the closed captions or not, insofar as the decoder can be turned off while the television set remains on.⁷

Close captioning involves a considerable investment in equipment and personnel. When the charges of maintenance and overhead are included, the price of captioning appears to be prohibitive for all but the networks and a handful of producers. However, the other cost of the system, using Line 21, is currently borne by the intended viewers. Sears, Roebuck and Co. has agreed to market decoders at a price of \$250 for the detached system, which is compatible with any modern day television set, and an additional \$100 over the cost of a new color television set for a built-in decoder.

Sears' considerable network of stores and mail-order facilities (it is the largest retailer in the world) assures extensive distribution and substantial maintenance—crucial factors in establishing this innovation. Nevertheless, since the device is privately marketed, television means somewhat higher prices to deaf people.⁸

TELEPHONIC ASSISTANCE DEVICES

When Alexander Graham Bell invented the telephone, he was searching for a way to aid the deaf. It is ironic that his invention instead greatly increased their handicap. From an interesting and perhaps fascinating novelty, the telephone grew into a virtual necessity, especially in business and industry. Because they could not utilize the telephone as it was originally conceived and developed, the deaf found themselves often excluded from many employment opportunities. The social patterns that emerged in response to the telephone adversely affected the deaf. For almost 100 years, the handicap of being unable to use the telephone went unaddressed and unabated.

Then, in 1965, Weitbrecht invented an acoustic coupler—a means of opening telephonic communication to deaf people.⁹ The acoustic coupler translates electrical impulses into audible signals, and vice versa. By placing the telephone handset in the coupler, the user of this invention joins two teletypewriters (TTY) in a communicative relationship; i.e., what is typed on one machine is reproduced on the other machine, and vice versa. Neither speech nor hearing plays a role in the communication process, thus enabling speech-impaired persons who can hear to also overcome a barrier to telephone use. This telephonic assistance device (TAD) does, however, require reading skills and, at a very low level (at least), some typing ability.

The TTY is not the only telephonic assistance device. Other TADs will be discussed in the following pages; however, because the TTY has gained the greatest of deaf people's attention, the bulk of this section will deal with TTY attachments.

Technological Aspects of the Problem

The design and engineering of a TAD system involves classical human-machine interface problems. The efficacy of a particular configuration depends upon its adaptation to and acceptance by the persons for whom it is intended (and who will have to operate it). Until recently, TAD design has been engineered largely without regard for deaf users.¹⁰ The Western Union TTY was not conceived with the deaf in mind; its utilization by the deaf has by and large

been an afterthought. In a similar case, the Electrowriter was discovered by deaf people, but not designed for them. However, as Schein and Hamilton point out, in the past three or four years, studies of the consumer preferences of the deaf have been initiated. As a result of these studies, new designs have emerged.

Types of TAD

Since the primary concern here is with equipment, the use of interpreters in telephonic communication will not be fully treated. The interpreter can not only translate into visible form what is said at the other end of the line, but can also speak for the deaf person. (A review of ingenious, non-equipment solutions to telephone management by deaf persons can be found in Schein and Hamilton's excellent book; see note 34 for particulars.)

To aid interpreters—any second party who assists the deaf person in making or receiving telephone calls—an additional earpiece can be rented (it is called a Watchcase Receiver). The interpreter listens and either writes, signs, or mouths (so the deaf person can lipread) the incoming message.

Persons who are hard of hearing can benefit from amplifiers built into the telephone. Of course, an amplifier will not be of any assistance to someone who is totally deaf. Many deaf people frequently do, however, have sufficient residual hearing to detect a metal object struck against the telephone mouthpiece. Because of this fact, some experts recommend Morse code as the replacement for speech on the telephone with deaf people. Many telephone companies will provide a Code-Corn, an attachment that blinks a light or vibrates a button in response to the sound introduced on the line. A version of Code-Corn will glow one, two, or three times depending upon whether "no," "yes," or "please repeat" is spoken.

A similar device, the "speech indicator," shows promise. It is small, battery-powered, portable and can be used with any standard telephone. A deaf person with intelligible speech can often predict the conclusion of a sentence from the first part of the coded message being received then verbally complete the sentence and simply ask the hearing party for confirmation. The conversation can thus be accelerated by the deaf person making statements and asking questions. The hearing person taps once for "no," twice for "yes" and three times for "repeat."¹¹

These simple techniques make possible communication with hearing people and do not require the hearing person to have any special equipment. Moreover, the equipment needed by the deaf person is not expensive. There is a disadvantage, however. The expenditure of time in using these devices is typically so great as to

effectively limit their utilization to fairly simple conversations. Users must learn a code, simple or complex, to take full advantage of the equipment. Along with the extended time required, this additional stricture limits applicability.

The substitution of buttons for dials on telephones offers the possibility that the buttons could be used as a keyboard by deaf persons to send and receive messages. Because this keyboard is basically numeric, a coding scheme is needed to transmit alphabetic characters and special equipment is needed on the receiving end to convert the code into readable alphabetic characters. In 1968, Bell Telephone Laboratories announced an experimental device that attaches to the phone and displays each character as it is received (plus the two preceding characters as well). A functionally similar, but completely portable prototype unit, called the **Cybertone**, was also developed in the late 1960s. Two portable, battery-powered units, the **Telelator** and the **Cyberphone**, have also been produced in prototype form.

A remote-controlled typewriter, called the **Cybertype**, and an expanded alphanumeric light display, called a **Cyberlex**, can be attached to the Cybertone to display several letters at one time, thereby easing the fatigue caused by concentrating on one, or at most, three letters at a time. These additions, however, do reduce the portability of the equipment. A similar adaptation to the push-button telephone is also available, but its cost is relatively high and it is not commercially available.¹²

GRAPHIC DISPLAYS

The Electrowriter

The Electrowriter basically is a pantograph connected via the telephone lines to a similar unit. Rather than typing, the person sending a message writes or draws his desired transmission on the immediate unit, which causes the same message to appear on the distant unit. The device employs ink on paper, so a hard copy is made. It requires no special skills to operate, beyond reading and writing. There is a disadvantage with this device, however. The Electrowriter is a very costly investment. In 1980, each unit was renting for about \$50 per month in addition to a rental fee for the telephone to which it must be attached. Where Electrowriters are utilized in industry (often as a means of requisitioning materials) they make feasible the opening of positions for the deaf. When orders are called in over a telephone or loudspeaker, deaf workers

cannot handle the stockroom job, but if orders are written, the deaf stockclerks are not handicapped.

The Picturephone

The Bell System invented a device combining a video image and sound transmitted on telephone lines. The excellent quality of the visual images made conversations by means of signs, fingerspelling, and lipreading possible. (Written or typed copy held up to the camera was not, however, clearly enough perceived on the receiver to permit conversation by that means). Prototypes installed at the National Technical Institute for the Deaf in 1973 have received enthusiastic use by the students. Yet, economics are against the mass distribution of the Picturephone. It requires a 1,000,000 Hz bandwidth; voice transmission, 3,000 Hz. One Picturephone transmission occupies more line capacity than 300 regular telephone calls. For that reason, it is not currently being marketed; however, researchers are pursuing economical modifications.

The Teletypewriter

The term TTY applies to a wide range of equipment consisting of a keyboard that activates and is activated by other TTY when interfaced via telephone lines. Some TTY, like the Western Union versions, produce a paper ("hard") copy. Others have l.e.d. (light-emitting diode) readouts. Still others, like the TV phone, couple with home television sets and display what is typed on the raster. Keyboards differ, and the portability ranges from complete to none. Manufacturers interested in developing a competitive model with which to attract deaf purchasers have looked at each aspect of the TTY in an effort to assess the likely merits and demerits of specific configurations. The following conclusions come from various surveys of deaf persons over the past seven or so years.

Portability

Once installed, the early TTY could only be moved with great difficulty. Deaf people consider portability a highly desirable feature. Of course, being portable within the confines of the home means being lightweight and small. Portability outside the home means having a self-contained power source. Both features (i.e., portability and a self-contained power source) rate highly with deaf adults.

Display

Schein and Hamilton point out that two considerations apparently govern preferences for one or another type of display: legibility and

hard vs. soft copy. A particular TTY output may be preferred because of one or both of these features. The options are between typed copy on paper, light-emitting diode (l.e.d.) displays, and television displays.

Legibility: L.e.d. displays receive the lowest rating among deaf persons. Typically, their luminance is weak; characters are based on six-dot squares; the successive letters received "march" across the display. These features together and separately tend to rate poorly with the deaf. The moving display is also quite short, stressing reading skill, since a word or phrase must be grasped rapidly or its meaning is lost. Typewriter copy is usually most readable, with television displays placing second. The latter also move across the TV faster, but longer lines are possible and more than one line can be programmed to remain on the screen, so the demands on reading speed and constant attention can be lessened. The size of letters, as well as their shape, also influence preferences, with small letters least desired and mid-sized letters most desired.

Hard vs. soft copy: Paper printouts are permanent and preferred by the deaf. Hard copy can provide a useful record for the user. It does, however, involve more expense and maintenance than the other two displays—expenses for paper and inked ribbon, and maintenance of the typing mechanism.

Some experts, Schein and Hamilton among them, speculate that reading skills probably dictate the choice of display. For example, a message typed on paper can be studied by the recipient or shown to another person at a later time in order for it to be deciphered. Light-emitting diode and television displays cannot, unless equipment is added. A tape recorder can be included and a tape of the audible message can then be replayed at will. In addition, a minicomputer can serve the same purpose. Both options, however, involve additional expenditures—the latter being substantially more expensive but also offering other advantages.¹³

Research in Graphics

Congress, in P.L. 95-602, broadened the Architectural and Transportation Barriers Act (which is discussed at length in Chapter 7) to include communication barriers. The new law also specifically calls upon the National Institute for Handicapped Research to undertake research that will lead to improved telecommunications for the deaf.

The nation's telephone companies, led by AT&T, are changing the basis of transmission from wire to optical fiber. Instead of

sending messages via electricity, the new system transmits by means of laser pulses. This development, soon to begin on a large scale, will improve communication for several reasons:

1. Because optical systems code in digital, rather than analog form, they produce higher quality signals.
2. Digital codes permit more precise communication with computers.
3. Optical signals are cheaper to transmit, because (a) they require no intermediate amplification, (b) glass is less expensive than copper, (c) glass fibers carry many more times the messages corresponding copper wires of the same bulk are capable of handling.

The distortion-free, less expensive optical-transmission system means finer telephonic communication for all its users. If for no other reason, then, the research and development required for deaf people to reap some of the benefits from this great advance must proceed quickly and effectively. Otherwise, contrary to Alexander Bell's intentions, the telephone will continue to handicap deaf people.¹⁴

RADIO AND THE DEAF

The common association of radio with speech is so entrenched that the suggestion of joining radio and deafness seems implausible. "Radio," however, actually means the wireless transmission and reception of signals; thus, signals other than spoken words can be transmitted via radio waves. Once that fact is kept in mind, the possibilities of employing radio technology for the deaf begin to come into focus.

In discussing these possibilities, three categories are useful for clarification: paging devices, coding devices, and teletypewriters. These three categories encompass the major variations on the theme of radio telecommunications for the deaf.¹⁵

Paging Devices

A portable radio transmitter can be used to generate signals translated into vibrations by portable receivers located at fairly

great distances (up to a quarter-mile from the transmitter). These signals can be used to page the receiver. For example, a child can be taught to return home when the device begins to vibrate. The remotely activated tactile signalling device has many applications in situations in which the deaf person is out of sight of someone who wishes to contact him. The unit also has obvious value for communication with deaf-blind individuals. The National Technical Institute for the Deaf has prepared an excellent catalog providing details on 18 signalling devices and listing nine suppliers.

Coding Devices

Shortwave operators have to learn Morse code in order to obtain a federal license. Deaf individuals cannot hear the 1,000 Hz or higher tone presently used, therefore they are excluded from such licenses. However, if the tone's frequency is lowered to a point audible to many deaf persons (e.g., 250 Hz), then the deaf person may be able to receive Morse code. Transmitting would be no more difficult for the deaf than for persons who can hear. Thus, by adopting a different and lower frequency tone, some deaf people could use shortwave radio.

Dr. Alan Stewart, director of the Visual Communication Laboratory of the Deafness Research and Training Center, has suggested a means by which this idea could be expanded to include a larger proportion of the nation's deaf population. Instead of a tone, the radio receiver could substitute a pulsed light. This arrangement should be adaptable to the majority of deaf persons.

Adopting the 250 Hz frequency tone would not require the purchase of new equipment, only the modification of existing receivers. Such modifications, Schein and Hamilton note, would be fairly simple. Needless to say, field testing should be conducted to uncover any unforeseen problems, though such problems are unlikely. When tested and perfected, the apparatus to modify existing equipment could be sold as kits for owner installation.

No other problems seem likely to interfere with development of coded transmissions to deaf persons. The National Center for Deaf/Blind Youth and Adults has rigorously tested a wrist-worn instrument called TAC-COM, which responds to radio waves by producing Morse code or braille. In November 1979, the FCC moved to assign two low-frequency radio channels for paging devices to be used by and with disabled persons. These low-frequency channels would also permit TAC-COM transmission.

Teletypewriters

The linking of teletypewriters by radio did not take place until October 1976. The catalyst for initiation of the service—nicknamed "Captioned Radio"—was a grant from the George W. Nevil Trust in Philadelphia. The then-superintendent of the Pennsylvania School for the Deaf, Dr. Philip A. Bellefleur, led a coalition which included Philadelphia Community College, Pennsylvania Society for the Advancement of the Deaf, and Temple University's radio station. To differentiate radio from telephone transmission, the group proposed that the former be referred to as RTTY.

The **RTTY** system consists of a radio station that broadcasts to special receivers connected to a TTY. The initial information is converted, using a TTY, to audio tones that correspond to digital teleprinter information. This signal is then fed via telephone lines to a broadcast point. That broadcast point transmits a signal via FM subcarrier frequency to sites equipped with a compatible radio receiver. At those sites, the reception (which is translated as audio tones) is fed into an acoustic coupler, which drives the TTY in the same manner as if the signal came over a telephone line. The equipment is manufactured by Essco Communications, Inc. and is readily available for purchase.

The station at Temple University has an effective broadcast radius of about 30 to 50 miles. In the initial phase of the program, 650 households in the Philadelphia area were equipped with the special radio receiver-couplers. The Philadelphia RTTY system is essentially a one-way communications network; the radio station broadcasts signals to the receivers, but the receivers cannot contact the station or each other via radio. Feedback to the station and between deaf subscribers is by telephone.

Temple University's station subscribes to the major wire services. As bulletins are received, they are punched on paper tape and combined with other tapes in a program mixer from which the multiple sources are assembled and edited for broadcast. The Philadelphia RTTY invites listener input, resulting in highly personalized news releases. The radio station broadcasts emergency notices, health information, announcements of employment opportunities, and items of particular interest to the deaf community. Broadcasts are twice daily: one hour in the morning, two hours in the evening.

An RTTY information system can be established for a relatively modest price, as compared to the costs for its competing information technologies. The equipping of an RTTY studio, where information is received and made air-ready, can be achieved on a budget as low

as \$15,000 in 1980 dollars. Of course, added to that figure are personnel costs and equipment maintenance. Schein and Hamilton note that the use of a broadcast facility for origination of the subcarrier signal could be handled on a time-rental basis and need not be a large expenditure. Home radio receivers to be attached to acoustic couplers and TTY can be purchased for about \$100. This price contrasts with the \$250 cost of closed-captioning decoders for television sets.

The plausibility of sharing RTTY programs using communications satellites, microwave transmission, or other devices, could serve to further reduce the start-up price to communities and would make more information available to the deaf. Consequently, a considerable amount of vital and interesting information could be obtained by a deaf individual using RTTY at an indeed low cost per unit of information.

THE BLIND AND VISUALLY IMPAIRED

The legal definition of blindness is not what most people understand when the term is used. Some legally blind persons are in fact totally devoid of sight; however, they represent only a minority of the overall legally blind population.¹⁶ In reality, more than 75 percent of the legally blind have considerable useful vision.¹⁷

Nonetheless, in 1976, there were more than 1,500,000 functionally blind persons in the United States. The functionally blind are unable to read a newspaper or an ordinary book even with the aid of corrective glasses.¹⁸ There are more than 500,000 eye operations performed annually in the United States. More than 10 percent of the nation's hospital patients are eye patients.¹⁹ With the creation of Medicare and Medicaid and other forms of medical insurance has come the emergence of thousands of individuals who for years have lived with severe visual handicaps, but who are now seeking (and in some cases *demanding*) help for their conditions.

It has been estimated that some four million Americans have diabetes and they are justifiably concerned that they may one day lose their vision. They want something done about it. The aged, with macular degeneration; the young with amblyopia and strabismus; people of all ages with cataracts, glaucoma, retinal detachments, uveitis, corneal disease, and countless other conditions that have deprived millions of their vision—all of these can no longer be content to accept their condition and their fate without loud,

protracted protest. Moreover, neither can those persons with the gift of sight sit by complacently on the sidelines, for there is a growing awareness that blindness is a clear and present threat, and the public is demanding an intensive research effort to meet it.²⁰

So, what exactly is being done? Quite a lot. While we cannot undertake an exposition on the varied medical research in progress, it is our intention to carefully examine numerous electronic and other technical devices either currently on the market or under development that can make a great difference to the world of the blind.

ELECTRONIC AND TECHNICAL AIDS

The Kurzweil Reading Machine converts printed matter into speech and was designed as a reading prosthetic aid for the blind and visually impaired. The system ordinarily handles books, letters, reports, memoranda, etc. in most common styles and sizes of type. The output produced is a synthetic voice—full-word English speech.

The user operates the device by placing printed material, whether a typed letter or a bound book, face down on the glass plate, which forms the top surface of the Desk Top Reading Unit. The user then presses the "PAGE" button on the control panel and listens to the synthetic speech produced as an electronic camera scans the printed material and transmits the image in a coded electronic signal to a minicomputer within the device.²¹ The computer separates the image into discrete character forms, recognizes the letters, groups the letters into words, computes the pronunciation of each word, and then produces the speech sounds associated with each phoneme.

The user has the option of taking an active role in the overall reading process. For example, at any time he can temporarily halt the machine, cause it to back up one or more lines, and repeat lines or whole sections of a text. The user can proceed through any given text word by word, locate a specific term, and then have that word spelled out one or more times. In this way, the user can more carefully examine words or parts of phrases that he initially did not grasp. The user also has control of the general location of scanning—he can go from one column to another, he can skip whole sections of text, and perform other format-related functions. He can set a mark at a particular point of the page (similar to a two-dimensional tab) by pressing the "SET MARK" key and identify that mark with a number. He can later return to that location by pressing the "GO TO MARK" key and the same identifying number. This is useful, for example, in finding footnotes and then

returning to the same location in the text where the footnote was originally referenced.

The device is intended to allow blind persons to read ordinary printed matter rapidly (up to approximately 160 words per minute), with minimal training required, and without fatigue.

In his presentation before the Science Writers Seminar of Research to Prevent Blindness, Inc., Kurzweil noted that the need for easy access to ordinary printed matter is indeed considerable. Of the nearly 40,000 new book titles printed every year, only approximately 300 are transcribed into braille by the Library of Congress, and only about 900 are taped. Professional materials (journals, textbooks, correspondence, memoranda, etc.) are even less available in braille or talking books.²²

Another electronic reading aid is the Optacon, a compact, portable reading device, which gives blind and deaf-blind persons independent and immediate access to the world of print. Using advanced electronics, the Optacon converts the image of a printed letter into a vibrating tactile form that a blind person can feel with one finger.²³ A wide variety of styles and languages can be read with the Optacon (Optical-to-Tactile Converter) because it reproduces exactly what is printed. The usual step of tape or braille transcription is thus eliminated, providing Optacon users with a new degree of independence and privacy.

To read with the Optacon, the blind person moves a miniature camera across a line of print with one hand. The index finger of the other hand is placed on Optacon's tactile array, which is approximately one inch long and one-half inch wide. As the camera is moved across a letter, the image is simultaneously reproduced on the tactile array by miniature vibrating rods. The reading finger feels the enlarged letter as it passes across the tactile screen. The reader feels whatever image is viewed by the lens of the camera. For example, as the camera is moved across an upper case "E," the reader feels a distinct vertical line and three horizontal lines moving beneath the finger.²⁴

The Optacon is a portable, battery-powered unit. It weighs four pounds and is approximately the size of a small cassette tape recorder. It comes in a leather carrying case with adjustable shoulder strap. The compact unit consists of three integral parts: the camera module, the electronics section, and the tactile stimulator array.

The miniature camera is about the size of a small pocket knife. It contains two tiny lamps and a silicon integrated circuit containing 144 light-sensitive phototransistors (the retina). When the camera is passed over a printed letter, these phototransistors produce

signals that are transformed into electronic impulses. The impulses in turn activate rods in an array, which vibrate to form a readable, tactile facsimile of the original image. The camera lens can be easily detached from the retina to permit the attachment of accessory lenses for viewing a page in a typewriter, a calculator display, or the display of a computer video terminal unit.

The Optacon's tactile stimulator array is made up of 144 miniature rods or stimulators arranged in 24 rows and six columns. Each rod corresponds to a single phototransistor in the retina of the camera.

Several controls are used in operating the Optacon. The *zoom lens* adjusts the magnification of the camera image to compensate for differences in print size. The *stimulator intensity control* adjusts the strength of the vibrations of the rods in the tactile array. The *threshold control* compensates for differences in the reflectivity of inks and papers and affects the apparent stroke width of the letters.²⁵

The Cathode Ray Tube (CRT) Lens Module, Model F1A, is a miniature camera that attaches to the RIC Optacon. This accessory enables the user to read many cathode ray tube displays directly. As the user moves the lens module across the face of the video display terminal (VDT) screen, the Optacon presents the images on the tactile array. *It is primarily utilized by computer programmers and personnel who require the use of a VDT for information retrieval. The CRT Lens Modules are factory adjusted to read characters either larger or smaller than .165 inches (.419 cm).*

The Calculator Lens Module, Model F2B, attaches to the basic RIC Optacon unit and allows the user to directly read the display of many electronic calculators.

The Typewriter Lens Module, Model F3A, permits the user to identify characters as they are typed. The device also allows the blind user to fill out preprinted forms, make typing corrections, and relocate typing position when interrupted. The lens module is designed to fit several models of electric and manual typewriters.

Training is necessary for mastering the skills essential for effective use of the Optacon and for realizing the device's full potential. On the basis of years of research and actual training experience, Telesensory Systems, Inc. developed and refined training courses for both Optacon students and blind and sighted Optacon teachers. The courses are offered in Palo Alto, California, although training is also available at many Optacon training centers throughout the world.

Professional assessment of a potential Optacon user's ability should be made prior to Optacon acquisition and training. Factors

that may influence successful Optacon learning include age, motivation, tactile discrimination, language skills, and motor coordination.

Another device manufactured by Telesensory Systems, Inc. is the **Sonicguide**, an electronic mobility aid and environmental sensor that can enhance and extend the independent travel of blind individuals. Used in conjunction with a long cane or guide dog, the Sonicguide allows safer, more confident, and more efficient travel. As a training tool for basic orientation and mobility, concept and spatial awareness training with children, and low vision training, the Sonicguide improves the user's understanding of the environment and his ability to move through it.²⁶

The Sonicguide works by means of a small transmitter located in a lightweight eyeglass frame that radiates ultrasound (high-frequency sound inaudible to the human ear) in front of the wearer. When the ultrasound hits an object, such as a wall or a tree, it is reflected back to the aid and received by two microphones located just above the transmitter on the eyeglass frame. The ultrasound is then converted into audible sound, which is directed into the ears of the wearer by small eartubes. The audible sound and the eartubes do not interfere with normal hearing and use of natural ambient sounds. These sounds become integrated through use and training.

The microphones are deflected slightly outward so that ultrasound reflected from objects located to either side of the user will be louder in the ear nearest the object. Objects located directly in front of the user will sound of equal intensity in both ears. This process is based on sound localization in normal hearing and is a natural indication of sound direction. The pitch of the sounds heard indicates the distance of an object. Tonal characteristics of the sound heard provide information about the surface qualities of reflecting objects. Hence, the Sonicguide user is able to judge the distance, direction, and surface quality of reflecting objects. The apparatus generally has a useful range of 10 to 15 feet and 30 degrees to each side of center.²⁷

The device's electronic components are contained in a control unit that has an on-off/volume control switch. The control unit is slightly larger than a deck of cards and has a lightweight cord that connects to the eyeglass frame, the detachable, rechargeable battery that powers the aid is located below the control box. It permits approximately four hours of use before a recharge is required.

The Sonicguide User Aid is intended for blind persons who have completed or are receiving Orientation and Mobility (O & M) training with a long cane or guide dog. A period of training under the supervision of a specially qualified O & M instructor is essential

for full mastery of the device.²⁸ Training is preceded with an evaluation and assessment of the individual's current travel skills and travel requirements and his ability to interpret and integrate the Sonicguide as a secondary mobility aid. This assessment is made by a qualified O & M instructor.

The training program is developed on a 30- to 40-hour training model. Each program is appropriately modified to suit the individual's needs.

Sonicguide Instructor Training is generally available to qualified O & M specialists through special university programs and Telesensory Systems, Inc. Course length varies from three to four weeks depending on the established program structure.

An aid similar in purpose to the Sonicguide is the **Mowat Sensor**. This device, small enough to be carried in a pocket or purse, transmits a beam of high-frequency ultrasound into the area the user desires to explore. Objects in or near the travel path are detected by the beam that is reflected back into the device causing the Sensor to vibrate silently. The rapidity of the vibration indicates the distance from the device to the object being detected. The more rapid the vibration rate, the nearer the object. When there are no obstructions within the range of the Mowat Sensor, no vibrations are felt. If more than one object is in the travel path, the device picks up and indicates the closest one.²⁹

The Sensor beam is elliptical in shape with a width of 15 degrees and a height of 30 degrees. This shape, which approximates the human form, enables the user to easily locate a clear path of travel. The narrow 15-degree beam width permits precise determination of the location of objects by scanning horizontally with the device.

A single control switch on the Sensor performs the on-off function and allows the user to select either of two distance ranges. For travel in congested areas, the one-meter range may be selected; or the user may choose the long-range, four-meter setting when traveling in open areas.

The flexibility of the Mowat Sensor permits individuals to readily adapt its use to their own personal travel requirements. The Sensor is designed to complement a primary travel aid, such as a long cane or a guide dog. Its utilization simplifies locating landmarks, doorways, objects of interest (such as mailboxes and bus stops), or a clear path of travel through a crowd of people, construction site, or similar congested area. Other possible applications range from using the device to maintain a place in a line of people to locating a dropped object on the floor or ground. Because

of its silent signal, the Mowat Sensor is practically inconspicuous and does not attract undue attention to its user.

The Sensor can be an effective travel aid for persons with low-vision, including those with restricted fields or night blindness. Inasmuch as the signal generated by the device is vibratory, the Sensor can be of significant benefit for deaf-blind persons also.³⁰ The relative simplicity of the apparatus insures ease of operation by all age groups.

It is important, however, that the user obtain proper training in the use of the Sensor from a qualified mobility specialist in order to gain maximum benefit from the device. Training programs are of short duration and are available in most locations nationwide.

The inability to perform computational tasks precluded most blind persons from applying for many jobs requiring this skill. This unfortunate state of affairs had been the case for years. Now, however, with the **Speech Plus** device (a talking calculator that speaks arithmetic operations as they are being performed) blind individuals can compete with their sighted counterparts for positions that demand proficiency in computing taxes, accounting, purchasing, inventory control, and much more.³¹

The Speech Plus verifies all keystrokes and answers with 24 words from either an earphone or a self-contained speaker. The device is hand-held, portable, and rechargeable. It has normal addition, subtraction, multiplication and division functions; automatic constant; independent memory; floating point decimal; memory swap (with display); change of sign key; and algebraic logic.

Also developed by Telesensory Systems, Inc., Speech Plus uses a keyboard with layout and keys selected for maximum accuracy during nonvisual operation. The device allows *silent* or *announced* entry. Even when the calculator is talking during an announced entry, it will register new keystrokes, it will not ignore them. The calculator automatically abbreviates words if and when entry rate exceeds speech rate. Even during *announced entry* operation, the user dictates entry rate.

Speech Plus uses custom-designed calculator and speech-generating integrated circuits. It comes with print, braille, or cassette instructions. The unit announces low battery and overflow conditions and permits overflow recovery. It has a pull/turn on-off/volume control for volume presetting before use and provides more than three hours of continuous speaking use between recharges. The calculator comes equipped with a battery extender circuit to limit discharge during silent times.³²

The **Canon Communicator**, distributed in the United States and Canada by Telesensory Systems, Inc., is a portable communication aid for non-oral, motor-impaired persons. It can also be used by the blind-deaf and vision impaired.³³

As entries are made on the Communicator keyboard, letters and symbols are produced on a paper tape display, facilitating communication by persons with severely restricted oral or written communication capabilities. For the blind user, the device can be an effective aid in requesting information or assistance from sighted persons, particularly if the blind user is also deaf and must communicate by means of manual signs.

The Communicator is applicable in a wide variety of daily activities in the home, on the job, at school, and at the store. It can facilitate communication with family members or fellow employees, taking telephone messages, completing brief classroom assignments, and requesting information or assistance.

Because it is highly portable, the device can be used in a hand-held format, on a table top or lap tray, or attached to a wheelchair. With the use of an arm belt, the device can be worn on the wrist or, with extension belts, on another part of the body.

The Canon Communicator is compact and lightweight, measuring only 313x85x30mm (approximately 5"x3 1/2"x1 1/2") and weighing 280 grams (approximately 10 ounces). The device is operated from a separate, rechargeable power supply, which fits easily into a pocket or a purse or can be attached to a belt. On a full charge, the communicator will operate for up to seven hours at a printing rate of one character per second.³⁴

The Communicator keyboard permits entry of the alphabet, numbers from zero to nine, and a wide range of punctuation marks. It is arranged in a matrix format designed to maximize accessibility to the characters most commonly used in everyday communication.³⁵ Messages are printed on thermo-sensitive paper tape and can be produced at a rate of up to 10 characters per second. Each tape has the capacity of 12,500 characters.

Two alternative keyboard overlays are provided with each device. The overlays facilitate key location and prevent multiple entries by motor-impaired persons operating the device manually, with a head pointer or other type of selector.

In September 1978, Telesensory Systems, Inc. for the first time publicly displayed its **prototype braille information processor** during the Interagency Conference on Rehabilitation Engineering in Washington, D.C., sponsored by the Rehabilitation Services Administration and the Veterans Administration. The braille processor is a compact, highly portable system that permits the user to read

braille on a 20-cell electronic tactile display rather than on paper. Impulses recorded on a tape cassette control the braille output of the device.³⁶

By writing with the electronic six-key braille keyboard, the user is able to record cassettes quietly and conveniently. A sophisticated microcomputer in the braille information processor enables the user to automatically locate information stored in the files and insert or delete material after a cassette has been recorded. Insofar as the unit also functions as an audio tape recorder, it is possible both to store braille and spoken information on the same cassette.

The paperless braille information processor greatly extends the utility of the braille medium by augmenting the capabilities of the braille user in taking notes, editing and correcting materials, and by reducing the bulk and expense of paper braille.

Paperless braille is a dramatic development, which opens new dimensions in written communication systems for blind people. A crucial initial step in the production of a prototype braille information processor was the development of an electronic braille display. This research was supported by a grant from the Rehabilitation Services Administration to the Smith-Kettlewell Institute of Visual Science of the Institutes of Medical Sciences in San Francisco. Actual development of the display was subcontracted to Telesensory Systems, Inc. by the Institutes of Medical Sciences. Successfully completed in June 1978, this project resulted in the development of a 20-cell braille display.³⁷

Braille information stored on a cassette tape is displayed for the reader on the 20 braille cells. As the reader finishes the last word on a line, the advance bar is pressed to display the next line. This feature permits readers to proceed at their own pace. Following a period of machine familiarization, reading speed on the 20-cell braille display can be comparable to paper braille reading rates.³⁸

Each line automatically concludes with a full word. Words are never split and displayed on two sequential lines. This feature, controlled by the processor's microcomputer, helps to eliminate reader confusion and can thereby increase reading speed.

Literally hundreds of pages of braille text can be stored on a single tape cassette. This advantage means a typical paper braille dictionary requiring dozens of volumes could, if recorded on tapes, be easily stored in a desk drawer.

Braille publishing organizations worldwide are seriously considering the production and distribution of prerecorded cassettes containing a variety of publications. The significant cost reduction associated with paperless braille, as compared with paper braille, means that publishers will be able to produce many times the

amount of braille information for the same production costs. Braille users will greatly benefit from the increased availability of literature in this new paperless form.

Because this device is so revolutionary and possibilities for its application seemingly endless, its various features are listed below:

1. Compact, operates on rechargeable batteries (battery charger included).
2. Complete six-key braille writing capability.
3. Advanced electronically-activated braille cells.
4. Braille cell dimension identical to standard braille.
5. Solid-state buffer memory with 1,000 character storage.
6. Full page (1,000 character) immediate editing capability.
7. Computer-grade digital electronic tape transport.

In addition, the paperless braille information processor includes state-of-the-art computer storage techniques, braille reading on a 20-cell line, audio record and playback capability, input/output connector for future attachment of accessories, and microcomputer-controlled automatic location of stored information by topic—thereby eliminating the need for a tape footage counter.³⁹

With the electronic braille keyboard, the information processor can be operated as a braille writing system. Because the arrangement of the keyboard is similar to that of the traditional mechanical braillewriter, the braille user can quickly become familiar with the paperless braille system. Moreover, writing with the device can be faster and less fatiguing than with a mechanical braillewriter. The electronic keyboard operates silently and easily, thus reducing the stress and fatigue factor. The quiet keyboard also enables the user to work inconspicuously, without distracting others.

Professional reports, educational papers, letters, diaries, and appointment schedules are only some of the examples of the many items that can be written and stored on tape. The editing function of the device will enable the user to easily update and revise materials as this becomes necessary. Several features of the information processor make it especially appropriate for the professional person. The braille and audio note-taking capabilities are particularly useful for meetings and conferences. The editing function is helpful for speech and report writing (there may also be applications for the device in the journalism profession, if it can be adapted to the growing number of video display terminals gracing more and more newsrooms). The indexing capability permits rapid access to files, names, addresses, phone numbers, and important meeting sched-

ules and agendas. Extensive information systems can be filed, accessed, and updated quickly.⁴⁰

The following employers have blind employees who use Telesensory Systems, Inc. aids to help them meet the demands of their jobs: Air Products, Inc., Arthur D. Little, Bank of America, Bank of Rome (Italy), Blue Cross/Blue Shield, Boneville Power Administration, Boy Scouts of America, British Columbia Hydro, California 1st National Bank, Citibank of New York, Civil Service Commission, Control Data Corp., Cummins Engine Co., Digital Equipment Corp., Dow Chemical Co., E.I. du Pont de Nemours & Company, Fair Employment Practices Commission, Family Service Association, Fireman's Fund International, General Foods, General Motors, Grumman Aircraft Corp., Hartford Insurance Corp., Hewlett-Packard, Hughes Aircraft, I.B.M., Internal Revenue Service, John Hancock Mutual Life Insurance, Kroger Foods, Mack Trucks, Inc., Mead Corporation, Michigan State University, Miles Laboratories, Montgomery Ward, NASA, Ohio State University, Pacific Northwest Bell, Pacific Telephone, Philips (Holland), Polaroid, Procter & Gamble, Provident Life Insurance, Sears Roebuck & Co., Security Pacific National Bank, Siemens (Germany), Smithsonian Institute, Social Security Administration, Tektronix, Inc., Travelers Insurance, United Airlines, University of Wisconsin, U.S. Department of Labor, U.S. Geological Survey, Veterans Administration, Wells Fargo Bank, and Xerox Corporation.⁴¹

OTHER ELECTRONIC AIDS

The Pathsounder

This device is approximately the size of a camera and is worn suspended from the neck by a strap. The Pathsounder is used in conjunction with a cane and provides a warning of forthcoming objects or obstacles several steps beyond the reach of the cane. Obstacles are indicated by audible tones. In terms of its operation, this device in principle is very similar to the Mowat Sensor, except the Sensor vibrates to warn its user of impending objects.⁴²

Ray's Ultrasonic Spectacles

Almost identical in principle to the Sonicguide, this device consists of a modified eyeglass frame containing ultrasonic sending and receiving components. The frame is connected to a pocket-carried electronics and battery package. The device transmits an assortment of high-frequency sounds corresponding to the sizes and object surfaces it encounters. The information is then relayed to the blind user via two plastic tubes, one for each ear.⁴³

The Laser Cane

This is a specially designed long cane that transmits pencil-thin beams of light to detect overhanging objects, obstructions up to 20 feet ahead, and alterations in terrain (e.g., curbs, manhole covers, etc.). The Laser Cane alerts its user by means of a vibrating pin in the handle or audible signals. Although the cane can provide a safe path, it gives no details about the surface type or texture of impending objects.⁴⁴

The Seeing Aid

Mounted entirely on an ordinary eyeglass frame, this device operates similarly to the laser cane. The Seeing Aid projects a narrow beam of infrared light in front of the user's head. When an object is detected, some of the light is reflected back into the receiver. A signal is sent to the user through a thin plastic tube placed in the ear.⁴⁵

Recording for the Blind

RFB's singular role is to reproduce all manner of educational books aurally and make them easily available to blind listeners as comprehensible tape recordings in open reel and cassette form. An RFB book is supplied on request either as a complete copy of one of the more than 30,000 titles currently recorded and stored in RFB's master tape library, or as a book newly rendered and dispatched a section at a time from one of RFB's 27 recording centers located in 15 states.⁴⁶ RFB also serves students who cannot read due to physical handicaps other than blindness (e.g., cerebral palsy, multiple sclerosis, and dyslexia).

The Automated Typewriter

Johann Schopper, a German teacher for the blind, devised an instrument that permits blind typists to follow the printout of automated typewriters. The device enables the typists to insert additional material as it is needed. A braille tape emerges from the instrument that indicates where inserts are to be made and lets the blind operator know if the automated typewriter made a mistake anywhere. Meanwhile, the typewriter continues to operate normally so sighted persons can also use it.⁴⁷

ACTUAL CASES

Particularly in today's business community, the difference between finding employment and not finding employment gener-

ally revolves around the ability of the employee to work reliably, efficiently, and independently. Many blind persons are currently able to successfully meet the expectations of their employers with the help of electronic sensory aids.

The most effective way to illustrate the difference (and advantage) such aids can make for the blind, and for employers who have hired or are contemplating hiring blind workers, is to cite a few actual examples.

Case 1

Jim Stevenson is a statistician for the National Aeronautics and Space Administration in California. Stevenson, because of his blindness, uses the Sonicguide to move about his workplace. Asked about his aid, Stevenson said: "From the first time I saw it, I knew it was helpful...I can travel around at work better and more confidently."

Case 2

Despite being blind, James Slagle earned his Ph.D. in mathematics from the Massachusetts Institute of Technology. He is currently recognized as one of the nation's leading research mathematicians in his capacity as head of the Heuristics Laboratory in the U.S. Department of Health and Human Services. Slagle also teaches at Johns Hopkins University. He credits much of his success to Recording for the Blind, Inc., which even today continues to supply him with the highly technical recorded reading materials essential to his work.

Case 3

Laura Sloate has been blind since the age of six. She graduated from Barnard College and earned an M.A. degree from Columbia University. Laura then literally "broke into" the securities business and acquired five years of experience among skeptical colleagues. She currently owns a seat on the stock exchange and is rated as one of Wall Street's brightest money managers. Laura has written: "I owe a great deal to RFB for the solid educational grounding that was so essential in preparing myself for a place in a highly competitive profession."

Case 4

Jane Powell is a telephone service representative for the Internal Revenue Service in Maryland. She uses the Speech Plus talking calculator to perform many of the functions associated with her job.

She explained: "The good part of this is that you can do the math without having to worry about your errors...when you're computing someone's tax return, you've got to be accurate."

Case 5

Ellen Robertson is a social worker for the Veterans Administration in New York. She spends much of her time handling printed material and therefore uses the Optacon device. Asked her assessment of the aid, Ellen said: "It's absolutely essential. I wouldn't give it up for the world...I would say that the Optacon was the difference between getting a job and not getting one."

Case 6

Paul Filpus had been a construction engineer for eight years until he lost his sight in a car accident. After a year of training he began work as a computer programmer at Miles Laboratories, Inc. in Elkhart, Indiana. He gets his computer printouts in braille through installation of a braille translator software system into the operating system. The only additional hardware required was a piece of garter elastic that could be mounted on the print chain to provide the soft backing needed to emboss the braille.

In his nearly 10 years with the company Paul has used an Optacon, a braillewriter, tape recorders, and a card reader. He has often taken advantage of RFB's voice recordings services. Mr. Filpus asserts that a blind person can function as a computer programmer if he is aware of his limitations, uses the proper technical devices, knows when to ask for help, and has the proper training. We might add that the cooperation of the company (which knows it is getting a top-flight employee) and the character of the blind person are also important.

THE ORTHOPEDICALLY HANDICAPPED

Tom Meath spins away from his office phone, leaving in his typewriter an unfinished report. Fulfilling a requirement for his Master of Science degree in rehabilitation counseling, Tom is on his way to another bedside interview with a patient in the Veterans Hospital at Castle Point, N.Y. He is hoping his specialized knowledge and physical presence will help the disabled man he is about to visit.

Custom-made steel devices have taken over most of Tom Meath's muscular functions since he was afflicted with polio at age 10 in 1951. Tom went to school by telephone while an iron lung kept him

breathing. Over the years, improved devices and electronic systems have permitted him to do more—attend two colleges and prepare himself to earn a living, although he can only move his mouth and eyes.⁴⁸

More than anyone else, Donald Selwyn has been instrumental in making Tom mobile enough to put in a tough eight-hour working day. An electrical engineer and executive director of the National Institute for Rehabilitation Engineering, Selwyn is an expert in amplifying or directing any mobility a client may have so he can perform usefully. Having taken machine shop courses, Selwyn hand makes the equipment for the disabled persons who come to him.

Inventively adapting mass-produced items for assembly into custom-made aids for the handicapped, Selwyn's institute attracts volunteer helpers from various professions and fields—doctors, designers, engineers, businessmen, and machinists.

"I have a drill press, a milling machine, welding equipment, a bench grinder, a band saw, and a bending brake," Selwyn says. "I work mostly in steel because it's the easiest material to handle. From a single source I can get strength, resistance to body acids, formability, smoothness—most of the properties I need. If I could stockpile about 2000 standardized subassemblies and the steel to put them into useful form, I could reduce the cost to the handicapped. Tom Meath's chair was costly to build."

At the National Institute for Rehabilitation Engineering, where Tom's battery-operated, computerized wheelchair was designed, 3,600 different devices can be modified to suit the individual's needs. Tom, for example, uses an ordinary typewriter, telephone, and tape recorder, but with steel attachments. He operates them by either a long stick held in his mouth, or by remote-control—puffing or sucking on the same tube that actuates his chair.⁴⁹

To discover a handicapped person's needs, the institute goes into the individual's home and/or office. For Mrs. Barbara MacIver, confined to an iron lung, the institute provided a control system that answers her telephone, works her color television, turns her radio and lights off and on, and signals her nurse. For the disabled worker, a control system may be provided right on the wheelchair that can switch lights on or off, open or close doors, answer or make telephone calls, turn the pages of reference books, operate a remote-controlled typewriter, and so on.

The institute tailor-makes special car controls for the handicapped. Thus, a man whose arms are paralyzed can operate his vehicle with foot pedals. On the other hand, a woman with both legs and an arm paralyzed operates her auto by controls built into the

steering column. The institute has developed other ingenious devices: an electronic speaker, invented by Selwyn, that unscrambles the speech of a person with cerebral palsy; an automatic feeding machine that stops a rotating plate and lifts a food-laden spoon to the user's mouth; a typewriter with recessed keys for the spastic; and special typewriters for typing with the toes.

Doris Brennan doesn't want very much—just to be able to turn on the television set, adjust the volume control on her radio, or turn off the lights in her home. Ever since she was paralyzed in an auto accident, she hasn't been able to do even these simple tasks. Thanks to modern electronics, however, there is a way.⁵⁰

A device called an environmental-control system, approximately the size of a stereo turntable, can greatly expand the physical capabilities of quadriplegics like Miss Brennan. Yet, as hopeful as this development is, there is one essential problem. The device that could extend Miss Brennan's physical range is priced out of her reach at over \$3,000.

Such are the somewhat mixed blessings for the handicapped as a result of the semi-conductor and microprocessor revolution. It has engendered the development of a number of elaborate devices, but because research and marketing costs are so high and the potential sales relatively small, prices of the devices tend to be well above those for mass-produced equipment of comparable technical sophistication. Prices can range as high as \$15,000 for the most elaborate devices.⁵¹

Despite the high costs, much has been done to assist the physically disabled. For example, the Chicago City Colleges began a unique program in January 1979 to train orthopedically handicapped adults for careers in computer programming. The interesting aspect of the program was that students accepted into the course learned computer programming in their own homes by means of remote access terminals on line to an IBM computer.⁵²

The Homebound Computer Training Program was designed to train severely physically disabled adults and place them in jobs as quickly as possible upon completion of training. A spokesman for the Chicago City Colleges said the goal was to help students who had been homebound and unable to find work successfully locate a satisfying career that would pay an excellent salary and, he hoped, take them outside the home. The course was the result of a pilot program started in 1975 in cooperation with the Illinois Division of Vocational Rehabilitation.

Students who have become successful programmers include paraplegics, quadriplegics, and persons with muscular dystrophy, spinal bifida, multiple sclerosis, and cerebral palsy. In addition to the home tutoring offered each student, supplementary assistance

includes a one-day seminar, self-study programs on video tape, audio tapes, programmed instruction books, and consultation with instructors. Home remote access terminals were adapted to the physical needs of the data processing students, who also had access to the other electronic and microprocessor aids.

The program, which is still in existence, is open to any severely physically disabled adult with the motivation, interest and aptitude for computer programming. "We've proven severely physically handicapped persons can become successful programmers, so we are expanding our program to serve more people and provide business and industry with qualified personnel," instructor John Longstreet said.⁵³ Most individuals enrolled in the program also qualify for subsidies through the Illinois Division of Vocational Rehabilitation that cover tuition, supplies, computer access terminals, and transportation.

There are similar efforts being made throughout the country. The authors are confident these efforts will continue and multiply.

Technological innovations are continuing to evolve. Keeping abreast of the developments will become increasingly important. The agencies listed in Appendix 2 are valuable sources of information in this regard.

LOOKING BACK: QUESTIONS TO CONSIDER

1. What are some of the aids available to the seeing impaired?
2. What are some of the aids available to the hearing impaired?
3. How do you think it's possible for a blind person to function efficiently as a computer programmer?
4. Is there a sizeable market for telecommunication devices for the deaf?
5. What is a telephonic assistance device? Are there industrial applications for such devices?
6. What are the implications of the IBM Work-Experience Program for your organization?
7. What sort of devices are available to the orthopedically handicapped?
8. Are there jobs in your organization that a handicapped person, with the assistance of a technological device, could perform?

9. Do you presently have handicapped workers using technical aids?

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CHAPTER 7

Logistics and Accessibility: Programs and Facilities

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"For the disabled, transit is the key issue. All your basic rights rest on the assumption that you're mobile. You can be rehabilitated. You can be educated. But if you can't get out of your home, you're in prison. You start to shrivel—psychologically, mentally, physically. You become a prisoner in your body. It's devastating."

—George Lloyd, quadriplegic¹

In Chapter 2, we carefully examined those laws and regulations (Sections 503 and 504 of the Vocational Rehabilitation Act of 1973 and the Vietnam Era Veterans Readjustment Assistant Act of 1974) that protect handicapped persons capable of carrying out particular jobs if reasonable accommodations are made for their handicaps. Making reasonable accommodations has been interpreted to include making facilities accessible to individuals with physical limitations. This has frequently meant the elimination of architectural barriers that otherwise prevent some handicapped persons from performing fully and safely in the work environment.²

In this chapter we will explore some major issues associated with accessibility and transportation and examine their relationship to employment. We will describe the accessibility standards that have been required to this point and provide employers with a means of evaluating their internal accessibility. Finally, we will suggest the role of employers in pushing for better public transportation.

In order to accomplish accessibility in the workplace, an understanding of barriers is the first priority. A step into the company entrance is an architectural barrier to those individuals who are mobility impaired. Likewise, the absence of an elevator in a multi-stored office building. Revolving doors are barriers to those confined to wheelchairs. The lack of braille floor indicators in an elevator can be a barrier to the blind. In other words, architectural barriers come in all shapes, sizes, and degrees.

So, what are the basics or essential fundamentals of accessibility? Let's state the case simply. Disabled job applicants should be able to get in the employer's door to apply for a position. Under affirmative action obligations, the job application process must be accessible. Interview sites, if they are inaccessible, must be made accessible or moved to insure that handicapped applicants have access. Any pre-employment testing and tryouts (which are permitted under the regulations for job-related purposes only) must be held in accessible locations and must be in a form that is usable by the handicapped applicant, e.g., braille or oral tests for blind job seekers. It is also expected that accessible parking and toilet facilities will be available for handicapped job applicants.

Sections 503 of the Vocational Rehabilitation Act of 1973 and 402 of the Vietnam Era Veterans Readjustment Assistance Act of 1974 do not require contractors to make their overall workplace accessible. However, once they have provided for an *accessible personnel process*, employers may also need to pinpoint barriers in other areas of the facility. Under 503, handicapped employees are entitled to access to those areas widely used by other employees during the course of the work day. Whether companies commission a consulting architect, an in-house engineer, or a local disabled consumer group to survey the work facility, a close inspection should be given to all major work areas, eating facilities, vending areas, hallways, conference and meeting rooms, parking areas, etc.³

How much does accessibility cost? Employers have traditionally feared that architectural modifications would cost them a considerable investment of capital. Nonetheless, recent studies have indicated that accessibility need not be expensive in many cases, particularly when creative space management and cost-effective modifications are utilized.

The specific area where a handicapped person works must be accessible. Some of the particular factors that should be examined include: door width; door threshold; lighting; thickness of carpeting; floor surface (slippery and nonskid); elevator access; height of water fountains; space between desks, machines, and other equipment; and accessibility of supplies, research materials, file cabinets, etc. We will pay closer attention to these specific areas later in this chapter when we assess and compare General Services Administration (GSA) standards for accessibility with those of the American National Standards Institute (ANSI).

Before proceeding, however, it should be noted that under Sections 503 and 402 contractors are not obligated to make accommodations if the changes would impose undue hardship on the conduct of the contractor's business. In fact, in determining the extent of a contractor's accommodations obligation, two factors are taken into consideration: (1) business necessity and (2) financial cost and expenses.

Later in this chapter, we will examine the role of transportation in the overall accessibility equation. For the moment, however, we turn to a more detailed appraisal of *internal* or in-plant accessibility.

BARRIER FREE DESIGN AND THE ANSI STANDARDS

An architectural design that is truly barrier free is devoid of all barriers that would hinder access or functioning of the handi-

capped and nonhandicapped, the extremely young and the extremely old. Section 503 mandates reasonable accommodation (in other words, *accessibility*) at the work site, but not a barrier free workplace.⁴ For example, in a metal manufacturing plant, the jobs on the pot lines (which would be hazardous to persons with severe disabilities) would not normally be considered open to employees with serious physical handicaps. Therefore, if the safety factors precluded employing handicapped persons, it would likewise follow that restrooms in that particular area of the plant need not be made accessible to the disabled, although technically they may have architectural barriers. To state it simply, Section 503 calls for the elimination of specific barriers, not all barriers.

The building codes enforced in many of the nation's cities are based on the American National Standards Institute's A117.1-1961 (R197), *Specifications for Making Buildings and Facilities Accessible to and Usable by the Physically Handicapped*. The ANSI standards, which include building specifications for restrooms, parking areas, walkways, ramps, entrances, elevators, floors, water fountains, and much more were superseded in November 1980 by the new General Services Administration Architectural Barriers Act standards.⁵ These new standards, which apply to the design, construction, and renovation of federal facilities, are (according to the GSA) "more enforceable, clearer and up-to-date" than the ANSI standards. The GSA standards, however, were only temporary. They were issued with a July 1981 expiration date. The GSA is awaiting the accessibility guidelines soon to be published by the Architectural and Transportation Barriers Compliance Board, to which it will be subject, before it issues permanent accessibility standards.⁶

Nonetheless, for our purposes, it is worthwhile to first examine the ANSI standards and then focus on the GSA revisions.

In May 1959, the American National Standards Institute, responding to a request from the President's Committee on Employment of the Handicapped, called a general conference of those organizations and groups vitally interested in the problem. This conference recommended the initiation of a standards-development project, which was subsequently approved by the Construction Standards Board. The President's Committee on the Employment of the Handicapped and the National Easter Seal Society for Crippled Children and Adults were designated co-sponsors, and the latter agreed to assume the Secretariat. *American National Standard Specifications for Making Buildings and Facilities Accessible to and Usable by the Physically Handicapped* (ANSI A117.1) was approved in 1961 and reaffirmed in 1971. In 1974, the U.S.

Department of Housing and Urban Development joined the Secretariat and sponsored two years of research and development in order to revise the standard and extend it to include residential environments. This work resulted in ANSI A117.1-1980.⁷

The purpose of the ANSI specifications was to make buildings and facilities accessible to and usable by people with such physical disabilities as: the inability to walk, difficulty in walking, reliance on walking aids, sight and hearing disabilities, incoordination, reaching and manipulation disabilities, lack of stamina, difficulty interpreting and reacting to sensory information, and extremes of physical size.⁸

The scope of the ANSI standards extended to:

1. The design and construction of new buildings and facilities, including both rooms and spaces; site improvements; and public walks.
2. The remodeling, alteration, and rehabilitation of existing construction.
3. Permanent, temporary, and emergency conditions.

The ANSI standards were intended for adoption by governmental building regulatory agencies at the federal, state, county, or community level. They were devised to achieve uniformity in the technical design criteria in building codes and other regulations enforced by these authorities. In addition, the standards were available for use by nongovernmental parties as technical design guidelines or requirements to make buildings and facilities accessible to and usable by disabled persons. They provided minimum specifications for accessibility and usability of buildings and facilities, but they did not establish which occupancy or building types were covered or the extent to which each type was covered.

Listed below are some of the ANSI accessibility standards:

Accessible Sites and Exterior Facilities (minimum requirements):

- (1) At least one accessible route shall be provided from public transportation stops, accessible parking spaces, accessible passenger loading zones if provided, and public streets or sidewalks to an accessible building entrance.
- (2) At least one accessible route shall connect accessible buildings, facilities, elements, and spaces that are on the same site.
- (3) All objects that protrude from surfaces or posts into circulation paths shall not reduce the clear width of an accessible route or maneuvering space.
- (4) Ground surfaces along accessible routes and in accessible spaces shall be stable, firm, and relatively nonslip under all

weather conditions.

- (5) If parking is provided, a reasonable number, but always at least one, of parking spaces and access aisles shall be available to the handicapped.
- (6) Stairs connecting levels that are not connected by an elevator shall have uniform riser heights and uniform tread widths on all steps; shall have handrails at both sides of all stairs; and the undersides of nosings shall not be abrupt.
- (7) All passenger elevators shall be on an accessible route. Elevator operation shall be automatic. Each car shall be equipped with a self-leveling feature that will automatically bring the car to floor landings within a tolerance of 1/2, in (13 mm) under rated loading to zero loading conditions. This self-leveling feature shall be automatic and independent of the operating device and shall correct for overtravel or undertravel. Call buttons in elevator lobbies and halls shall be centered at 42 in (1065mm) above the floor. Such call buttons shall have visual signals to indicate when each call is registered and when each call is answered. Call buttons shall be a minimum of 3/4 in (19 mm) in the smallest dimension. The button designating the up direction shall be on top. All elevator hoistway entrances shall have raised or indented floor designations provided on both jambs. The centerline of the characters shall be 60 in (1525 mm) from the floor. Such characters shall be 2 in (50 mm) high. Permanently applied plates are acceptable if they are permanently fixed to the jambs. Elevator doors shall open and close automatically. They shall be provided with a reopening device that will stop and reopen a car door and hoistway door automatically if the door becomes obstructed by an object or person. The device shall be capable of completing these operations without requiring contact for an obstruction passing through the opening at heights of 5 in and 29 in (125 mm and 735 mm) from the floor. Door *reopening devices* shall remain effective for at least 20 seconds. After such an interval, doors may close in accordance with the requirements of ANSI A17.1-1978 and A17.1a-1979. The minimum acceptable time for notification that a car is answering a call until the doors of that car start to close shall be calculated from the following equation:

$$T = \frac{D}{1.5 \text{ ft/s}} \quad \text{or} \quad T = \frac{D}{455 \text{ mm/s}}$$

where T=total time in seconds and D=distance (in feet or millimeters) from a point in the lobby or corridor 60 in (1525 mm) directly in front of the farthest call button controlling that car to the centerline of its hoistway door. The minimum time for

elevator doors to remain fully open in response to a car call shall be three seconds. The floor area of elevator cars shall provide space for wheelchair users to enter the car, maneuver within reach of controls, and exit from the car. The clearance between the car platform sill and the edge of any hoistway landing shall be no greater than 1 1/4 in (32mm).⁹

Needless to say, there are many more regulations covered in the ANSI standards than we can do justice to within the confines of this section. Nonetheless, there are a few that should be examined closely and then compared to the updated GSA standards. With that in mind, let us turn to the ANSI standards pertaining to public telephones. The identification numbers referred to below are those used in the ANSI manual A117.1-1980:

4.31 Telephones

4.31.1 General. If public telephones are provided, then they shall comply with 4.31.

4.31.2 Clear Floor or Ground Space. A clear floor or ground space at least 30 in by 48 in (760 mm by 1220 mm) that allows either a forward or parallel approach by a person using a wheelchair shall be provided at telephones. The clear floor or ground space shall comply with 4.2.4. Bases, enclosures, and fixed seats shall not impede approaches to telephones by people who use wheelchairs.

4.31.3 Mounting Height. The highest operable part of the telephone shall be within the reach ranges specified in 4.2.5 or 4.2.6. Telephones mounted diagonally in a corner that require wheelchair users to reach diagonally shall have the highest operable part no higher than 54 in (1370 mm) above the floor.

4.31.4 Enclosures. If telephone enclosures are provided, they may overhang the clear floor space required in 4.31.2 within the following limits:

- (1) Side reach possible: The overhang shall be no greater than 19 in (485 mm); the height of the lowest overhanging part shall be equal to or greater than 27 in (685 mm).
- (2) Full-height enclosures: Entrances to full-height enclosures shall be 30 in (760 mm) clear minimum.
- (3) Forward reach required: If the overhang is greater than 12 in (305 mm), then the clear width of the enclosure shall be 30 in (760 mm) minimum; if the clear width of the enclosure is less than 30 in, then the height of the lowest overhanging part shall be equal to or greater than 27 in (685 mm).
- (4) Where telephone enclosures protrude into walls, halls, corridors, or aisles, they shall also comply with 4.4.

4-31.5 Equipment for Hearing Impaired People. Telephones shall be equipped with a receiver that generates a magnetic

field in the area of the receiver cap. If banks of public telephones are provided, then a reasonable number, but always at least one, in a building or facility shall be equipped with a volume control.

4.31.6 Controls. Telephones shall have pushbutton controls where service for such equipment is available.

A.31.7 Telephone Books. Telephone books, if provided, shall be located so that they can be used by a person in a wheelchair.

4.31.8 Cord Length. The cord from the telephone to the handset shall be at least 29 in (735 mm) long.¹⁰

The ANSI standards are also very specific about work surfaces, seating, and tables:

4.32 Seating, Tables, and Work Surfaces

4.32.1 Minimum Number. If fixed or built-in seating, tables, or work surfaces are provided in accessible spaces, a reasonable number, but always at least one, of seating spaces, tables, or work surfaces shall comply with 4.32.

4.32.2 Seating. If seating spaces for people in wheelchairs are provided at tables, counters, or work surfaces, clear floor space complying with 4.2.4 shall be provided. Such clear floor space shall not overlap knee space by more than 19 in (485 mm).

4.32.3 Knee Clearances. If seating for people in wheelchairs is provided at tables, counters, and work surfaces, knee spaces at 27 in (685 mm) high, 30 in (760 mm) wide and 19 in (485 mm) deep shall be provided.

4.32.4 Height of Work Surfaces. The tops of tables and work surfaces shall be from 28 in to 34 in (710 mm to 865 mm) from the ground or floor.¹¹

Requirements for assembly areas are also covered in the ANSI standards:

4.33 Assembly Areas

4.33.1 Minimum Number. Assembly areas shall have a reasonable number, but no less than two of locations for wheelchair users in each assembly area that complies with 4.33. Assembly areas with audioamplification systems shall have a listening system complying with 4.33.6 and 4.33.7 to assist a reasonable number of people, but no fewer than two, with severe hearing loss in the appreciation of audio presentations.

4.33.2 Size of Wheelchair Locations. Each wheelchair location shall provide minimum clear ground or floor spaces and shall accommodate two people in wheelchairs.

4.33.3 Placement of Wheelchair Locations. Wheelchair areas shall be an integral part of any fixed seating plan and shall be dispersed

throughout the seating area. They shall adjoin an accessible route that also serves as a means of egress in case of emergency and shall be located to provide lines of sight comparable to those for all viewing areas.

4.33.4 Surfaces. The ground or floor at wheelchair locations shall be level and shall comply with 4.5.

4.33.5 Access to Performing Areas. An accessible route shall connect wheelchair seating locations with performing areas, including stages, arena floors, dressing rooms, locker rooms, and other spaces used by performers.

4.33.6 Placement of Listening Systems. If the listening system provided serves individual fixed seats, then such seats shall be located with a 50-ft (15-m) viewing distance of the stage or playing area and shall have a complete view of the stage or playing area.

4.33.7 Types of Listening Systems. Audio loops and radio frequency systems are two acceptable types of listening systems.¹²

The ANSI standards go on to cover such areas as tactile warnings on doors to hazardous areas, bathtub and shower enclosures, adaptable kitchens, sinks, ovens, refrigerators, freezers, laundry facilities, public lavatories, private lavatories, medicine cabinets, and mirrors; tactile warnings at hazardous vehicle areas, visual alarms, and ramps.

At this point, we are ready to look at the General Services administration's standards and attempt to determine in what way they differ from ANSI requirements.

GSA ACCESSIBILITY STANDARDS

The intent and purpose of the GSA standards are identical to those of the ANSI standards. The GSA accessibility standards are enforced by the Architectural and Transportation Barriers Compliance Board; they were adopted in the *Federal Register* of October 24, 1980 as temporary regulations to expire July 31, 1981. As we mentioned earlier, the GSA standards are temporary because the Compliance Board is publishing minimum guidelines for accessibility standards. Once the guidelines are issued, GSA standards will have to conform to them.

The GSA standards are applicable to all buildings designed, constructed, or altered after October 14, 1980 (the effective date of the GSA requirements). Buildings designed, constructed, or altered before the effective date of these standards, and subject to the Architectural Barriers Act of 1968 (about which more will be mentioned in the course of this chapter), must be in accordance with the ANSI standards. Exceptions to these standards are:

1. The design, construction, or alteration of any portion of a building that need not, because of its intended use, be made accessible to, or usable by, the public or by physically handicapped persons.

2. The alteration of an existing building if the alteration does not involve the installation, or work on, existing stairs, doors, elevators, toilets, entrances, drinking fountains, floors, telephone locations, curbs, parking areas, or any other facilities susceptible to installations or improvements to accommodate physically handicapped persons.

3. The alteration of an existing building, or of such portions thereof, to which application of the standards is not structurally possible.

4. The construction or-alteration of a building for which plans and specifications were completed or substantially completed on or before September 2, 1969.

5. When leasing space, if no offeror or bidder meets the requirements of the GSA standards, then preference shall be given to the one who most nearly complies with GSA Accessibility Standards. In certain circumstances, a waiver or modification of the standards must be obtained.¹³

The regulations repeat the Architectural Barriers Act's provisions for modification or waiver of standards. Such modifications or waivers are treated on a case-by-case basis and may be granted only after formal application to the GSA and a determination by the Administrator of General Services that such a modification or waiver is clearly necessary.

In large part, the GSA standards are very similar to those of the ANSI. Examining GSA's regulations regarding public telephones, for example, we see the following (regulation identification numbers below are those used by the GSA):

5.8 Public Telephones

5.8.1 General. If public telephones are provided, they shall be accessible and comply with the criteria specified within this section.

5.8.2 Height. The highest operable part of the telephone shall be a maximum of 54 inches above the floor. If the telephone can only be reached by perpendicular or frontal approach, then it should be mounted with its highest operable part no higher than 48 inches above the floor.

5.8.3 *Clearances.* Telephones shall have an unobstructed floor approach space of at least 30"x48". Telephones, telephone enclosures, telephone booths and seats shall not reduce the minimum clear width of accessible paths of travel.

5.8.4 *Supplementary Hearing Devices.* All public telephones shall be equipped with a receiver that generates a magnetic field compatible with hearing aids and identified as such by blue grommets. If public telephones are provided, then at least one shall be provided with a variable volume control, and a sign shall be posted on all the others indicating the location of the volume control phone.¹⁵

GSA and ANSI standards with respect to public telephones are almost identical. The big difference, however, is the language. GSA standards are generally clear and concise. Language used in the ANSI guidelines is more complex and perhaps a bit too technical.

Of course, the biggest difference between the two sets of standards is that the ANSI is a private institute (based in New York City) and not connected with the federal government. The GSA, on the other hand, is an agency of the federal government. As such, its regulations carry the implied authority and *clout* of the government of the United States.

Having said that, it is now time to examine the *latest word* (and the most *authoritative word*) on accessibility standards: those proposed by the Architectural and Transportation Barriers Compliance Board.

PROPOSED FINAL GUIDELINES AND REQUIREMENTS OF THE ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD

The Architectural Barriers Act of 1968 (Barriers Act or ABA), as amended, directs four federal agencies to "prescribe standards for the design, construction, and alteration of (certain federal and federally assisted) buildings to insure whenever possible that physically handicapped persons will have ready access to, and use of, such buildings." The four agencies, the General Services Administration (GSA), the Department of Housing and Urban Development (HUD), the department of defense (DOD), and the United States Postal Service (USPS), have all issued standards: GSA: 41 CFR 101-19.6, effective September 2, 1969; HUD: 24 CFR Part 40, effective September 24, 1969; DOD: DOD 4270.1-M "Construction Criteria," June 1, 1978, paragraphs 5-6; USPS: "Postal Contract-

ing Manual," Publication 41, paragraph 18-518.4, 39 CFR 601.100, as amended by handbook RE-4, November 1979.¹⁵

Section 502 of the Rehabilitation Act of 1973 established the Architectural and Transportation Barriers Compliance Board (ATBCB), an independent agency charged with insuring compliance with the standards. The Board consists of the heads of 10 federal agencies, plus 11 members appointed by the president from the general public.

The ATBCB guidelines are divided into five major components. The initial subpart explains the purpose, applicability, definitions, relationship of the guidelines to the Architectural Barriers Act standards, other uses, and effect of state or local law on the guidelines. The second subpart relates to processed departures from the guidelines, i.e., waivers and modifications. Other departures from the guidelines are allowed under specific design exceptions. The third subpart enumerates the provisions applicable to new construction, alterations, and leased buildings. The fourth subpart contains the pertinent technical provisions. The fifth subpart (though reserved at the time of this writing) will address special technical provisions applicable to unique elements or types of buildings, e.g., stacks in libraries, hospitals, penal institutions, and residential structures.¹⁶

The guidelines do not specifically delineate the ATBCB's authority to ensure the accessibility of public conveyances, including rolling stock. The Board has determined that any guidelines it may wish to publish on this subject should be considered as it more fully develops its transportation policy.

On the whole, the authors find the ATBCB's guidelines more comprehensive, more understandable, and less confusing than the ANSI standards. For example, ATBCB guidelines for public telephones require that if sets of two or more telephones are provided at least one telephone in the set must have a volume control and at least one telephone in the set must be equipped with touch-tone dialing or with a sign giving directions to the location of a phone with that dialing system.¹⁷

The requirements stipulated in *p 1190.210* for public telephones are identical to those mandated in the ANSI and GSA standards, except the ATBCB provision for TDDs for hearing impaired persons—TDDs are not mentioned by either the ANSI or GSA. Of course, let us remember that ultimately the GSA will adopt the guidelines proposed by the ATBCB.

The ATBCB guidelines and the ANSI specifications are similar overall, except for the following:

1. *Parking spaces:* The ATBCB proposes that when parking is provided, a certain number of accessible parking spaces shall be available (see Table 7.1). ANSI recommends a reasonable number, but always at least one accessible space comply with the appropriate section if parking is provided.

2. *Elevators:* The ATBCB proposes to require a passenger elevator for multi-story buildings unless another means of vertical access is provided. ANSI simply requires that if passenger elevators are provided, each shall comply with the appropriate section. The ATBCB also excepts elevator pits, elevator penthouses, mechanical rooms, and piping or equipment catwalks from the guidelines. Each elevator is required to be accessible in a bank because the typical call or summons technique used in bank operation generally does not discriminate as to which elevator is summoned. In general, it summons the closest elevator traveling in the desired direction. If there were only one elevator per bank that was accessible and this summons technique was employed, it could conceivably result in a situation whereby a handicapped person might have to wait a considerable length of time before the accessible elevator arrived.

3. *Platform lifts:* The ATBCB proposes to permit the use of platform lifts as a means of vertical access. ANSI permits them only if other alternatives are not feasible.

4. *Entrances:* The ATBCB proposes that each entrance shall be accessible. ANSI recommends a reasonable number, but always at least one, of the principal entrances be accessible.

5. *Toilet and bathing facilities:* The ATBCB proposes that each be accessible. ANSI recommends a reasonable number, but always at least one.

6. *Assembly areas:* The ATBCB proposes that when assembly areas are provided a certain number of accessible viewing positions shall be available (see Table 7.2). ANSI recommends only that a reasonable number, but no less than two, shall comply with the appropriate section if assembly areas are provided. The ATBCB also proposes to require listening systems to assist no fewer than two persons with a severe hearing loss. Listening systems are not mandatory in the ANSI standard.

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7. *Dwelling units:* The ATBCB proposes to reserve this section for future rulemaking. ANSI now recommends specific criteria.¹⁸

TABLE 7.1

ATBCB Parking Guidelines

Total Parking in Lot	Required Minimum Number of Accessible Spaces
1 to 25	1
26 to 50	2
51 to 75	3
75 to 100	4
76 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1,000	2 percent of total
Over 1,000	20, plus 1 for each 100 over 1,000

Source: Federal Register, Vol. 45, No. 161, p. 55019.

TABLE 7.2

ATBCB Assembly Area Guidelines

Capacity of Assembly Space	Number of Viewing Positions
1 to 25	1
26 to 50	2
51 to 75	3
75 to 100	4
76 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1,000	2 percent of total
Over 1,000	20, plus 1 for each 100 over 1,000

Source: Federal Register, Vol. 45, No. 161, p. 55019.

ARCHITECTURAL ACCESSIBILITY CHECKLIST

One of the authors recently visited a new bank building under construction that had been acknowledged for its barrier free design. A superbly ramped walkway led from the sidewalk level to a spacious main entranceway. Unfortunately, there was a three-inch drop between the sidewalk and the parking area. As it turned out, no curb cut had been provided. To the architects and engineers associated with the project, this was a barrier free design. To those bank customers confined to wheelchairs, however, it was far from barrier free.

The following checklist has been adapted from the standards compiled by the State University Construction Fund of Albany, New York. Although based on a guide designed to be applied during the planning, design, and construction phases of campus projects, this checklist can also be used to evaluate the accessibility and usability of other existing facilities:¹⁹

Checklist

v *Doors:* Depth between outer and inner doors must be a minimum of 6 feet 6 inches, so that a wheelchair cannot be trapped between the two. All doors require a minimum clear opening of 2 feet 8 inches. Maximum pressure to open a door should not exceed 8 pounds.

- *Thresholds:* Shape for accessibility; height should not exceed $\frac{1}{4}$ inch.
- *Handles:* Should be 3 feet 6 inches from floors. Horizontal level handles are preferable. Handles should be knurled to serve the blind as indicators of danger areas. On sliding doors, handles should protrude.
- *View panels:* Glazing should be on all swinging doors. Lower edges should be no more than 3 feet from floors. Doors with large areas of glass should have markings on the glass to avoid accidents.

Stairways: Stairways are to be well illuminated at all times.

- *Exterior:* The risers should be a maximum of 5 inches high. The tread should be a minimum of 14 inches wide. All stair treads and nosings are to be surfaced with a nonskid finish. Handrails, 32 inches high, should be located on both sides of stairs and should extend 30 inches

horizontally at both top and bottom levels. Care should be taken to design handrail extensions so that they do not become hazards.

- *Interior:* The landings and floor levels should be distinguished from stairs by contrasting color or texture. The risers should be no more than 7 inches high with no projecting nosings. All handrails (circular or oval section; 1½ inches to 2 inches in diameter) should be 32 inches high (measured vertically from stair nosing) and continue 18 inches horizontally at both top and bottom levels.

v *Corridors:* Corridor width must be a minimum of 5 feet for wheelchair maneuverability.

v *Parking:* Special parking for the disabled should be located as near as possible to the facility served. Five percent of the bays should be reserved for disabled persons. The width of a bay should be a minimum of 9 feet. Pedestrian access between every other bay reserved for the disabled should be 4 feet. A ramp should be provided if there is a level change from the parking lot to an adjoining walk. The area for the disabled should be designed so that movement behind parked cars or across lanes of traffic is not necessary.

Elevators: All elevators should be so adjusted and/or controlled that the floor of the elevators, when stopped, will conform exactly to building floor levels. The cab size should be a minimum of 5 feet 1 inch deep by 5 feet 6 inches wide. The doors would have a sensitive safety edge plus a sensing device (e.g., photoelectric eye) to prevent closing while entering or exiting. No control should be higher than 4 feet from the elevator floor.

Walkways: There should be at least one access without steps connecting all facilities. Pavement materials used on walkways should be firm and not slippery when wet. Walks with 5 percent gradients must have frequent level rest areas (i.e., 60 feet maximum intervals). Intersections of walks with streets must be blended by ramps. Gratings, manholes, and like impediments should not be located in walks.

Ramps: Ramps should be provided only when it is impossible to have grade-level entrances. The surface should be treated so that it is nonskid. There should be intermediate rest platforms a

minimum of 4 feet 6 inches every 30 feet of ramp. The approach to a ramp should be level, and a minimum of 6 feet in length. Where a ramp enters a building, there should be a platform of 5 feet minimum depth from the building extending a minimum of 1 foot on each side of the doorway. If there is a significant drop from the side of a ramp or platform there should be handrails on both sides 32 inches above the ramp surface, the full length of the ramp. Ramps exposed to the elements either should be protected by a canopy or provided with automatic snow-melting capacity.

Sanitary Facilities: At least one *toilet* for each sex on a floor should be accessible to the physically handicapped. It should be located most distant from the space entrance. The *stall door* to the toilet accessible to the handicapped should have 2 feet 8 inches opening clearance and should swing out. A stall should be 3 feet wide 4 feet 10 inches to 5 feet 6 inches deep. The toilet, preferably wall-mounted, should have a seat 19 inches above the floor. Grab bars, 1 1/2 inches in diameter and 1 1/2 inches from walls, are to be placed on both walls, 33 inches above the floor. Clear space below a *sink* for the handicapped should be a minimum of 26 inches above floor level. All *faucet handles* should be easy to operate (e.g., lever handles). *Hot water lines* and *drains* under sinks should be shielded to protect the legs of a person in a wheelchair. *Mirrors* should be placed so that the bottom edge is not more than 3 feet above the floor level.

The following applies to all *shower rooms* with two or more stalls: Two of the stalls should be accessible to the handicapped and should measure 3 feet by 3 feet. The floor surface should be nonslip and the curb should be no more than 2 inches above floor level. A *seat* should be positioned 19 inches above the floor. In one stall, the seat should be positioned on the lefthand wall and in the other it should be positioned on the righthand wall. The seats should be hinged to fold against the wall and a grabrail attached to the stall wall opposite the seat should extend around on the back wall. The *water control*, *diversionary shower spray*, and *soap tray* all should be placed 3 feet 6 inches above the floor.

Drinking Fountains: Upper edges of drinking fountain basins should not be more than 3 feet above floor level. Controls and spouts should be located in the front. If set in recessed areas, their recess should be no less than 3 feet wide.

Light Switches: No more than 2 light switches should be located on a plate positioned 3 to 3 1/2 feet above floor level.

Electrical Outlets: Outlets must be located no less than 18 inches above floor level. In areas specifically designed for the handicapped, outlet height should be 24 inches.

Room Identification: A plaque bearing raised or notched numbers should be placed on the corridor wall next to a *doorway*, about 5 feet above floor level (side nearest handle when the door is closed), to identify spaces. This will assist visually handicapped persons.

Telephones: In any telephone bank, at least one public telephone should be accessible to a handicapped person (e.g., outside of a booth). The dial should be between 3 and 4 feet above floor level.

Vending Machines: Vending machine controls and access should be located in the range 2 to 4 feet above the floor. Pull on control knobs should not require more than 8 pounds of tension.

The authors emphasize that this is only a *checklist* against which a company, factory, university, or public building can be measured for accessibility. How does your firm or agency measure up? Is there room for improvement?

The elimination or removal of architectural barriers to the handicapped does not have to be an expensive or burdensome undertaking. Professional guidance can make the accommodations process much easier. With help from a relatively new and unique consulting organization, Kaiser Aluminum did away with architectural barriers from its California headquarters building. *The company's engineers has estimated the cost of modifications at more than \$160,000. However, consultants from Mainstream, Inc. showed Kaiser how the necessary accommodations could be made for less than \$8,000.* William Cochran, a consultant on architectural barriers working for Mainstream, explained that most of the changes required at Kaiser proved relatively simple, such as the reallocation of spaces in the parking garage and the elevation of desks for wheelchair-bound workers.

PUBLIC TRANSPORTATION AND THE HANDICAPPED

The accessibility of the physically handicapped to public transportation has been "the law of the land" for more than a decade now. In five separate pieces of legislation enacted during the last decade, the Congress of the United States reiterated its expectation that federally assisted public transit vehicles, facilities, and programs

would be equally available to the disabled and elderly as they are to others. The courts as well have been remarkably consistent in maintaining that disabled and elderly persons are entitled to accessibility to transit services made available to most other Americans.

Nevertheless, as of this writing (1981) no U.S. city is providing the handicapped with access to public transportation services on a par with the access enjoyed by the nonhandicapped, and no American bus manufacturing company is currently marketing (in serial production) standard-size buses that are accessible to and useable by disabled individuals. Frank Bowe points out that even separate "special" services especially for disabled and elderly persons do not offer assistance comparable with that made available to the nonhandicapped in U.S. cities.²¹

This transportation shortfall is a private as well as a public problem. Many employees of private corporations depend on public transit to get to and from the job. While we realize that private employers do not have direct control over public transportation, they can exercise indirect control—their influence as citizens and corporate taxpayers. In some cases a documentation of needs of employees (disabled and not) for service would help; in other cases a little political muscle may need to be applied. In any case some comprehension of the options and alternatives available is necessary as a prelude to making the difficult transportation decisions ahead.

Bowe notes that with respect to public transportation and the handicapped there are five critical issues: (1) the level of *service* the society as a whole intends to provide for the disabled, (2) which *civil rights* of the disabled and elderly to honor in public transportation service delivery, (3) how much will it *cost* to put into effect the different kinds and degrees of public transit service, (4) the availability of appropriate *technology*, and (5) whether or not the American public is willing to *support* the concept of public transportation accessibility for the handicapped.²²

CONGRESS AND TRANSPORTATION FOR THE HANDICAPPED-BACKGROUND

Since as early as 1964, the Congress has acknowledged the importance of the federal government in the provision of public mass transit services, particularly on behalf of disadvantaged persons living in the nation's urban areas. The Urban Mass Transportation Act of 1964 emphasized the desirability of offering

low-cost, readily available transportation for those individuals unable to afford personal and private modes of transport. In its pursuit of this objective, the Congress authorized a broad variety of initiatives designed to develop, improve, and implement public mass transit systems and services, specifically in economically depressed urban areas.

The Congress augmented the scope of the Urban Mass Transportation Act in 1970 by adding other persons in need of public mass transit, particularly those who are disabled or elderly. In reporting on P.L. 91-453, the Congress found that:

..the rapid urbanization and the continued disbursal of population and activities within urban areas has made the ability of all citizens to move quickly and at a reasonable cost an urgent national priority.²³

Bowe points out that the emphasis on "all citizens" was due in large part to the efforts of U.S. Representative Mario Biaggi (D-N.Y.) to add the disabled and elderly to the list of beneficiaries of the programs authorized by the Act.

In a number of separate legislative proposals, Congress not only gave its authorization to programs aimed at implementing the policy of providing public transport to "all citizens," but also appropriated large sums of money to guarantee that these programs would be effectively pursued. In addition, Congress attached to every major piece of legislation on public transportation specific conditions and requirements, many of which applied directly to advancing the goal of improving access for the handicapped and elderly. However, as Bowe notes, the pursuit of this was tempered by a "growing awareness of the possible costs involved," which "led the Congress to insist that actions undertaken by the federal agencies in response to its direction be steps that resulted in effective service delivery at reasonable costs.

Later in the course of this chapter we will further expound on the five critical issues concerning access by the disabled to public transportation. For the moment, however, we turn to the Department of Transportation and some of the efforts it has made to render transit services more accessible.

THE DEPARTMENT OF TRANSPORTATION AND SECTION

In response to the January 1978 guidelines issued by the Secretary of Health, Education and Welfare for federal agency implementation of Section 504, the Department of Transportation

(DOT) disseminated a notice of proposed rulemaking in June of the same year. The DOT held five public hearings, and some 650 persons and organizations made written comments on the proposals. It was on the basis of those comments that the DOT developed a final regulation, published in the *Federal Register* of May 31, 1979.

The regulation establishes requirements and deadlines for recipients of DOT funds for providing accessibility in urban mass transportation, airports, highway facilities, and intercity rail service. If the recipients fail to comply, they could be deemed ineligible for federal transportation grants. Many of the proposed changes will be made within an 18-month to three-year period. In the event that structural changes and/or vehicular replacements are extraordinarily costly, they will be required within periods ranging from five to 30 years.

Transit agencies that receive DOT funds will have to make key rapid rail stations accessible to the disabled. This applies to the five cities with existing rapid rail systems that currently do not provide special access for the handicapped (i.e., New York, Chicago, Philadelphia, Cleveland, and Boston). The regulation specifies that key stations must include transfer points within a rail system, generally major interchange points with other modes. Also included would be: end-of-line stations in most cases, stations serving major activity centers (e.g., employment and government centers, universities and health care facilities, and shopping areas), stations that would generate large numbers of trips by handicapped persons, and stations where passenger boardings exceed the average by 15 percent.

The DOT estimates that 40 percent of stations would be key stations. As such, they would handle about 70 percent of all boarding passengers in the five systems. The stations without special access facilities would be linked with accessible stations by a connector service using regular or special buses, special paratransit, etc. The most essential key stations (about one-third of all key stations) would be made accessible to the handicapped within 12 years, and the remaining key stations would have to be accessible within 30 years.

Transit operators could request a waiver of the key station provision from DOT; however, before such a request could be approved, the operator would have to hold public hearings and consult with the handicapped community and other interested groups on the merits of the proposal. The DOT can grant a waiver *only* when the recipient shows its alternative plan offers service substantially as good as, or better, than the key station approach. Alternative service could include buses, taxis, vans, or a combina-

tion of these. To insure adequate service, certain major agencies granted a waiver would be required to spend or guarantee the expenditure of an amount equal to at least 5 percent of the Section 5 funds it annually receives from the DOT's Urban Mass Transportation Administration (UMTA) on the alternative service.

New rapid rail vehicles must be accessible to the disabled and elderly, with the exception that a device that bridges the gap between the car and the platform (if such a device is needed on a given system) shall be required on vehicles ordered after January 1, 1983.

The estimated cost of making key stations accessible in the five cities mentioned is \$1 billion. If all five cities were to obtain waivers, they would be required to spend \$510 million over a 30-year period. The cost of restructuring all rapid rail stations in the five cities would have been considerably higher, and the DOT was concerned that the expenditure would not result in a substantial enough increment in service for the handicapped to justify the cost. Therefore, the key station approach was thought to provide the maximum cost-effectiveness and minimum inflationary impact.

Commuter Rail

The "key station" rule applies to commuter rail. However, since commuter rail serves less populated areas, any station that is distant from any another station will be a key station. It is expected that generally every third station will have to be accessible. New commuter cars ordered on or after January 1, 1983, will have to be accessible. The projected cost of providing commuter rail accessibility is \$290 million.

Rapid and Commuter Rail Vehicles

In order to achieve accessibility, one car per train must be accessible to wheelchair users. When attaining such accessibility requires expensive modifications or replacement of existing vehicles, the deadline is five years for rapid rail vehicles and ten years for commuter rail cars.

Light Rail

The key station provision applies only to fixed-facility light rail stations, not to street stops. Relatively low-cost station improvements must be made within three years, but this is extended to 20 years for unusually costly improvements and replacement of facilities. During peak hours, at least one-half of the vehicles must be accessible to those who cannot use steps, and in off-peak hours, accessible vehicles must be used first. The estimated cost is \$33 million.

Transit Bus Service

Effective with the DOT's regulations, all new transit buses purchased with UMTA funds must be accessible to wheelchair users. It is expected that the first buses ordered in compliance with this rule will go into operation before the end of 1981. Several of the nation's largest bus systems have already purchased or will be purchasing some accessible buses. To achieve accessibility, one-half of all buses in service during peak hours must be accessible, and accessible buses must be used first during off-peak hours. This level of service must be provided within 10 years. Transbus was mandated under an earlier DOT rule as a long-term solution to provide accessible buses. Until Transbus is available, however, the regulation requires that new buses be accessible to persons confined to wheelchairs. DOT expects very few buses now in service will require conversion.

Interim Service

When a transit operator is unable to provide accessibility within three years, it must provide or guarantee the provision of interim service. The type of service must be developed in consultation with the handicapped community and might utilize buses, vans, taxis, or smaller buses. The agency must spend or ensure the expenditure of an amount equal to 2 percent of its UMTA Section 5 funds to provide such service unless an advisory group of handicapped persons agrees that less money should be spent. Communities receiving UMTA funds must prepare a transition plan to identify improvements and policies needed to achieve transit system accessibility and provide interim service.²⁵

TRANSPORTATION ISSUES

We now return to the earlier discussion of the five crucial issues regarding the disabled and accessibility to public transportation.

SERVICE

Bowe notes that the Congressional intent "clearly was to use the standard of services available to members of the general public as the objective to be reached in provision of assistance to disabled and elderly people...."²⁶ To acknowledge this is to discern quite clearly that Congress did not envision "special" services for the handicapped, i.e., services that were utopian or idealistic in nature. With perhaps a few exceptions, public transportation systems tend to be at best minimally adequate with reference to such basic

amenities as predictability of schedule, air conditioning and heating, comfortable noise levels, and "anatomically correct" seating. On the whole, the level of service enjoyed by the general public tends to be functional, at best. This is the level of service Congress expects will be reached on behalf of disabled and elderly persons.

Despite its shortcomings, public transportation for the general public has a number of favorable characteristics that can be used as parameters to measure progress toward the provision of adequate service to the handicapped. In general, these characteristics are: relatively low fares, no restrictions on purpose, full range, hours of operation, system stability, transfer availability, decision time (on the spur of the moment, users can decide to take public transit because it is generally always available), travel time, capacity, and no user tests or criteria.²⁷

The conclusion perhaps most likely to occur to many readers will be that the easiest way to achieve comparability is to make the general transportation system accessible to the handicapped and nonhandicapped alike. In most instances, this is the best solution. Yet, there are some instances in which departure from the existing fixed-route system may be desirable. This will be discussed further in the subsection on alternatives.

CIVIL RIGHTS

The second major issue in designing accessible and usable transit services for the disabled and elderly concerns the civil rights guaranteed these individuals by the Constitution and by various federal laws and regulations. However, many states and localities have civil rights provisions specifically intended to protect the rights of the handicapped.

Civil rights considerations must be carefully weighed in any discussion of providing transportation for the handicapped. Many disabled persons, for example, have paid local, state, and federal income taxes over several years. The denial to them of services they have helped pay for is clearly wrong. In addition, public transportation is the only transit service many disabled persons can afford. Denying them public transit is tantamount to denying them any transit.²⁸

COSTS

The question of costs for various alternatives for the handicapped is complicated. Bowe points out that the few national

studies that have been conducted have methodological and procedural weaknesses. A great deal of the basic information available comes from sources and agencies with a vested interest in the outcome, i.e., architects and engineers (some of whom are interested in obtaining large paychecks), transit personnel (some of whom are interested in discouraging full accessibility), and officials at different levels of government (some of whom are seeking to have other units of government than their own pick up the tab). For a detailed exposition of the overall question of costs, see *Full Mobility*, the American Coalition of Citizens with Disabilities publication written by Dennis Cannon and Frances Rainbow.

To avoid being seriously misled on cost issues, it is essential to keep a few fundamental principles in mind:

1. Regardless of the alternative chosen, costs will be high. Public transit today is almost totally inaccessible to the disabled. The rectification of this will require the expenditure of large sums of money.

2. The social costs of doing nothing to make public transit accessible are higher than the costs of any alternative. Denying the disabled access to public transportation forces many of them to depend on federal social security and other benefit programs. These costs are tremendous. Enforced idleness often means that another family member (often someone who otherwise would be a wage earner and taxpayer) is removed from the labor market. Enforced dependency also carries with it other social costs, including greater need for medical care services as health deteriorates and as mental stress mounts.

3. The costs of rendering a transit system accessible are lower when this is done through reliance on new construction and adoption of accessible equipment as facilities or vehicles are renovated or replaced. The cost of accessible equipment is virtually always equivalent to the cost of inaccessible equipment, as long as converting an existing vehicle or facility from inaccessible to accessible is not necessary.

4. The major costs in the provision of transportation to the public are for labor expenses. Drivers salaries and fringe benefits constitute a sizeable minority or actual majority of transit authority annual expenditures, that is, apart from capital investment. To the extent that additional drivers are not needed, costs are reduced.

5. Capital costs are "one-time" investments, while operating costs are "continuing" expenses. The distinction here is critical. On the one hand, if the transit system decides to purchase accessible vehicles and/or facilities (capital equipment), the initial costs will be considerable, but these costs will be one-time costs; i.e., the expense, once made, usually does not recur for these budget items. Continuing expenses, on the other hand, are incurred from one year to the next.

To continue on the last point, if the transit authority elects to provide separate services with special vehicles, special drivers, special fuel, and similar costs, the costs will continue annually and, of course, will rise with inflation; these indeed are not one-time expenditures.

According to Bowe, in most instances of publicly supported services, the desire to contain costs (that is, to rely on options with lower overall price tags) must be balanced by the desire to reduce spending over the short term (that is, prior to the next election).²⁹

TECHNOLOGY

It is occasionally said, when discussing accessibility and technology, that such devices are not available for public transportation systems. Variations on this particular theme accentuate the alleged lack of reliability of "untested technology." Some critics may even point to specific instances as evidence in support of the contention that the technology capable of doing the job does not yet exist, e.g., the case of St. Louis and its lifts on buses.

In order to preclude any tendency toward confusion on this question, two points should be stated and kept firmly in mind. First, the development of any new technology necessarily involves the production and testing of a "first generation" of devices. Typically, these early attempts are full of difficulties, even failures. However, removing the bugs does take a little time. Later, a second generation of devices appears that is sufficiently reliable for general use. This is the case with lifts on buses and similar technology. The lifts employed in St. Louis have been surpassed by lifts now in use in Seattle. Second, technology develops only as fast as demand for it increases. If manufacturers and purchasers see no compelling need for new technology, or indeed if they have a vested interest in stifling the development of such technology, the emergence of reliable equipment will be delayed.

The second point helps explain why today in West Germany there exists the technology sufficient to produce a full range of

vehicles, from small special-purpose vans to large standard-size buses, accessible to and usable by disabled people. Several West German firms perceived the need for such equipment and developed the necessary technology.³⁰

PUBLIC SUPPORT

In a period in which many social and political commentators believe popular sentiments have begun a "swing to the right," will the American people support what will undoubtedly be expensive steps to guarantee the handicapped access to public transportation? It is frequently claimed that the Proposition 13 tax revolt in California (and similar tendencies elsewhere in the country) indicates a palpable lack of willingness on the part of the general public to continue to foot the bill for "special reform." The authors think such a willingness does exist, and has existed for many years.

During the summer of 1978 (at the very time that Proposition 13 allegedly heralded a nationwide "swing to the right"), Yankelovich, Skelly, and White (YSW) asked a representative sample of more than 2,000 adults whether they would be willing to pay *more* taxes to make buses accessible to disabled and elderly persons. The majority of those polled, 51 percent, said they'd be willing to pay the higher taxes. One year later, the YSW researchers asked a similar question: "Opening up new opportunities for the handicapped may involve certain costs in terms of ramps, special equipment, special facilities, etc. In which of these areas, if any, are you willing to see higher prices in order to open up more opportunities for the handicapped?" This time, 41 percent said they would be willing to pay higher bus and mass transit fares if it meant greater access to transit services for the handicapped.³¹

These conclusions appear to indicate that, if the case can be made that public transit can in fact be rendered accessible to the disabled, a significant proportion of the American people are prepared to support such efforts, even if such support means higher fares or taxes.

AVAILABLE ALTERNATIVES

Despite the fact that a broad variety of options is available, the alternatives represent variations on four basic themes: (1) mainstreaming, (2) special services, (3) current law and regulations, and (4) comprehensive services. Let's assess these in order.

MAINSTREAMING

This alternative stresses making regular, fixed-route mass transit systems accessible to and usable by disabled persons, as well as other citizens, through converting existing vehicles and facilities and in future designs. In many respects, this is the simplest alternative. As Bowe points out, no special vehicles, drivers, administration, fare system, certification process, or funding mechanism would be required. Instead, what is now available to the general public would be made available to the disabled as well.³²

One strong advantage of mainstreaming is that the long-range costs are considerably less than those associated with other options. For the most part, expenses are one-time, capital costs. The bulk of the allocations would be for converting already existing vehicles and facilities. In addition, mainstreaming lowers the share of the financial burden adopted by financially strapped urban areas. It also satisfies a large part of the critical requirements of Section 504.

Nevertheless, there are also disadvantages. For one thing, mainstreaming does not necessarily mean that services provided for the handicapped would be equally effective as those for the nonhandicapped. In fact, in some situations and for some individuals, the level of service would be markedly lower. For example, the individual who is unable to get to accessible public transit is not helped by knowing of its accessibility.

Another disadvantage is that although long-term costs are indeed lower, short-term costs are in many instances higher. For public officials, pressure to limit short-term and long-term costs may produce resistance to this option. Furthermore, some areas do not have fixed-route, regular mass transit services. Hence, there is nothing to make accessible; there is nothing to mainstream.

SPECIAL SERVICES

The provision of separate mass transit services for the disabled may satisfy some of the needs left unmet by mainstreaming; however, it fails to meet others. The major advantage cited by many is an alleged lower level of costs over the short-term. An attendant advantage is its apparent rapid mobilization (within a period of two to three years many communities could, given adequate resources, begin providing services comparable to those available to the general public). Also, special services may be strongest where mainstreaming is weakest, e.g., in rural areas.

Yet, the disadvantages associated with special services are several. Long-term costs, for example, may be higher than is the case with mainstreaming. Special services entail continuing expenditures year after year (with inflation), while mainstreaming by and

large involves one-time capital costs. In addition, the local share for special services costs is greater in proportion to the federal share.

Another disadvantage is that the costs of these services are heavily dependent upon the level of service provided. Once a certain "critical mass" is attained, the system's capacity is stretched beyond its limits and geometrical increases in funding are necessitated.³³

While the dimensions of making fixed-route systems accessible are at least calculable, estimations of the operating and financial aspects of enlarged special service programs are indeed difficult. As we mentioned, nowhere in the United States are truly comparable special services being provided. Therefore, planning such a system, especially as a national policy, would be extraordinarily complicated.

CURRENT LAW AND REGULATIONS

Under the terms of Section 504 and Section 16, as well as other laws and regulations in force, the federal government has chosen a compromise between mainstreaming and special services. Essentially, the compromise provides that mainstreaming shall take place over an extended period (up to 30 years in the case of some rail systems), while special services are encouraged in the interim preceding full access and as a supplementary service where needed.

One major advantage to this approach is that it does in fact meet the requirements of the law. This has been tested and confirmed in the courts, most recently by Judge Oberdorfer in his 1980 decision on *American Public Transit Association vs. Goldschmidt*.

A second advantage is that this approach responds to political and practical considerations. The regulation also addresses the need for some level of comprehensiveness in planning and programming. A role is recognized for special services. Waiver provisions are also taken into consideration and included.

Again, however, there are disadvantages. A crucial one is that the regulation, in responding to political concerns, delays considerably access to publicly supported mass transit services. In addition, in conjunction with other DOT regulations and policies, it does not offer adequate financial support to enable special services, where they are in fact required, to offer truly comparable services.

COMPREHENSIVE SERVICES

This type of approach would recognize the unique contributions of mainstreaming and special services, integrating the two into a

truly flexible system of nationwide services able to provide the level of assistance visualized by the Congress since 1970. While this option is obviously expensive, the cost-benefit ratios may be attractive because of the high return on investment.

A comprehensive approach would also encourage more rapid development of appropriate technology. It would stimulate the utilization of the best available vehicles, facilities, and programs (whether of domestic or foreign origin). It would provide true "local options" by making all necessary components of good service available and financially obtainable. The policy would also encourage and facilitate the purchase of vehicles and other equipment by local transit authorities from whatever manufacturer offered the best value on the dollar (regardless of whether the manufacturer were Japanese, German, or American).

In addition, the federal government would assist in making accessible devices and vehicles readily available where needed. Former Secretary of Transportation Neil Goldschmidt proposed creation of a 1,000-bus reserve that would be purchased by the DOT and then sold to local authorities, under the usual 20 percent state/local share, as needed.

The major disadvantage of such a policy at this time is that, because it is an ambitious undertaking, political and fiscal restraints would probably discourage its full implementation. In view of the budget cuts being implemented by the current Reagan administration, such a policy may be infeasible, despite its merits. Even Bowe suggests that a comprehensive approach will probably not become a reality for perhaps a decade or more. It does, nonetheless, provide us with a perspective of the overall objective toward which we, as a society, must strive.

LOOKING BACK: QUESTIONS TO CONSIDER

1. What does "making reasonable accommodation" mean with respect to rendering facilities accessible to the handicapped?
2. Is it necessary for a facility to be absolutely "barrier free" for the disabled?
3. Are contractors always obligated to make accommodations under Sections 503, 504, and 402?
4. How do the ANSI standards compare with those of the GSA?
5. How does your organization compare to the GSA minimum requirements?

6. What are some circumstances under which GSA accessibility standards may be waived?
7. Are the Architectural and Transportation Barriers Compliance Board standards substantially different from those of the ANSI?
8. How does your organization stack up when measured against the architectural accessibility checklist included in this chapter?
9. Why should private employers concern themselves with mass transit systems and their accessibility to the handicapped?
10. What are the five critical issues with respect to public transit and the handicapped?
11. What has the role of the Congress been on the public transportation question?
12. Are there alternatives for making transportation accessible? How viable are they?

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4. *Ibid.*, p. 6.
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6. *Ibid.*
7. American National Standards Institute. *American National Standard Specifications for Making Buildings and Facilities Accessible to and Usable by Physically Handicapped People*, ANSI A117.1-1980, p. 3.
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9. *Ibid.*, pp. 12-30.
10. *Ibid.*, pp. 49-51.
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27. *Ibid.*, pp. 6-7.
28. *Ibid.*, p. 12.
29. *Ibid.*, pp. 12-13.
30. *Ibid.*, p. 14.
31. *Ibid.*, p. 16.
32. *Ibid.*, pp. 17-18.
33. *Ibid.*, p. 20.
34. *Ibid.*, pp. 4-5, 25.

Chapter 8

Training and Development

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My Darkness has been filled with the light of intelligence, and, behold, the outer day-lit world was stumbling and groping in social blindness.

—Helen Keller

MANAGERIAL/SUPERVISORY ROLES

As we've established, selective placement of the handicapped is a first giant step toward successful employment: a disabled individual has a job, and the organization has a handicapped employee on board. But what is even more crucial is the individual's retention and productive use of his talents as a contributing and welcome member of the work team. Nothing is more irritating to a manager under pressure to produce than an employee who was thought to be interested in a job but now looks to be only interested in a pay check. Absenteeism, tardiness, bad quality workmanship, a lousy work attitude, and failure to do a good day's work for a good day's pay, etc. are very disturbing to a manager, irritating to a coworker, disappointing to the personnel/human relations staff, humiliating to an external rehabilitation agency, and a personal defeat to the conscientious worker.

How do we avoid this situation? How do we validate the promise of the handicapped worker? It takes a commitment at the top level of management. A written corporate policy on equal employee opportunity, prohibiting discrimination against qualified handicapped individuals, can bring handicapped people to the recruiter's attention, but such a policy on hiring does nothing to retain that individual who is supposed to help employers achieve higher levels of productivity. That policy needs to be implemented, which requires active cooperation support and sensitivity from all levels of management and employees. As indicated previously, teamwork among rehabilitation professionals, physicians, managers, and handicapped persons themselves, is absolutely essential to the successful placement and overall utilization of handicapped persons.

If affirmative action is more than just a promise not to discriminate—if the company is really going to invest in hiring disabled workers—then passive indifference by managers can cost a company a lot of money. Managers have a crucial role to play.

What the manager does or does not do can make the difference between winning profitable contracts and closing down a plant. As M.S. Battles points out, the manager must:

1. *Make affirmative efforts to select* handicapped workers from among those referred by personnel and *place them* in the job.
2. *Inform other personnel* about the company's AAP policy, the law, and the obligation to *hire and promote* qualified handicapped workers.
3. *See to it* that handicapped workers are given a *full opportunity to demonstrate their skills and abilities*.
4. *Set an example* by treating handicapped workers *with respect*.
5. *Recommend*, as the expert on the job, *accommodations* by which the handicapped can *improve performance*.
6. *Encourage* handicapped workers to compete for jobs and develop their *career potential*.¹

Thus, an examination of Battles' statement of the role of the manager/supervisor under legal obligation, in essence describes managerial and supervisory functions in general. Placement, communication, promotion of qualified people, fair treatment, improved performance, worker encouragement to achieve career goals are basic human resource functions. The only added dimension here is an employee with a disability. That, as we have stressed throughout this book, is not to say that a supervisor is asked to assume these responsibilities for the incompetents or play the rehabilitation specialist's role. He is simply asked to manage people with diversity. It is not an additional responsibility, but an integral part of the job—a plus for a manager who believes in success and achievement through better utilization of people.

Courts, judges, administrative agencies, attorneys, and advocates, although helpful, are not going to solve the EEO, people, and productivity problems of business and industry. It's the managers and the supervisors who are and who will. They are the ones who

work very closely with people in the "pressure cooker." They are in the unique position to create a supportive work climate in which all people, including the handicapped, can survive, compete, and grow. However, they need assistance to meet the challenge. Yes, there are managers/supervisors who have a negative attitude towards handicapped people, but a close scrutiny may suggest that they may have negative attitudes towards everybody, including themselves.

On the other hand, we believe there are many managers who hold nothing against handicapped people. They want to help, but do not know how. They are concerned about their safety and well being, so much so that they end up sheltering and protecting handicapped workers because they care. In addition, some managers feel considerable discomfort while dealing with handicapped persons, not only because of their unawareness of the disability, and its consequences, but some perhaps cannot cope with their own fears or vulnerabilities.

Managers need information. They also need training and education to assist them to get their job done with the help of disabled people. They need to know and realize their own vulnerabilities and those of others around them, so they can cope and bring or create social change in their work places. Attitudes can have a profound impact on the handicapped person's integration into the work place. Nathanson and Lambert bluntly warn employers about their own attitudes and assert that if the handicapped employees are to be successfully integrated into the work place, the behavior of all members of the organization must change including, "high level management, secretaries, custodial, and cafeteria staff, EEO/affirmative action specialists, as well as disabled employees themselves...."²

They add:

No matter how well-trained, sensitive, well-meaning, or objective they may be, supervisory and managerial personnel, line workers, and other professional and nonprofessional staff are not immune to holding biases, beliefs and prejudices about persons who are disabled. These feelings and thoughts, deeply and often subconsciously rooted, are carried into daily interactions with disabled employees and can have a profound effect on their social and vocational integration into the business community.³

Thus, supervisory and managerial personnel, the backbone of the organization, must be given assistance in terms of information,

training, and education, so that a disabled person's entry or reentry into the work place becomes smoother.

KEY ISSUES

The authors have heard many training and development questions related to the handicapped throughout the nation. Here are some:

- What is the best training approach for our managers and supervisors in the handicapped area?
- How do you change attitude?
- Should special training programs be devised?
- Who should get what training?
- What outside training sources are available?
- What are some training techniques?
- What preparation does the first-line supervisor need?
- What are the most effective interviewing techniques?
- How can personnel people sell programs to top and line management?
- How can you get top management commitment?

We will attempt to answer the above and related questions in detail in the following sections.

DEFINITION AND NATURE

The astute reader must have noticed by now that we have used the terms *training* and *development* together and continuously. These terms need to be defined first and their nature understood before we can integrate the handicapped dimension into the training and development picture.

Training has been defined by Burack and Smith as "planned, organized and controlled activity designed to improve some aspect of present job performance. Training is skill oriented and it is usually intended for the short-run welfare of the company, the employee notwithstanding."⁴

Development, on the other hand, according to the same authors, "has to do with a planned sequence of education, training and work experience that moves an individual toward his or her career objectives efficiently. Development provides new abilities, knowledge and perspectives."⁵

Training is short-run oriented, while development is long-run. Both can be utilized to alter behavior and/or attitudes of employees

in a direction to achieve objectives.⁶ Both can be used to help individuals to learn. Organizations providing such opportunities through formal or informal programs can considerably assist individuals not only in learning about today, but tomorrow. And, of course, learning is an active and continuous process. If guided through appropriate materials, methods, and credible leadership, organizations and their people, "whether they are managers or employees," can alter behavior and eventually change their attitudes.

In the handicapped area, we need both training and development. A manager/supervisor, through training, can learn about the laws—mechanical approaches to compliance involving "how to" (see Chapter 2)—or learn how to look for employee behavior that can constitute a possible case of alcoholism or drug abuse (see Table 8.4 later in this chapter). He can learn clues as to how to interview a handicapped person (see Chapter 3) or how a particular technology or aid can be useful (see Chapter 6). Through training, he can learn how to instruct a deaf person or how to supervise a retarded employee or how to handle an employee with unexpected seizures. (See Figure 8.1 for such a "how to" approach used by a prominent employer in the Midwest.)

The simple steps in Figure 8.1 can be taught in a training session. Falling asleep while on duty is an ordinary encounter. But what may be unusual about it is that today, given the legal environment, if a supervisor does not follow such procedure, he may place himself, as well as his employer, in jeopardy. Individuals with a heart condition or controlled epilepsy are persons possessing what

Figure 8.1. Supervisory Instruction in Case of an Employee Who Appears to be Sleeping on the Job

When you are not sure whether a person has fallen asleep on the job or has passed out, do the following:

1. Get a coworker, subordinate, or your boss to witness as you awaken the individual.
2. Attempt to tenderly awake the individual. If the person does not wake up, it may mean that he is unconscious.
3. If the employee wakes up, ask what happened. Write down the person's response.
4. If the person is sick or ill, notify the company doctor or personnel officer.
5. If a person falls asleep on a regular basis, send him/her to the personnel office.

is known as "invisible handicaps." Even though chances of having a seizure or a heart attack may be remote, such things could happen and do happen. One need not be alarmed about it, he/she only needs to follow certain procedures to: (1) help the company to live up to the law, (2) help the supervisor to continue to be a good manager of people, (3) help the employee with a debilitating condition to be active on the job.

People can be helped with minor accommodations or adjustments to get the care they need. In this case, a supervisor might have mishandled a handicapped person, not because he cared less, but because he did not know how.

Development, on the other hand (which may include training), could emphasize the "whys," to broaden an individual's horizon in terms of developing deeper understanding and better sensitivities.

An actual case may clarify this issue. (Note: a similar case was identified in a vignette by Nathanson and Lambert to describe a syndrome they called, "All That Matters Is Your Label."⁷ The notion here is that some of us not only place all handicapped in one basket, but also evaluate a total person by a single mental or physical disability. Therefore, blind persons may be viewed as "unfriendly"; a retarded person can be perceived as "sick." Once we label people, we make wrong decisions about them.)

Consider the case of Mr. Peters.

Mr. Peters is upset again. Inflation, taxes, government regulations, utility costs, picky customers, and a shrinking profit margin are parts of his worry. What has also been driving him up the wall is a union drive to organize the workforce of 25 people in his shop. He has been also concerned about high turnover and absenteeism among his employees. Now he has a new worry. He is shocked at the "lack of commitment" by his first handicapped worker. His quality of work is not good, absenteeism and tardiness records are also bad. Being a small businessman, he is angry because he had heard handicapped made good employees and so he hired a deaf person. The job categories in which he was experiencing turnover and other problems were dull and monotonous. He thought hiring a deaf person would solve that problem. He does not know what to do!

Of course, the problem here is improper placement, plus the labeling syndrome. Mr. Peters thought he was hiring a retarded person, when he employed the deaf worker. Initially, he didn't know the difference. To him, deafness was the same as retardation. He failed to realize that the deaf employee just can't hear—and that he was neither sick nor retarded. Deafness has not affected his mental ability; the job does not challenge his mind. Therefore, he is showing all the classic syndromes of a nonmotivated employee.

This happened to a small shopkeeper, who, of course, didn't have a formal training and development program. But for other organizations, a program of development would increase awareness of managers/supervisors about disabilities and their connection to job performance. Using Mr. Peters' example, managerial personnel can learn the distinctions between disabilities, and the "whys," of employee behavior, so that they can learn how to treat handicapped people on an individual basis, keeping in mind the varied needs, abilities, and potentials of the employee as well as the job needs.

Training and development go together. Mr. Peters' developmental needs could be met by contacting a rehabilitation agency, which would be delighted to assist. In case of large organizations, the selective placement staff, with or without external rehabilitation agency assistance, can not only teach managers how to handle disabled employees, but also why the employee behaves as he does.

CREDIBILITY OF TRAINING AND DEVELOPMENT AND MAINSTREAMING

The crucial issue is not whether effective programs can be developed within the existing resources of the organization, but whether the existing training and development programs have any credibility. If the existing programs are perceived by managers as useless and described by managers as: "a charm school" or "a day of rest" or "a Mickey Mouse game" or "a waste of time" or "a dog and pony show" or "manipulative mind twisters" or "a day of golf and booze," then any approach initiated through such programs will be ineffective, costly, and demotivating, and will fail. But, on the other hand, if the organization is perceived by its members as having solid programs that meet their current and future development needs, then new programs may be taken very seriously.

In the Equal Employment Opportunity area, whenever EEO issues have been presented by programs with no or limited credibility, they have not reached the participants. At least that has been our experience, and managers privately admit that. Furthermore, whenever we introduce EEO issues and the handicapped employment issue in a not-so-highly acclaimed "charm school," the presentation may be perceived in terms of: "what do *they* want now?" or "a love and brotherhood issue" or "they want us to be social workers." What could be even more damaging is that handicapped people could then be considered as unproductive burdens or "outsiders," reinforcing the biases that are held against them. So, "mainstreaming" handicapped people through separate or special programs or poorly administered programs may not only backfire on the organization,

but may have a devastating impact on the survival of the handicapped persons in the organization.

A training and development (T & D) program must develop credibility first. That can be accomplished by:

1. Competent staff who understand managers' headaches and pressures.
2. Materials that are believable, workable, and job related.
3. Encouragement, support, and a positive tone from top management and department/division heads who take such efforts seriously.
4. Reward for learning that is measured and recognized through periodic performance evaluations noting improvements made as a result of such learning (carrot + stick).
5. Follow-up in recognizing that some training and development participants may need private counseling to solve problems or resolve structural issues over which the individuals have no direct control.
6. Recognition by training and development staff that many problems in the organization are not training problems, but are organizational problems, which can't be solved by training and development alone.

New handicapped employees as well as returning injured workers must go through programs with everybody else. There should not be any "separate or special programs." Indeed, many handicapped people have special needs, but so do the nonhandicapped. Yes, handicapped people need to learn the "ropes," the policies and procedures, the opportunities, and the future, but so do the nonhandicapped. A handicapped person may need to know the selective placement program, technology, where to find help, organizational layouts, accessibility; so does the nonhandicapped person. If managers/supervisors are going to be successful, they need to know about planning, organizing, controlling, and directing in order to manage people—handicapped and nonhandicapped persons alike.

Why do we need separate programs then? Couldn't handicapped employee/managers add new knowledge and perspective for the nonhandicapped as partners in training and development approaches? And vice versa? Can they enrich each other with new sensitivities? Are managers and students better served by separate

programs? We doubt that. The existing studies are telling us that if we want to make handicapped people an integral part of our lives, then *the less separatism we practice, the better*. Mainstreaming makes sense, and the studies that are available do not suggest that "separate" or "special" programs are more effective.⁸

WORKABLE DESIGNS

Handicapped human resources and the issues and dimensions that accompany them must be integrated within the existing training and development efforts. The search for objective behavior should be the pivot around which training and development revolve. Handicapped people are human beings first, handicapped second. Nonhandicapped people, described by some wits as "temporarily able-bodied," are human beings first, nonhandicapped second. Therefore, three questions arise:

1. How can we develop programs that focus human beings as people irrespective of ethnic, sexual, physical diversities?
2. Where can we find help?
3. How can we make such programs workable?

Programs have to be developed on a highly coordinated team basis because, just as it is impossible to find one expert on the subject, it is equally impossible to find "bias-free" people who can approach it objectively. Resources are available within and outside the organizations. They need to be mobilized, and the personnel/human resources personnel are in a unique position to coordinate and mobilize the talents. Assuming that we are not going to have "separate" or "special" programs, extensive work and effort need to be directed towards mainstreaming the handicapped. How can we do that? Here are some steps.

STEP 1: PHILOSOPHY

Let us present handicapped people as a part of our existing workforce—old or new. People programs in organizations are common. So we can rename our human relations oriented programs and put them under one umbrella. Call it "Human Resource Management" or "Managing People Today." Within that umbrella there could be components of our labor force—the youth, older employees, women, disadvantaged, professional employees, people with disabilities—the uniqueness of whom could be presented. After all, if a manager/supervisor wants to manage people, he

should know their values, their beliefs, their attitudes toward people, and what motivates them and what turns them off. This approach reduces or minimizes labeling.

STEP 2: CLARIFICATION OF OBJECTIVES

What do we want to accomplish through T & D? We strongly believe that T & D objectives should be linked with profitability and the service objectives of the organization. "Training for training's sake" or "education for education's sake" is noble, but such concepts do not get support from top management, which signs the checks. Therefore, T & D objectives must be tied with the organizational concerns: cost control, turnover reduction, EEO/AAP compliance, absenteeism control, quality improvement, teamwork, performance evaluation, reduced resistance to new technology and work innovation, government awareness, company image, etc. T & D programs have been justified on the basis of how some of these issues could be handled by better management of people and a better motivated workforce. Handicapped people could be presented as one alternative source of viable human resources supply and a possible answer to many productivity-related issues. If the objective is to have an hour presentation to brag about "our handicapped employees," no systematic analysis of T & D objectives is required. But in that case, the effort does little to make the handicapped a part of the team.

STEP3: ESTABLISHING T&DNEEDS

A needs analysis is crucial. T & D is a multimillion dollar industry. All sorts of programs are available at educational institutions, professional business associations, and trade groups that attempt to meet the educational needs of business, industry, academia, and people in the community. Organizations themselves have, to a varying degree, some sort of program to meet their unique needs. But many programs may not be effective. General programs have great value, but organizations today have to adapt and/or devise programs to meet their own urgent and, at times, unique needs. In organizations, needs are as numerous as people. Therefore, these needs have to be specified, and an inventory of "what we have" and "what we don't" at what levels has to be taken. Furthermore, we must also determine whether there is a training or a developmental need, or both. Do we have organizational or training problems or both? Some examples:

Case 1: The organization has a selective placement program. But most people don't know much about it. *What is the need here?*

Case 2: The organization does not have a selective placement program. Members either don't care or don't know where to go. *What is the need here?*

Case 3: The organization is not an AAP employer, but it wants to hire the handicapped and does not know where to go. *What is the need here?*

Case 4: Accommodations and job restructuring scare the daylights out of many managers in one organization. *What is the need here?*

Case 5: Managers want to utilize handicapped people, but they do not know what type of technology and aids are available to make such effort a good experience. *What is the need here?*

Case 6: The organization is scared to death about high accidents and increased workmen's compensation claims and therefore avoids discussion on hiring the handicapped. *What is the need here?*

Case 7: Many managers/supervisors are afraid and uncomfortable with disabled people. *What is the need here?*

Case 8: The organization has an employee assistance program, but line supervisors do not sell the program. *What is the need here?*

Obviously, needs can be diverse. However, we would recommend a committee or a task force consisting of the following major groups:

1. Personnel officers: human resource specialist, training personnel.
2. Members of the line management team.
3. Selective placement person (in charge), if any.
4. Medical personnel.
5. An individual who is knowledgeable of the entire plant/operation layout.
6. Outside rehabilitation agency personnel.
7. Handicapped employee/manager.

This group could analyze the organization, the operation, and the individuals to determine T & D needs. Each individual could bring a unique perspective to the task. Line management must be involved because they work very closely with people directly

involved in production or service. Human relations specialists can bring the total human resource picture. Selective placement persons can get a better feel of the operation as well as organizational needs. Operations personnel can provide engineering and layout information. Outside rehabilitation personnel can provide the group with placement-fit ideas. A handicapped person can provide his perspective on job modification and accommodations, plus his assessment of prevalent attitudes of managerial and staff personnel from personal experience.

Analysis can be performed by questionnaires, observations, and interviews. Thus, a group approach of studying organization, operation, and individuals would lead to a need determination that is bound to be less academic, more practical, and bottom-line oriented. We would add that, in Appendix 2 and throughout this book, we have included names of many organizations that would be happy to provide help and guidance to develop programs. Please remember, a workable relationship with them is a plus. They are not "sheriffs"; they are resource people who are ready to help.

*STEP U: SELECTION OF T & D APPROACHES,
CONTENT, AND DELIVERY*

Needs analysis would lead to the establishment of a program integrated with the existing programs. At this time, identification needs to be made in terms of who are going to be included, what will be the content, and who are going to lead the discussions. Furthermore, a decision has to be made about the degree of formality that will be involved in the process. A series of questions may be raised in this regard. Here are just a few that need to be resolved, keeping in mind the cost, organization resources, people, and program accessibility:

- What format should be utilized?
- Off-the-job or on-the-job training?
- Who should be instructors? (In-house or outside personnel?)
- Vestibule training?
- Coaching, counseling?
- Classroom training or lecture methods?
- Role-playing?
- In-basket method?
- Audiovisual aids? (films, videotapes, etc.)
- Job instruction training?
- Continuous reading programs?
- On company time or employee time?

STEP 5: EVALUATIONS

Any T & D program has to be evaluated. Such evaluation, of course, will depend upon the objective of the program. If the objective on the handicapped issue is to raise awareness among participants, that is one thing. If the objective of the program is to retain handicapped employees as productive employees, the issue is quite different. A number of organizations, which chose to remain anonymous, suggested a number of criteria to evaluate a program's impact on the handicapped.

1. *Employment record:* (department by department)
 - a. How many hired?
 - b. How many promoted?
 - c. How many retained?
 - d. How many transferred?
2. *Accommodations made:*
 - a. Has manager/supervisor cooperated?
 - b. Has there been follow-up?
 - c. Has manager/supervisor shown cooperation and initiative in job restructuring or program flexibility where required?
3. *EEO charges:*
 - a. Number of charges or complaints filed.
 - b. Grievances filed under grievance procedure.
 - c. Content of the charges.
4. *Production record:*
 - a. Work performance by the handicapped person in comparison with other personnel.
 - b. Work behavior such as punctuality, getting along with other people, absenteeism, tardiness, etc. of both handicapped and nonhandicapped.
 - c. Disciplinary records.
5. *Communication:*
 - a. Do employees respond to company requests for identifying handicapping conditions?
 - b. What feedback on utilization of employee assistance programs is received?
6. *Managerial leadership and commitment:*
 - a. Record of counseling to handicapped persons on career opportunities.
 - b. Periodic communication and discussion of EEO policy to all employees.
 - c. Encouragement to handicapped persons to go into meaningful careers, if any.

- d. Encouragement of handicapped persons to take advantage of educational and training opportunities.

If you consult Chapter 2, you will recall some regulations that require organizations to keep documentation on many of the criteria mentioned above. Therefore, records would indicate possible problem areas requiring organizational follow-up, training, and retraining. The real bottom line truly lies in results. Too many managers dismiss EEO related issues thinking they are unproductive. On the other hand, one executive who is fully committed to the employment of the handicapped said to one of the authors:

The best training is no training. I don't need any training and I believe my supervisors do not need any training either. The best approach an organization can take today is to hire one highly qualified handicapped person and place him where he fits. Once the supervisors find out how loyal and devoted the employee is, they will want a dozen of them. Experience is still the best teacher. "Show me and don't tell me," should be the approach. It always takes the first one. That's it.

T & D NEEDS FOR FIVE KEY GROUPS

Our research, observations, and experience involving close interaction with business, labor, rehabilitation, education, and handicapped persons and their families, suggest training and development needs are tremendous, varied, and vast. Key groups and many important people who can make a true difference in the lives of millions of handicapped people need to learn more about disabilities and how they affect us all. We believe the following groups could benefit from formal or informal educational efforts.

1. *Handicapped people themselves:* Many of them, and understandably so, have extreme difficulty accepting disability as a part of life. Many of them are not prepared for entry or reentry into the world of work. They need assistance.

2. *Top management and key executives:* Although many of them are fully committed to the issue, some have not fully appreciated how handicapped people can assist them to achieve their organization's profit/survival/productivity objectives. Top management still considers "computer printouts" as the ultimate and inadvertently neglect the broader social issues and how they affect their businesses. They need assistance, too.

3. *Human resources/personnel specialists*: The contributions made by these executives are truly outstanding. Model programs described in previous chapters are not accidents. These professionals have brought such programs to their organizations. However, personnel professionals need to vigorously look at what is available in other companies. They need to articulate and stand up for the handicapped issue, which requires their full integration into the mainstream of the organizational power structure. They need assistance as well.

4. *Middle management/supervisor personnel*: The need here is enormous. During our research, we found well-prepared line managers/supervisors who are doing an outstanding job of managing people, in general, and handicapped people, in particular. On the other hand, we also found their "weak sisters," whose perception and understanding is so "far out" that it is not only pitiful, but it is a miracle how handicapped workers survive under them and how the contractor still keeps his government contract. Training in many places is simply nonexistent.

5. *Rehabilitation counselors/placement specialists*: We found a tremendous reservoir of knowledge and competence in selected state and private rehabilitation agencies and facilities. They are pros. But we also found counselors and placement personnel who are not equipped to handle either the labor market or the employer or the handicapped person. Many of them talk a "good game" about placement and employment discrimination, but they are simply not aware of positive things that are going on in the real world. They need assistance, also.

Figure 8.2 summarizes key needs in the area of T & D for these five groups. Needs, of course, must be adapted to individual situations. The presentation here represents the authors' analysis. We will take each group and discuss their needs briefly. Two areas—*disability, its nature and consequences* and *attitude*—constitute common items among all groups mentioned. Therefore, we will discuss those in much greater detail.

THE HANDICAPPED PERSON

As we have stressed throughout the book, handicapped people are a diverse group, and, therefore, their needs are varied. These needs require analysis on a one-to-one basis. However, generally speaking, we can divide the population into two groups—existing employees and new employees.

Existing Employees

People can get hurt on-the-job and off-the-job and develop a disability. That sort of an experience could be “traumatic” to some, “irritating” to a few, and “devastating” to many. The individual returning to work after recovery may develop many anxieties:

- Will my disability get worse?
- How am I going to support myself and my family?
- How am I going to function and get around?
- Am I going to be accepted by loved ones, fellow workers, the boss, and my employer?
- What is my neighbor going to think?
- Am I going to be a burden?
- How can I learn a new skill?
- Where do I go for help?

These anxieties and concerns are natural. Some individuals cope extremely well. Others may go through a prolonged period of “mourning” for what could be perceived as “I am something less,” or “I have lost something,” or “I am not normal anymore.” Some need no help at all. Other individuals may need assistance to restore self-confidence and self-dignity as a productive person. The need here is counseling—advice, direction, and a sympathetic ear to help the person help himself/herself.

The individual, additionally, may need work-adjustment training, vocational counseling, or new skill training. Vocational rehabilitation specialists can be of great help here. The newly disabled individual must be reoriented to his job, new roles (if any), and the idea that he is welcome back. The organization can explain assistance programs confidentially and show concern, so that the employee can see how the employer is trying to assist. We recognize that the individual will have to play a role in this adjustment. But with help, he can assume his new role very well. What the person needs here is positive reassurance and a feeling that there is room for him in the organization. Handicapped people “make it,” and the person returning to work after recovery is going to make it, too. A program of reorientation is a must.

New Employees

To new employees, *landing a job itself could be considered an accomplishment*. After all, the handicapped person has gone through rehabilitation, counseling, job search, pounding the streets, scrutinizing, and more of the same to find a job. However, many have anxieties to varied degrees, which may be similar to those described for injured persons returning to work after absence. A rehabilitated worker returning to duty at least has known the work environment,

the people, and the employer. But, a newcomer does not have that advantage. Therefore, he/she may have the usual anxieties of any new employee (nonhandicapped), the anxieties of a rehabilitated worker, plus his own:

- Will they treat me fairly?
- Will they use my abilities?
- Are they sincere or am I a token?
- Are they going to promote me?
- Are they going to accept handicapped people?
- Am I going to be hassled?
- Am I going to be dumped?

It is difficult but vital to appreciate the notion that many handicapped persons have never worked. Some may be highly suspicious. A few may underestimate themselves. A number of them may suffer from "welfare syndrome." And there may be numerous others who may need no adjustment at all because they are very well prepared and "ready to go." Some may have bitter experiences involving doctors, teachers, counselors, psychologists, and they are simply tired and afraid of what may happen in the world of work.

What a new handicapped employee needs is an orientation training or program formally/informally administered to make him feel at ease. The idea that "help is here, all you need to do is ask" must be projected. Again, if the employee is placed through rehabilitation agencies, much of the orientation is done by the agencies themselves. To reputable agencies (as the ones mentioned in Chapter 3), the question of job readiness and adjustment are major concerns.

The President's Committee on Employment of the Handicapped has a number of brochures such as, "How to Get a Job," "A Bright Future: Your Guide to Work," "Preparation for Work,"⁹ that are highly readable and nicely explain job search techniques, where to find help, appropriate dress, punctuality, travel to work, documents that need to be carried for job interviews, job duties, etc. These documents can be procured from the Committee free of charge or reprinted and distributed to the new employees together with the employer's own orientation kit. They can be great resource materials for both employers and the handicapped employees.

Orientation training for the handicapped has to be done on an individual basis because an organization rarely hires hundreds at a time. Figure 8.2 capsulizes major items with special emphasis on selective placement programs, detailed explanation of the importance of the organization's physical layout, and information on program accessibility.

TOP MANAGEMENT

Top management personnel and key decision makers need to be sensitized as well. They are busy people and are concerned about the bottom line. Figure 8.2 highlights some of their developmental needs. Information needs to be presented to them in a seminar fashion. And individuals conducting such educational efforts must be knowledgeable about industry/organizational needs and must understand their pressure points. Major points could center on at least four areas.

1. Many businesses are very concerned about astronomical costs of workmen's compensation and disability benefits. Industrial rehabilitation to get injured workers back on the job is an investment. It will save them money.

2. Some industries nationally are concerned about skilled manpower shortages. Handicapped people can be utilized to meet this challenge. The loss of existing trained personnel because of disability is expensive. It costs somewhere between \$2,500 to \$3,000 to train a new clerical employee, and an executive costs somewhere between \$20,000 to \$40,000.

3. Many executives know they could get hurt. Many of them have seen how their friends, colleagues, and family members are struck by cancer, heart attack, diabetes, alcoholism, or blood clots. Yet, individuals can be productive in spite of these afflictions. (This point is discussed at some length later in this chapter.)

4. Laws and regulations govern their company policies and practices. For some reluctant executives, a "news clipping" on lawsuits, contract loss, and hassles with a government agency involving millions of dollars could be an eye opener. The leadership taken by executives of leading corporations in the country and their programs can be emphasized as well. (See Chapter 5.)

HUMAN RESOURCES/PERSONNEL SPECIALISTS

Figure 8.2 pinpoints some of the major areas of development for personnel/human resources executives. The outstanding executives, whom we met nationally and interact with on an ongoing basis, have identified some key areas for discussion.

1. Integrating personnel and other related functions with the overall organization's goals is essential. We have passed the

talking stage, we must do it. Existing individuals working in this field, particularly the "rookies," must learn the business in which they work. Once they have done that, they should show top management how they can provide practical help to the organization and its operating manager in solving day-to-day problems. By doing so, the personnel/human resources people can make themselves credible.

2. Selective placement components must be integrated more effectively with other personnel functions. It must be realized that the EEO, labor relations, workmen's compensation, selection, training and development, organizational analysis, the medical department, employee assistance programs, etc. are very closely related to the selective placement of the handicapped. We have noticed that many officials tend to go "in their own way" to do their "own thing" without much meaningful interface. The personnel/human resources specialists must learn how to build and work as a team among themselves before teaching line and operating departments the principles of team building.

3. All members in this group must be sensitized to the nature of disabilities and their consequences. And the interviewers must be experienced people who know the organization and job well. (See Chapter 3.)

4. People working in this field must view rehabilitation as a new frontier and thus see it as a new human resources tool.¹⁰ Many organizations have rehabilitated and returned employees to work with considerably less expense than it would cost to hire and train new employees. Sears, Roebuck & Co., in its corporate office alone, for example, reports 80 percent recovery rate in its alcoholism control program. J.C. Penney's, 3M, Metropolitan Life, Mutual of Omaha, General Motors, United California Bank, Inland Steel Co., TVA, Allis-Chalmers, Detroit Edison, and many others have programs that are helping thousands of employees to be productive workers.

Counseling and employee assistance is a big field in the business world today. Paul Scher cites a Columbia University study of 250 large Fortune 500 companies that are providing, to some degree, many of the following services:

- Career counseling with performance evaluation.
- Job rotation for career development.
- Individual self-analysis and planning workshops.

- Life and career planning workshops.
- Workshops on disengagement for retirement.
- Training supervisors in career development.
- Dual career ladder workshops.
- Utilization of "assessment centers."
- Realistic job previews for new employees.
- Mid-career workshops.
- Career sabbaticals.
- Dual careers for spouses.¹¹

The help and knowledge already available in American business and universities is mind-boggling. Yet, some of this knowledge can be acquired by personnel specialists through seminars and workshops conducted by the American Management Association, the Human Resource Planning Society, the American Society of Personnel Administrators, various university programs, and many others. Enrolling in programs and classes could nicely supplement the internal educational efforts of the organization itself.

Handicapped and nonhandicapped alike could benefit and their lives could be enriched by application of knowledge learned by the personnel specialists. *Yesterday's personnel managers, with experience in record keeping, union busting, banquet arranging, and annual picnics, are simply not equipped to meet the complex needs of today's people, organizations, and (especially) the handicapped.*

MIDDLE MANAGEMENT AND SUPERVISORY PERSONNEL

T & D needs for these officials are many. As pointed out before, these people in the "pressure cooker" can make the true difference between whether a handicapped person will survive or not. Figure 8.2 summarizes their T & D needs. At least three areas need to be highlighted.

Background

Many supervisors and middle management people in organizations come up through the "ranks." Promotion to supervisory positions strictly on the basis of technical skill is not uncommon in organizations. A supervisor today must learn human relations skills. He must know how to manage people with diversity for better motivation and productivity. A manager without that balance of human relations and technical skill can be a problem for all employees, including the handicapped. He can sabotage the company image and demolish EEO intent and productivity objectives. He needs human relations skills with emphasis in four areas. (See Table 8.1 for details.)

Table 8.1

Taxonomy of Motivational Needs and Approaches Involving Known Handicapped People^a

Disability	Needs in Varied Emphasis ^b	Job Instruction & Communication	Supervisory Style	Motivational Strategy	While Making Reasonable Accommodation
Deaf	Social Ego Self-actualization	Written messages Signals Body language Job envelope with job descriptions	Supportive "General" as opposed to "close" supervision	Intrinsic & extrinsic Reinforcement on ability & performance	Emphasize business necessity, i.e., had to be done anyway Dependability valued
Blind	Social Ego Self-actualization	Verbal-voice tone Braille when possible Physical contact (touch)	Supportive General Nonpatronizing	Intrinsic Reinforce feeling of belonging, you are always available to help, but let the person ask for help—don't overpatronize Reinforcement on ability	Same Dependability valued
Retarded	Social needs (friendship)	Verbal & written Very specific Identify, teach job elements Demonstrate Repeat	Authoritarian "Close" One job at a time, otherwise gets flustered	Intrinsic & extrinsic Structure—no, no (parent-child relationship) Brag about the person If poses problem, don't duck, but tell the person that he/she is not coming to work the next day Allow to work at his/her own pace	Explanation not necessary
Paraplegic	Physical needs (physical barriers) Social Ego Self-actualization	Nothing special	Contingent like anybody else	Intrinsic & extrinsic Recognition of strength Reinforcement on ability & performance	Tie in business necessity Dependability valued

Source: Reprinted with permission, Gopal C. Patil, "Countdown on Hiring the Handicapped," *Personnel Journal* (March 1978): 151

^aBased on interviews with supervisors and handicapped workers

^bBased on Maslow's hierarchy of need structure

Table 8.2**Communicating with Deaf Individuals: Do's and Don'ts**

Do's	Don'ts
1. Do accept a deaf person as an individual, with patience.	1. Conversations do not have to be in sentence form. "Are you working tonight?" may be asked as "Work tonight?"
2. Do face the person directly and make sure your hands and face are in front of him.	2. Do not talk with your back to the deaf person.
3. Do move your lips when you speak.	3. Do not hesitate to ask a deaf person to slow down/repeat when he speaks fast.
4. Do keep your hands at a position where they will not shield your lips. Keep them chest high.	4. Do not pretend to understand the person, when you don't.
5. Do be aware of the intellectual difference among deaf people. There are wide variations.	5. Do not be afraid to talk in public.
6. Do ask the person how he prefers to communicate.	6. While interpreting, it is not necessary to interpret everything, just the main ideas.
7. Do learn sign language, if you can.	

^aQuoted and adapted from, "Sign Language: Do's & Don'ts," *A Pamphlet*, Lake County Public Library, U.S. 30, Merrillville, Indiana and "Communicate," *A Pamphlet*, West Virginia Research and Training Center, 1223 Myers Ave., Dunbar, West Virginia 25064.

^bDeaf people can understand by reading your lips and hand signals.

One, he must recognize the varied needs of people, including the handicapped. Maslow's hierarchy of needs (which is very basic and a good start) can be discussed and tied in with the unique needs of the handicapped person in question. Although Table 8.1 only talks about four categories of handicap, training specialists can develop other categories and determine unique needs with the assistance of external rehabilitation personnel.

Two, supervisors must learn to communicate and give job instructions. In some cases, written messages (in the case of deaf employees) could be relied on more heavily than verbal communication. (See Table 8.2 for some do's and don'ts involving the deaf.)

Retarded employees need repetition of instructions. Demonstration and identification of specific tasks are a "must" involving retarded workers. They need to be understood. See Table 8.3 for understanding a job-ready retarded employee.

Also see Figure 8.3 for the correct ways to approach a blind person.

Alcoholism is a special problem. It is in the best interest of employers to develop methods for identifying employees with drinking problems, so through proper treatment they may recover

Table 8.3

Job-Ready Retarded Persons: What Have They Learned?*

I. At Home (expected)	II. Everyday Living	III. How I & II Help Employers
1. Help with the jobs we do at home.	1. We get up on time.	1. When we help others to do things around the home, we also learn how to work with other people on the job.
2. Always be on time to go to work.	2. We take a shower, brush our teeth, comb our hair, and make sure our clothes and shoes are neat and clean.	2. When we get up on time, we get to work on time.
3. Make your lunch.	3. We eat breakfast and make our lunch.	3. When we keep our room neat and clean, it helps us remember to keep our work place neat and clean too.
4. Keep room neat and clean.	4. We make our beds and clean our room.	4. When we learn to use the bus or train, we can go to and from work without help from other people.
5. Take care of the way you look.	5. We do our work at home.	5. When we take care of how we look, we keep ourselves neat and clean for work.
6. Learn to take the bus and train by yourself.	6. We make sure we have the right change and get to the bus or train on time.	6. When we learn to take care of our own money, we learn how to take care of our paycheck when we get a job.
7. Learn to save and spend your money carefully.	7. We have a good day at work, follow the rules and listen to what the boss tells us.	
8. Learn to get along with other people at home and at work.		

*Taken from, *A Place Of Our Own*, The President's Committee on the Employment of the Handicapped, Washington, D.C. 20210.

Figure 8.3. Approaching a Blind Person*

If you see a blind person:

1. Offer your help, if needed—introduce yourself and let him know you are talking to him, "May I help you?" otherwise, he will not know you are there.
2. While crossing the street, if help is solicited, let him take your arm—he can follow your body motion.
3. Use the words "see or look," "Do you see what I mean?"
4. Talk directly to a blind person, not through a third party.
5. Don't pet a dog guide. The pet is a worker on duty. Don't disrupt him.
6. When you leave a blind person, let him know you are. Don't leave him stranded.
7. When you meet a blind person, show respect and usual courtesy.

•Quoted and adapted from, *What do you do when you see a Blind Person?* New York, American Federation for the Blind, New York, 10011.

and return to full performance. Table 8.4 identifies the four stages of the disease (i.e., early, middle, late-middle, and approaching terminal) and the behavioral and job performance characteristics associated with each stage. Although one can make general estimates of years of addiction within each stage, we want to stress that progress varies greatly by the individual. Managers are advised to identify sufferers by their symptoms and try to persuade them to seek counseling. Recovery is the goal; however, should termination be required, it is necessary to establish that the employee refused treatment. Whatever the outcome, supervisors need to be alert to the symptoms.

Three, style of leadership is another crucial area. Type X Managers with strict authoritarian attitudes may play havoc with the handicapped worker. Authoritarianism generates negative attitudes toward hiring and retention of the handicapped. Studies show authoritarian personalities value strength and authority.¹² They show resistance to change,¹³ demonstrate intolerance for ambiguity, and exhibit rigidity and dogmatism.¹⁴ Authoritarian managers also emphasize more downward communication with little utilization of feedback. Many managers with this type of philosophy view handicapped people as weak, helpless, dependent, and socially inferior.¹⁵ Thus, this superiority complex compounded with ignorance of disabilities and abilities can lead to the failure of a program.

Table 8.4

Employees with Drinking Problems—Observable Behavior Patterns

Stage	Absenteeism	General Behavior	Performance on Job
Early	<ul style="list-style-type: none"> • Tardiness • Quits early • Absence from work stations <p>"I drink to relieve tension"</p>	<ul style="list-style-type: none"> • Complaints from fellow employees for not doing his/her share • Over reaction • Complaints of not "feeling well" • Makes untrue statements 	<ul style="list-style-type: none"> • Misses deadlines • Commits errors (frequently) • Lower job efficiency <p>— Criticism from boss</p>
Middle	<ul style="list-style-type: none"> • Frequent days off for vague or implausible reasons <p>"I feel guilty about sneaking drinks" "I have tremors."</p>	<ul style="list-style-type: none"> • Marked changes • Undependable statement • Avoids fellow employees • Borrows dollar from fellow employees • Exaggerates work accomplishments • Frequent hospitalization • Minor injuries on the job (repeatedly) 	<ul style="list-style-type: none"> • General determination • Cannot concentrate • Occasional lapse of memory <p>— Warning from boss</p>
Late Middle (years of alcohol addiction)	<ul style="list-style-type: none"> • Frequent days off—several days at a time • Does not return from lunch <p>"I don't feel like eating—I don't want to talk about it" "I like to drink alone"</p>	<ul style="list-style-type: none"> • Aggressive/belligerent behavior • Domestic problems interfere with work • Financial difficulties (garnishments, etc.) • More frequent hospitalization • Resignation, does not want to discuss problems • Problems with the laws in the community 	<ul style="list-style-type: none"> • Far below expectation <p>— Punitive disciplinary action</p>
Approaching Terminal	<ul style="list-style-type: none"> • Prolonged unpredictable absences <p>"My job interferes with my drinking"</p>	<ul style="list-style-type: none"> • Drinking on the job (probably) • Completely undependable • Repeated hospitalization • Serious financial problems • Serious family problems/divorce 	<ul style="list-style-type: none"> • Uneven • Generally incompetent • Faces termination <p>— Termination or — Hospitalization</p>

Source Content analysis by Gopal Patil of files of recovered alcoholics in five (anonymous) organizations

Four, motivating handicapped employees involves understanding needs, participative leadership style, and two-way communication. Handicapped people like to be involved. After all, who is more aware and sensitive to disability than the worker himself? Who is a better expert on job accommodation than the handicapped person himself? It is not what we do or say, but how we say or do it that makes a significant difference in employee motivation. If a manager, while orienting, training, or accommodating, projects an image of charity, favor, paternalism, and custodianism, that manager and the handicapped person are a "bad fit."

Education

Supervisors must also learn the mechanics of a selective placement program. Why is it there? What can it do for them? How can an external rehabilitation agency help? How can the handicapped handle various jobs and tasks with aids and technology? They need reassurance that upper management is going to back them up. They also need to be exposed to disability and its consequences. It could happen to them.

Perceptions

Many line supervisors give lip service to EEO programs for two main reasons: One, they believe upper management and their bosses are not serious. They perceive their company's involvement is due to governmental pressure. Therefore, they do the minimum, or just get by, or take a very passive posture. Handicapped people suffer. Two, they do not perceive EEO as part of their job. It is an added responsibility, which should be performed by the people at the "front office." This, besides other reasons, stems from a supervisor's perception of his own role. Davis presents an excellent perspective of the role of a supervisor as a leader from managerial, as well as supervisory viewpoints. He presents five views of a supervisor's job.¹⁶ We shall discuss only a few.

A supervisor may perceive himself as a *person in the middle*—a person who is caught between levels and conflicting expectations and who is not clear about his role. Consequently, he may not be aggressive, may be less of a risk-taker, and may play a very passive, safe role, so that he will not be in trouble. He may not be a good advocate for the handicapped.

A supervisor may also perceive himself as a *marginal person*—a person who is left out, ignored, and unaccepted by management. He may perceive the future as bleak. This type of manager can resent handicapped persons. He may think, "Look what they (management) are doing for those people (handicapped) and nothing for me!" Backlash may develop.

A supervisor may also see himself as *another worker*—a person who is called a supervisor but is really treated as an hourly person. Such individuals—lacking authority, training, and power—may play the role of a "messenger boy" or a "hard-boiled cop," or an "employee" who does what he's told and that's it. In this case, the supervisor may misinterpret management philosophy and directives. He may see utilization of handicapped people as an additional burden. He may be enveloped in a "what is there for me?" philosophy, a tone that obviously is neither favorable for the handicapped nor for management.

Therefore, supervisors with these perceptions need to be trained, counseled, and coached. Traditional human relations training (classroom approach) has to be supplemented by problem solving. Their deep sources of frustration need to be handled. Furthermore, supervisors need to be assured that counseling is available for them too, not just for the handicapped. Without a combined approach of training and problem solving, it will be extremely difficult for management to convince supervisors and middle managers to take T & D programs seriously, let alone promote and support the employment of the handicapped.

REHABILITATION COUNSELORS/ PLA CEMENT SPECIALISTS

Figure 8.2 identifies some key areas of training and development needs for this group of professionals. As mentioned in Chapter 3, just as there are good and bad employers, there are good and bad counselors and job placement specialists. But, the pros, i.e., those who are extremely successful in placement and a true resource to employers, have some advice for the "rookies" (see the counselor's checklist in Chapter 3). There are some additional areas of concern that are very sensitive, yet need to be discussed.

In spite of the successful programs we have presented, many in rehabilitation are not trained and well equipped with labor market information. They counsel clients to go into a vocation or career and then find out that opportunities in those areas simply do not exist. The counselors, as well as the handicapped, become flustered and do "finger pointing" at the employers in the name of discrimination. Today, many blind and visually impaired people are pursuing computer related fields, not because the jobs are stereotyped as "blind jobs," but because there is a severe shortage of skilled personnel in computer programming and related fields. Yet, many counselors simply steer clients to traditional jobs and careers, which is an exercise in futility. Employers cannot do much unless a person is "qualified" or "qualifiable." In one seminar attended by

over 200 counselors, the senior author found only four counselors who looked at the *Occupational Outlook Quarterly!*

Many counselors dislike placement, even though it is a crucial ingredient in the rehabilitation process. Besides the lack of training in labor market evaluation, many counselors' roles in the rehabilitation community are not well defined. In state programs, for example, a counselor is responsible for both counseling and placement. Of course it depends upon the caseload, but many counselors seem to be either "burned out" or lack adequate time to do both. So, placement, the more unfamiliar and distasteful event, gets less priority. This situation becomes almost a relief to the counselor, who is remote from immediate employer needs. Thus, the Vocational Rehabilitation Act has created, in many situations, a horrible situation in which employers and counselors are caught in their respective jargons, both parties are uncomfortable, and the handicapped person is left in limbo.

These problems compound the other existing difficulty of custodial and paternalistic attitudes among some counselors themselves. Result? Many handicapped people are misplaced, if they are placed at all. And that too often is in low paying, dead-end jobs.

Two major things can be done about this situation. First, area employers can invite area rehabilitation agency personnel to their facilities and educate them about their organizations, products, work environment, skill requirements, collective bargaining contracts, future human resource requirements, etc. They can also give exposure to their in-house training and organizational practices. This will help to develop understanding and sensitivity.

Second, our schools and universities must reevaluate their rehabilitation counseling/administration curriculum. They should include subjects such as (1) economics, (2) labor economics, (3) personnel/human resources, (4) labor relations and collective bargaining, and (5) organization theory and behavior. These subjects will assist counselors/job developers to develop a better understanding and balanced perspective of the real world of work, so that they can be a true *link* between the rehabilitation community and employers. Summer internships or work-study programs for credit are other possibilities.

ATTITUDES AND DISABILITY

Attitudes and disability are subjects that need to be covered for all key groups identified in the previous section. Time and time again, it has been claimed that negative employer/manager atti-

tudes and unawareness of disabilities are major barriers to the employment of the handicapped.

ATTITUDES

Attitude is defined "as a predisposition to respond in a favorable or unfavorable way to objects, persons, and concepts."¹⁷ It is not a fact; it is how one feels about something. It is evaluative in nature.

Beliefs, on the other hand, are defined "as statements about the relationships between objects, concepts, and events."¹⁸ Thus, "I like handicapped people" is an *attitude*; "Handicapped people make dependable employees" is a *belief*. "Handicapped people make me feel uneasy" is an *attitude*; "Handicapped people are sick" is a *belief*.

People form attitudes on the basis of beliefs, which may or may not be factual. Yet, we act on the basis of our attitudes. Some of our actions could be positive for our organizations, while others could be absolutely devastating. We can build or ruin people's careers and lives by our actions based on subjective attitudes founded on beliefs that are not grounded in facts. Thus, a manager may have a negative attitude towards utilizing someone with a disability. Consequently, he may reject him, block his promotion, and fail to develop him. Thus, the organization may end up discriminating, not because it does not have a nondiscrimination policy on the basis of handicap, but because its managerial personnel have negative attitudes towards those people. Therefore, regardless of an organization's positive intentions, it may end up treating one group of people differently from others and, causing needless discrimination charges, work disruptions, and lower productivity.

A case in point is the federal government, although this sort of thing can happen and does happen in private organizations as well. As pointed out in Chapter 2, the federal government's record of employing the handicapped has been poorer than that of the private sector. Validating earlier studies, a recent research paper focusing on the attitudinal, employment, and procedural barriers to the employment of the handicapped, generated by the Interagency Committee on Handicapped Employees (ICHE),¹⁹ came up with some sad conclusions.²⁰ The ICHE identified massive attitudinal, personnel, and other organizational barriers to the employment of the handicapped. The attitudinal barriers identified are summarized below:

1. *Apathy*: This attitude exists at all levels of the federal government, causing inadequate resource allocation to the

handicapped program. Although all agencies are required to appoint coordinators for selective placement and have AAP, many coordinators are not fulfilling their responsibilities.

2. *Paternalism*: Handicapped people are not involved in terms of giving input to the policy makers. Decisions are made for them, suggesting the belief that handicapped individuals cannot take care of themselves.

3. *Fear of persons with handicaps*: Many managers and supervisors feel uncomfortable with the handicapped, resulting in hesitation to hire handicapped persons.

4. *Curiosity*: In many cases, handicapped persons are given high hopes, when the reality is that the supervisors are more "curious about the person's disability" and do not have "any real intention of offering a position."

5. *Stereotyping*: This refers to the notion that individuals with certain disabilities are suited for a particular job better than others. This leads to dumping and concentration of handicapped people in certain job types. It is forgotten that there are wide variations in ability, aptitude, and interest among handicapped people.

6. *Fear of change*: This leads to inflexibility in the way a job is accomplished. Many supervisors are very committed to "one best way" of doing things. As a result, reasonable accommodations become extremely difficult.

7. *Focus on the "superstars"*: Many handicapped persons prove themselves and excel on their jobs and distinguish themselves by their superior performance in spite of their handicaps. Managers/supervisors unconsciously look for these "superstars" and screen out the average handicapped person with skills and abilities.

8. *Attitudes based on misinformation*: Many in government do not realize that handicapped people can perform a variety of jobs. In recent years, because of the availability of aids and technology, handicapped people are much more mobile and prolific in their fields of expertise. "Examples were given of an employer who would not hire deaf persons because the positions required good reading comprehension...or an employer who said that he could not consider handicapped applicants because most of the jobs were of a professional nature!"²¹

DISABILITY

Although one in four of us becomes disabled (in the sense of "impairment"; recall the distinction we made in Chapter 1), many of us fear disability; we associate it with chronic illness. We are products of a society that does not psychologically prepare people to cope with disability. Therefore, it is not surprising why many of us, including managers/supervisors, view disability as something dreadful. We confuse disability with inability, i.e., if a person has a disability, we unconsciously conclude he/she cannot function and engage in meaningful work. Paul Scher, Corporate Manager of the Handicapped Program at Sears, frequently cautions executives when he says:

You know, all of you able-bodied people are an accident away from a disability.

Leopold & Associates, Inc., designers of a management training program in EEO for the handicapped (to be described later in this chapter), start their brochure by saying:

One out of four people who read this will become disabled before retirement.
Shocking?
Perhaps, but a fact.

In spite of an increase in medical services and increased life expectancies as a result of advanced research in medicine and technology, disabilities in the U.S. are increasing and people who are making employment decisions can develop those disabilities themselves. Millions of workers with various forms of disabilities are already coming back to work; they need to be understood by their bosses. During the last 10 years:

- Diabetes increased by 174 percent.
- Arthritis and rheumatism increased by 56 percent
- Asthma, including hay fever, increased by 99 percent.
- Visual problems increased by 95 percent.
- Hearing impairments increased by 155 percent.
- Hypertension and heart conditions increased by 197 percent in men and 224 percent in women.²²

Any one of us could develop these conditions, requiring some modification in our life style, whether at home or at work. Any one of

us who are qualified to do a job can with these conditions be legally defined as "handicapped," requiring accommodations.

As life marches on, so do disabilities. Our bodies wear out. We get exposed to chemicals and toxic substances in our environment. Accidents happen. Some of us become ill or develop a disability, not by choice, but by accident.

- A California radio broadcaster is totally blind. She was born with sight, but too much oxygen in the incubator completely destroyed her eyesight. *Could this happen to you or your loved ones?*

- An Illinois market researcher, who now travels all over the world in her wheelchair, was struck by polio when she was only seven years old. *Could this happen to you or your loved ones?*

- A social worker and mother. 1980 Handicapped Hoosier of the Year, is paralyzed. One day during her lunch hour on a country road, she and her girl friends were riding in a car—they crashed and her back was broken. *Could this happen to you or your loved ones?*

- A successful rehabilitation counselor in northwest Indiana has been blind since he was nine. While playing, he lost one eye by a "speeding dart" and the other one by a "flying stick." *Could this happen to you or your loved ones?*

- A leader in the rehabilitation field, who is a professor at an East Coast university, author of eight books, and holder of nine honorary college degrees, was born without legs. *Could this happen to your children or grandchildren?*

- A successful corporate attorney in Louisiana suffered a sudden heart attack at 40, a case of coronary cardio-vascular disease. Now he is part of that 80 to 90 percent of the 1.5 million Americans struck by such attacks annually who recover. *Could this happen to you or your loved ones?*

This list could go on forever. There are thousands of conditions that one can develop. Those women, for example, who smoke and drink excessively during pregnancy could give birth to babies with birth defects, retardation, and other developmental disabilities. What does the birth control pill do? What does the exposure to dangerous chemicals do? These are frightening questions. And yet, cases show repeatedly how handicapped individuals can successfully recover from conditions and be a part of a productive labor force.

Corporate executives, personnel specialists, businessmen and women, managers and supervisors, rehabilitation specialists, government officials, union leaders, educators and educational administration, scientists, doctors, engineers, attorneys, media professionals, etc. are all people. As employers and managers, some of them don't realize that they are not immune to developing disabilities; and yet these are the same people who educate, hire, fire, and promote. These are the same people who set policies and implement them. These are the same people who put subtle pressure on people with disabilities. And they are the same ones who complain about rising disability costs, workmen's compensation costs, and increased welfare costs, at the same time throwing up barrier after barrier to prevent handicapped persons from finding and holding a job—a means of self-support and self-dignity.

STRATEGIES AND PROGRAMS TO IMPROVE ATTITUDES

We agree with the notion that an attitude is hard to change, if not impossible. Prejudgments, myths, and false assumptions about handicapped people have developed over hundreds of years. It will take time to change attitudes, but shall we take hundreds of years to do it? No. Available approaches can be utilized to make efforts *now* to change attitudes. The crucial question is where do we start?

CHANGING BEHAVIOR

Let us emphasize changing behavior first, then attitude. There are a number of steps that can be taken.

Educational Process

Let us expose managers/supervisors to the concepts of (1) advantages of utilizing handicapped people without idolizing them, (2) their abilities and disabilities, (3) the nature of disabilities—"it could happen to you," (4) the diversity of the handicapped population and myths associated with them, (5) role models of successful handicapped people in varied occupations, and (6) technology, aids, and medical services that are available to make people fruitfully engaged at work.

Increased Interaction

Let us encourage more interaction with handicapped persons. That can be accomplished by hiring and placing them on a selective basis. Once a supervisor/manager has worked with an individual,

he may develop unique sensitivities. Field trips by management personnel to a comprehensive rehabilitation facility such as the Rehabilitation Institute of Chicago or Human Resource Development Center in New York, or to sheltered workshops, or to rehabilitation units of major hospitals in a community can be very helpful in developing empathy and inspiration. Trips could be an integral part of an organization's total T & D efforts.

Increased Knowledge

Let us expose decision makers to resources—books and movies (a list is included in Appendix 3), slide/tape presentations—that will help solve their problems. After all, handicapped people are hardly an obstacle to organizational and individual goal attainment.

WORKING WITH INDIVIDUALS

If all managers or decision makers had negative attitudes towards the handicapped, the programs and progress presented in this book would not have occurred. The crux of the matter, to us, is the individual frustrations that many of us have and our utter inability to control forces that demotivate us—create in us negative attitudes. Such attitudes are manifested in negative behavior. A manager, for example, who sees himself as a marginal person or a person-in-the-middle or another worker (as mentioned earlier), does not hold these perceptions by choice, but because of circumstances over which he may not have any direct control. EEO lectures and consciousness-raising efforts are meaningless to them. Therefore, it is incumbent upon organizations to take a look at the individuals with negative attitudes on a one-to-one basis to find their pressure points and to do something about them.

Experience suggests many negative managerial behaviors are not necessarily culturally induced (they may be), but organizationally instilled and reinforced. Therefore, top management, in consultation with T & D personnel, must supplement education with simultaneous back-up, with problem solving, counseling, and coaching, so that the sources of those managerial frustrations can be minimized. Once that happens, attitudes toward equal opportunities tend to fall in place.²³

BREEDING UNDERSTANDING THROUGH COMPLIANCE

As indicated previously, while laws cannot change attitudes, they certainly can change behavior. Initially, it is not essential (although it would be nice) for a "temporary able-bodied" person to have great sensitivity towards the disabled. If a manager/supervisor

evaluates the person on the basis of performance and job-related criteria and is objective in his/her approach, that can be a starting point for introducing change in that person's behavior. As long as a manager realizes that in the eyes of the law, "prejudice is not the issue, discrimination is," and, therefore, disparate behavior is not tolerated, the organization is up for a good start. Therefore, temporarily, the objective of improving attitudes may have to be sacrificed to emphasize immediate behavior, i.e., compliance.

PRO VIDING LEADERSHIP FROM ABOVE

Positive and negative behaviors, at times, are reinforced by the top management. If the top management is committed to the principle of utilizing diverse people, including the handicapped, the supervisory behavior (positive or negative) must be documented and steps taken. *That can be achieved through performance evaluation.*

Today, it is not uncommon in organizations to include a "criterion" called "management's commitment to equal opportunity." During performance evaluation, a manager can be recognized and rewarded for positive behavior involving equal opportunity. Objectivity can be recognized. On the other hand, negative behavior involving EEO can be documented and efforts made to improve behavior. *If efforts are made to change supervisory behavior through education, training, development, counseling, coaching, and problem solving, and such efforts fail, then the individual should be terminated on the basis of adequate documentation.*

In summary, then, what we are suggesting is that efforts be directed through education, awareness, exposure, individual problem solving, compliance to EEO, and performance evaluation to improve behavior first. One hopes that may lead to changes in attitudes. Laws can change behavior and education can change attitudes. As a matter of fact, our experiences suggest that many in organizations have changed behavior and attitudes through such efforts. We present the following programs, which many organizations nationally have utilized to produce results.

THREE POPULAR PROGRAMS

Undoubtedly, there are many noteworthy programs in this country. We have chosen the following programs because of their uniqueness and relevance. All three programs, to varied degrees, attempt to accomplish the following:

1. Teach managers/supervisors through "practical and legally sound" methods the "know-hows" of hiring and fully utilizing handicapped people in work settings.

2. Improve managers/supervisors understanding of disabilities and their relationship to job performance, thereby reducing discomfort in them while interacting with handicapped individuals.

3. Help managers/supervisors to develop empathy and sensitivities through awareness of individual needs and capabilities of handicapped people.

4. Through a number of techniques such as case studies, role playing, practical vignettes, video cassettes, lectures, and personal care, the presenters make themselves available as a "resource" not as a "watchdog."

BREAKTHROUGH

This program has been developed by Leopold and Associates, Inc., which operates nationally,²⁴ and is designed for in-house use by the organization's own instructors. Recognizing the fact that (1) many managers feel uncomfortable in interviewing the handicapped, and (2) some react to the handicap first and not the individual with ability, the program attempts to assist the employers in three areas:

1. The laws involving the hiring of the handicapped, which are presented in the total context of other equal opportunity laws and regulations. The goal here is not only to make participants aware of the laws, but to help them not to get involved in "unintentional discrimination" on the job.

2. Employment interviewing—involving the basic steps in an interview process. It contains "all the essential elements of an interview course."²⁵

3. The important concepts and aspects of job accommodations for the handicapped.

The program is presented in a three-hour format, which can be adapted by an organization to meet its unique needs. The organization conducts "train-the-trainer" workshops. Over 30 organizations including Kraft, Inc., Bristol Myers, Borden, Inc., International

Paper Company, the U.S. Army at Fort Sheridan, etc. have utilized the program. The program has been helpful because managers/supervisors can relate to everyday business problems through practical vignettes. Awareness develops and the job of accommodations becomes much easier. One participant said he liked the program because, "it's not overly syrupy. It's very easy to feel good about hiring the handicapped by playing on people's sympathies. This is a really nuts and bolts good technique."²⁶

THE JOHNSTOWN EXPERIENCE

This unique seminar, probably one of its kind, has been developed by the Pennsylvania Bureau of Vocational Rehabilitation for employers at no cost. Participants are responsible for the cost of travel, lodging, and meals. The seminar, called "Understanding and Interviewing the Handicapped Job Applicant," started in 1975 as a "helper" to the personnel specialists and supervisors to implement the mandates of the Vocational Rehabilitation Act.²⁷ Very shortly after the seminar began, the legal emphasis began to be replaced by emphasis on awareness. Thus, a three-day awareness training program has developed and has been presented monthly at the Hiram G. Andrews Center, located in Johnstown, a small community in the Allegheny Mountains of western Pennsylvania.

The seminar focuses on the "handicapped persons" and presents them as people. This is a small group seminar (10 to 15 participants), which attempts to dispel the myths surrounding the handicapped. Some of the unique characteristics of the program are summarized as follows:

1. The participants live-in with the handicapped people in this 121/2-acre rehabilitation complex. They are in close contact with the handicapped for three days. They share cafeteria, rest rooms, snack bar, and canteens with the clients. This helps to alleviate fear, discomfort, and apprehensions.
2. They are taught by highly experienced faculty, many of whom are handicapped themselves. The managers are a "minority" there, outnumbered 50 to 1 by the center's clients.²⁸
3. The living experience provides opportunity not only to get the "feel" for a living laboratory, but role playing assists in internalizing the "feelings" of being:
 - (a) blindfolded and taking a stroll through the corridors with sighted guides, or participating in discussion while seated blindfolded.

(b) wheelchair bound: sitting in the chairs and making long trips through the corridors of the center.

The "helplessness, dependency, awkwardness, and frustrations" are dramatized by those who play the role and those who observe them.

4. The six major disability areas—blindness, deafness, orthopedic-neurological disorders, mental illness, mental retardation, and alcoholism—are presented by faculty members who have had such handicaps. Participants observe how the instructors have overcome their handicap.

5. Participants also learn to depend upon the handicapped to get guidance and suggestions about "dining, shopping, and other after-hour activities." Gallion writes:

The program at Johnstown does not schedule after hours activities for the participants. Events take place because of close association which develops during the daily sessions—if several groups decide to dine together, they will have to think about accessibility when choosing a restaurant because of the faculty member in the wheel chair. They will also provide help for the blind speaker and the seminar records some after-hours pinochle games with a Braille deck. And what's the feeling of a participant enjoying a drink while seated alongside the recovering alcoholic who had lectured earlier in the day?

6. Participants also learn to evaluate their own behavior through videotaping of mock interviews. This gives them the opportunity to do something about their own interviewing shortfalls and styles.

The seminar has been attended by 550 participants from 25 states, the District of Columbia, and one foreign country, representing business, labor, government, and advocacy groups. Major businesses that have sent representatives include Edison Electric Institute and among 40 of its associated electric companies, Bell Telephone, Sears, Roebuck & Co., U.S. Steel, Corning Glass, Proctor & Gamble, Westinghouse, Prudential Insurance Co., and others.

In 1978, a survey of alumni of the seminar was undertaken. *Based on a 57 percent response, it was determined that, as a result of the sensitivities developed through the seminar, some 357 handicapped people, representing all disability types, have been hired in a wide variety of jobs and occupations.*

LEARNING ABOUT DISABLED WORKERS

This is another excellent training program, designed by the Texas Rehabilitation Commission, that goes to the heart of the issue of disabilities. The program has been designed for employers who would anticipate hiring handicapped persons into their workplaces. Managers/supervisors, through experience and information, learn about general disabilities and eight additional specific disabilities, which to a lay person remain, by and large, a mystery. Persons working for/with a handicapped person become more at "ease" and learn how to communicate and interact better. The objectives for the participant of this training are to:

1. Learn specific facts about handicapped people.
2. Learn specific facts about a selected sample of disabilities.
3. Identify functions, tasks, or roles that managers and coworkers can perform or play to assist the handicapped person to better adjust to the workplace.
4. Become an advocate of good workers, including the handicapped.³⁰

The uniqueness of the program lies also in its basic characteristics, which suggest tremendous research and teamwork involving experts in the area of employment and disabilities, educators, practitioners, and other human resources specialists. The realistic bases of the program make the task of presentation a relatively smooth effort. The major characteristics are:

1. The assumption that the disabled worker fails on the job not because of his lack of skills, but because of unsatisfactory social interaction and work atmosphere.
2. The program can be presented by a person who is not an expert in rehabilitation or an expert in training.
3. Interaction among participants and group dynamics are heavily involved.
4. The program presents some major disabilities that are a major bottleneck for many employers, plus it focuses on generic accommodation efforts.³¹

The training consists of nine modules. One module covers general information about handicapped employees. And, with the help of the Participant's Manual, a person can take an inventory of his own perceptions of the handicapped people (myths, etc.) and demolish these perceptions with facts (provided).

The other eight modules cover some common samples of specific disability groups. These are:

- Mental retardation.
- Epilepsy.
- Cerebral palsy.
- Mobility impairments.
- Blind/Visual impairments.
- Deaf/Hearing impairments.
- Psychological-social disabilities.
- Other physical disabilities such as arthritis, diabetes, asthma, heart disease, cancer, cosmetic impairments, speech impediments, and treatment-related side effects.

Each workshop may last about two hours. It may consist of the general module and a specific disability module. Employers may choose one, or two, or all of them, depending upon their individual needs. The detailed instructional materials consist of a presenter's guide, participant materials in a written manual, as well as slides or tapes. The instructional materials also very carefully outline how to prepare the sessions and present them on a step-by-step basis.

The program has been utilized by leading organizations including the Tennessee Valley Authority (TVA), an employer of over 50,000 people. TVA has made this program a part of their total T & D programs for managers and supervisors at all levels through the organization. Over 300 managers and supervisors have gone through such programs and have developed sensitivity and empathy as a result.

What is impressive to the authors is that by explaining disabilities and their characteristics, managers find the task of making accommodations not as difficult as it was projected to be.

For example, supervisors learn many on-the-job related tips that are helpful. A few examples:

1. For a retarded worker: "Explain things in clear, concrete specific language—don't talk down to him as if to a child."

2. For an epileptic employee: He is not mentally ill. Eighty percent of the people with epilepsy can be treated. A "*seizure*" may last for a minute. A supervisor can help. "Don't hold him down....Stop him from shaking....Loosen tight clothing and turn the person to the side....Clear sharp or hard objects....When the "seizure" is over, let him rest....Although medical help is not usually needed, if the seizure lasts more than ten minutes or

another one starts less than an hour after the first one, call for medical help."³²

3. For a person with cerebral palsy: He may have muscle problems, which "may jerk" or "tremble." The employee may feel embarrassed because of such conditions. Advice to supervisor: Among other things, "you can be friendly. You can offer help when it is asked for....Do not finish sentences for them when they have trouble with a word...."

4. For a person with arthritis: He can be advised to avoid "cold and damp areas." For a person with asthma: He may avoid areas with high concentrations of dusts and fumes. For an individual with diabetes: Strict "dietary routine" may do the trick.

Many employers fear, as we mentioned before, both visible and nonvisible handicaps. But once they learn more about these disabilities, they become more willing to do something about them. Disabilities cease to be a "big deal."

If you can check the items on the list below your T & D is in good shape. If not, you should know what to work on.

T & D Action Checklist

Define supervisory/managerial responsibilities in the EEO area for the handicapped.

Improve the credibility and reputation of your existing T & D efforts.

Remember that T & D efforts in the handicapped area must be linked with the organization's profit and service objectives.

Avoid labeling. Handicapped people need to be presented as one of the diverse groups in the labor force.

Perform a needs analysis on the basis of a team approach. Utilize key people throughout the organization and outside the organization—and use the handicapped person, as well. A task force approach is recommended.

Back up educational efforts with problem solving to change and modify bosses' behavior. Do not overestimate their negative attitudes.

Seek to understand disabilities. It is critical; the better the understanding, the more comfortable a manager will feel in dealing with the handicapped.

Contact resource centers for assistance. Such a list is included in Appendix 2.

Evaluate supervisory attitudes and behaviors through performance evaluation. Use the carrot and stick approach.

Work closely with your union representatives, if any.

Remember *laws* can change behaviors and *education* can change attitudes. Both should be utilized.

Do use the books, films, and information sources that have been suggested in Appendix 3.

LOOKING BACK: QUESTIONS TO CONSIDER

1. What are the supervisory/managerial roles in the employment of the handicapped?
2. What is the distinction between training and development?
3. Why is it important to have credibility of existing training and development programs?
4. What steps can be taken to improve the credibility of such T & D efforts?
5. Why is it important to mainstream the handicapped program with that of the total T & D efforts instead of making it a separate program?
6. What steps are involved in designing a T & D program on the handicapped?
7. What criteria would you use to evaluate a program?
8. Who should get what in T & D? What are the main points that need to be conveyed to the key groups.
9. How can supervisory/managerial attitudes be modified or changed?
10. What can we learn from the three popular programs that have been presented?

NOTES

1. M.S. Battles. "The Manager and Affirmative Action to Hire the Handicapped." In *The Manager's Guide to Equal Employment Opportunity*, New York: Executive Enterprises Publications, 1977, p. 107.
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3. Ibid.
4. E.H. Burack and R.D. Smith. *Personnel Management: A Human Resource Systems Approach*. St. Paul, Minnesota: West Publishing, 1977, p. 221.
5. Ibid., p. 457.
6. W.F. Glueck. *Personnel: A Diagnostic Approach*, rev. ed. Dallas, Texas: Business Publications, 1978, p. 336. Also see John Hinrichs. "Personnel Training." In *Handbook of Industrial & Organizational Psychology*, ed. Marvin Dunnette. Chicago: Rand McNally, 1976.
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8. Frank Bowe. *Handicapping America*. Harper and Row, 1978, pp. 105-51.
9. Contact the President's Committee on Employment of the Handicapped, Washington, D.C. 20210 for these other documents. The Committee staff is truly helpful.
10. For an excellent paper, see P.L. Scher, "Rehabilitation: Personnel's Newest Human Resources Management Tool." A paper delivered to the California Governor's Committee on Employment of the Handicapped, Alhambra, California, October 2, 1980.
11. Ibid., p. 10. For an excellent presentation on career planning and workable systems, see E.H. Burack and N. Mathys. *Career Management in Organizations: A Practical Human Resource Planning Approach*. Lake Forest, Ill.: Brace-Park Press, 1980.
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15. R.G. Barker, B.A. Wright, L. Meyerson, and M. Gromick, *Adjustment to Physical Handicapped & Illness: A Survey of the Social Psychology of Physique and Disability*, New York: Social Science Research Council, 1953. For the behavior of the X-Type manager, see D. McGregor. *The Human Side of Enterprise*. New York: McGraw-Hill, 1960.
16. K. Davis. *Human Behavior at Work: Organizational Behavior*, 6th ed. New York: McGraw-Hill, 1981, pp. 141-44.

17. T.R. Mitchell, *People in Organizations: Understanding Their Behavior*, New York: McGraw-Hill, 1978, p. 118.

18. *Ibid.*, p. 119.

19. This agency was established under the Vocational Rehabilitation Act of 1973 with the objective of improving the employment picture for the handicapped by removing barriers that negate their fuller utilization within federal service.

20. Interagency Committee on Handicapped Employees. "Attitudinal Barriers, and Employment Practices and Procedures that Affect the Employment of Handicapped Individuals in the Federal Government," a report and recommendation adopted by the committee, November 21, 1975. (2402 E Street, NW, Washington, D.C. 20506).

21. *Ibid.*, pp. 8-11.

22. For information, contact National Center for Health Statistics tor U.S. Health. These statistics are based on the study conducted by Alain Calvez and Madeleine Blanchet as reported in the *American Journal of Public Health* and the *Chicago Tribune*, May 10, 1981, Sec. 3, p. 11.

23. Gopal C. Pati. "AAP & O.D.: Not Such an Odd Couple." *Management Review* (May 1980): 58-62.

24. Leopold & Associates, Inc., *Breakthrough*, 35 East Wacker Drive, Suite 3420, Chicago, Illinois 60601.

25. *Ibid.*, p. 3.

26. N.R. Kleinfield. "Teaching Employers About the Disabled: Training Film Dispels Myths," *New York Times*, February 26, 1980.

27. For seminar information, contact director, Bureau of Vocational Rehabilitation, Labor & Industry Building, Seventh & Foster Streets, Harrisburg, Penn. 17120.

28. For a fascinating description, see D.R. Gallion. "The Johnstown Experience: An Adventure in Awareness Training." *Proceedings of the IEEE Computer Society Workshop on the Application of Personnel Computing to Aid the Handicapped*, Laurel, Maryland, April 2-3, 1980.

29. *Ibid.*, p. 60.

30. Texas Rehabilitation Commission, *Learning About Disabled Workers: Presenter's Guide*, p. 2. Contact the Commission at 118 E. Riverside Dr., Austin, Texas 78704.

31. *Ibid.* For other characteristics, see p. 2.

32. *Ibid.* Participant's Manual, p. 6.

Chapter 9

Summary and Implications for Future Action

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"...it's inconvenient as hell to be blind, as I am, or deaf, or in a wheelchair, or have epilepsy, or have a history of mental illness...but it's darn right insulting, if not outrageous, to be treated as a patient by the public...."

—Paul L. Scher

SUMMARY

In this book, we have attempted to present a believable and workable body of knowledge and experience involving employment, management, and fuller utilization of people with disabilities. We have presented handicapped people as productive—as a viable source of valuable untapped potential and a partner to employers in their search to improve productivity. Even though we have merely scratched the surface, we have emphasized the following key points:

1. When selectively placed, handicapped people make good, dependable, and productive employees who are interested in a job, not just a paycheck—a plus for the employers.

2. In these days of skyrocketing labor costs, it is good business to hire, train, and fully utilize handicapped people. It is a better investment than supporting people on disability.

3. Good management practices and affirmative action programs go hand in hand. Many management practices can be updated under the auspices of the AAP.

4. Workable approaches for better utilization of handicapped people do exist. Organizations can learn from these approaches and adapt them to meet their unique needs, without further prodding by the government.

5. When the rehabilitation community and the business community work together, good and dedicated employees can be found and selectively placed. This reduces turnover, absenteeism, inferior work quality, and tardiness, which are frequently the symptoms of a bad match between people and jobs.

6. Advanced technology and aids have made the task of utilizing handicapped people much easier; however, more work remains to be done in this area.

7. Legal pressures, although needed, are not the only reason why employers hire the handicapped. Employers are looking for people in skill shortage areas, dependable people who are willing to work.

8. Innovative company programs that have been developed by the organizations themselves suggest (a) increased professionalism in the area of personnel and human resources and (b) increased sensitivity of business to social issues.

9. Attitudes are hard to change. However, given continued training, education, and support, *behavior can change*, leading to eventual changes in attitudes.

10. Increased work injuries, stress of the worklife, increased disabilities, and usual obsolescence of the human body create handicapping conditions for our national workforce. Organizations must learn how to manage this disabled workforce. What is the viable alternative? Should we allow people to decay needlessly?

11. Teamwork is essential in every organization. When the old management tools such as job analysis, job descriptions, job specifications are undertaken or updated, it is not difficult to selectively place the handicapped on the basis of teamwork.

Such updating of tools may improve placement of all future employees.

12. Accommodations are facts of life. Such accommodations for the handicapped have been made and are being made every day, without incurring huge costs as anticipated by the alarmists. In many cases, accommodations did not have to be made, simply because they were not necessary.

13. Selective placement programs, employee assistance programs, counseling, and outreach programs are good investments in human capital. Human beings are not machines. At times, they need assistance and support to be fully productive. Increasingly, modern organizations are realizing that simple condition.

14. It is not necessary to tear down old buildings, roads, and facilities to accommodate the handicapped. What is necessary is leadership and initiative in rendering facilities accessible to the handicapped. We are not talking about a barrier free environment, for the moment, but program accessibility.

15. There is a gradual emergence of labor-management cooperation in accommodating handicapped people. Innovative programs have been initiated by the unions to assist the handicapped.

16. Handicapped people face countless barriers. But the most suffocating barrier is the nonhandicapped world, which has to make drastic changes in its attitude, outlook, and (frequent) defensive posture to make it a better world for the handicapped. This country has that great potential.

IMPLICATIONS FOR THE FUTURE

It is obvious from all indications that the next 20 years will be very challenging for our society, in general, and employers, in particular. In spite of its enormous wealth, America is not going to be that bountiful. An increasing population, rising energy costs, inflation, international competition in the marketplace, vocal quality-conscious customers, and corporate watchers will squeeze employers.

In spite of talks to the contrary, the government will continue to play a major decision making role in private businesses. This will be true, not because the private sector cannot get its act together, but

because of the increasing expectations of the general public, less loyalty of employees to their employers, noise and increasing pressure from impatient groups who have not gotten their share in the past—who all will ask government to act on their behalf, and fast.

Over 35 million handicapped people, their families, friends, and advocates are a lot of voters. They will increasingly pressure government not only to clean up its act, but to put pressure on the private sector, which employs about 80 percent of the people in this country, to clean up theirs, too. The muscle of that political force, a sleeping giant, was manifested in the late 1970s in the march in Washington, D.C., sit-ins in San Francisco, and lobbying at HEW. The prodding caused legislators to act and administrators to write regulations. That same force will continue to exert muscle in the area of enforcement of the regulations, as well. Politically vulnerable elected officials will put pressure on businesses, which, in turn, will put pressure on managers, who, in turn, will put pressure on other managers and supervisors. This sort of pressure will be placed upon educational institutions, rehabilitation programs and facilities, transportation systems, unions, the medical profession, health care systems, and the initiators and designers of disability policies. The technical ingenuity of our scientific and industrial community will be fiercely challenged.

Some clear policy and management implications emerge for key groups.

GOVERNMENT

The enactment of the Vocational Rehabilitation Act and accompanying regulations are giant steps. The provision of tax incentives and funding for Projects With Industry programs are very useful, as well. Within the federal government, the Office of Personnel Management is emerging as a true innovator in the techniques of selective placement. However, a number of specific actions are necessary.

1. Currently, the Vocational Rehabilitation Act only applies to government contractors and subcontractors. This law should be amended, or the Equal Employment Opportunity Act of 1972 should be amended to include other employers and unions and to prohibit discrimination on the basis of handicaps. If the latter becomes the case, then the management of EEOC needs a drastic overhaul and credibility needs to be established in that office.

2. Sections 501, 502, 503, and 504 are excellent. But they need to be enforced properly. So far, the authors feel Section 503 provisions have been implemented more forcefully than those of the other sections. Internal squabbling among agencies, which only confuses the employers, needs to be minimized. This is clearly a management issue within government.

3. In the enforcement area, we need more investigators with work experience. Theories are great; but in the real world, employers are looking for resource people who can help them.

4. We suggest that the government gradually transfer the responsibility of training the handicapped to the private sector—on the basis of that sector's demonstrated abilities in this area. The government should do four things:

- a) Provide further incentives to employers to hire the handicapped by providing dollars for relocation expenses for the handicapped.
- b) Provide direct cash payment to employers to train individuals in high demand technology areas in which skill and labor shortages exist.
- c) Improve the efficiency of the economy that creates jobs.
- d) Improve public transportation.

BUSINESS COMMUNITY: EXECUTIVES AND MANAGERS

The health and vitality of our society is inseparable from the health and vitality of the business community. Each affects the other. Work is essential and the lifeblood of the American society. The overwhelming majority of our people work for private businesses. Americans want to work. Americans with disabilities want to work to get out of the shackles of unemployment, a social stigma. Both groups want to work under different work environments where the quality of worklife is emphasized. American businesses spend millions to evaluate the values and attitudes of our working age population. Yet, we are not sure if such data is fully utilized to make sound business decisions! As employers representing a great socioeconomic institution, they should consider the following:

1. Top executives of major organizations should set the tone. When Xerox's president became the President for the U.S. Council for the International Year of Disabled Persons (1981), he set a cooperative and challenging tone for the other executives

to follow. It was not a matter of charity. It was a continuation of enlightened self-interest (e.g., shortage of people in a high technology industry) and a social conscience that triggered this industrial giant to action. It is a self-help approach.

If executives want less government intervention and to restore the private enterprise system, they will have to increasingly rely on their own business instincts, technical know-how, and managerial expertise to minimize and solve those problems internally, without inviting further government entanglements, which, in part, are the result of public pressure. Employment discrimination is a costly issue. Chief executives should set the tone by not tolerating discrimination, overt or covert. And we know that major employers have done just that without further guidance from the government.

In the handicapped area, we notice the "wait and see" posture by some organizations, typically the weak sisters, who get other employers in trouble. Through major business forums, associations, presentations, personal contacts, and groups, business executives can strengthen the commitments of their weak sisters.

2. What is killing many companies today is the legacy of past discrimination. They are being haunted. Employers have been cited for discrimination. In many cases, employers have also been cited not because they discriminated, but because they have failed to prove that they have not. Regardless of intentions, management practices of many organizations are simply outdated. Rules, procedures, structure, evaluation standards, management styles, work expectations and measurements, etc. need to be reevaluated and reexamined in view of the changing times.

Antiquated rules and standards are double-edged swords. They do nothing to improve work efficiency and do a lot to perpetuate discriminatory impact and raise government curiosity. Managers do it without knowing they are doing so. Therefore, it is in the self-interest of the organization to engage in organizational renewal, to strengthen work units, and to clean up old practices. This sort of effort may help to increase productivity and, at the same time, encourage people with or without disabilities to be productive employees. Internal structure and management of organizations must improve.

3. Employers must give higher priority to the human resources function. As mentioned previously, rehabilitation is a

fantastic, innovative management tool, a new frontier that needs to be utilized by human resources professionals and backed by their bosses.

We know that our workforce is looking for a better quality of worklife. They are looking for flexibility. Handicapped and nonhandicapped alike need counseling. Advancing technology and increasing difficulties in transportation are making home employment a more attractive business option—for handicapped and nonhandicapped employees alike. Rehabilitation professionals can do a great deal to screen employees through vocational evaluation—a costly task that businesses can utilize, without adding more people to the personnel staff if an organization is cost conscious. Human resources professionals need to work more closely with credible external groups. Wherever possible, a selective placement and rehabilitation unit is a good investment, which many leading businesses have demonstrated through their own programs.

All this requires money, top management encouragement, and emphasis on human resources. We don't know of many organizations not plagued by people problems. Yet, action in the people area is slow in coming. The priority must change. Finance, marketing, product development, laws, and technology are important; but without equivalent emphasis on people an organization today is clearly headed for trouble. (Japan taught us what we already knew in the people area. Yet, we were too slow to practice it.) Overall improvement of human relations at work is indeed a personnel/human resources function, but the real instigating force has to be top leadership, who must be willing to spend the money and go after top talents in the area of human resources. Without such a commitment and back-up, programs to employ the handicapped and to reemploy the rehabilitated worker on the job will be extremely difficult, if not impossible.

Furthermore, personnel and human resources specialists need to switch their emphasis from protecting their employers exclusively through litigation and courtroom tactics, to an in-house watchdog that is cost conscious, innovative, and fights for better utilization of people within the organization through education, training, persuasion, and brute force. They must take an advocacy role within the organization and protect the organization from bad publicity and litigation through utilization of sound human behavior principles.

REHABILITATION COMMUNITY

We have presented the rehabilitation community as a valuable resource to the employers. We have also described some highly successful efforts by selected private and public rehabilitation programs and facilities to aid the employers. Since rehabilitation in the business world is gradually being recognized as a new frontier, a number of steps can be taken by members of the rehabilitation community to make themselves more visible and helpful.

1. A rehabilitation counselor must be trained in job placement, a critical phase in the rehabilitation process, yet sadly neglected. We are not saying all counselors should be expert at it. What we are emphasizing is that a counselor today should have better appreciation for job development activities, the real needs of the employers, and how placements take place in the real world. Even though a counselor in question may not be seriously involved in placement, per se, such understanding will facilitate better interface between the counselor and the job placement specialists. In Chapter 3, we have attempted to articulate such needs.

In state agencies, in particular, there is a tremendous need to clarify the role of a rehabilitation counselor. He/she can't be all things to all people. Role ambiguity does nothing but confuse the counselor, the handicapped person, and the employers, who give up because of the perceived "run around."

2. Existing university curricula in the field of rehabilitation need to be reevaluated and revamped. Drake University, for example, has developed a master's degree in Rehabilitation/Job Development/Job Placement. The curriculum emphasizes (a) client development—"placeability and employability," (b) employer development—"attitudes, policies, practices, and accommodations," and (c) skills involved in job placement. The program heavily emphasizes labor economics and personnel management subjects. Such programs would take us a long way toward making the goal of independent living for disabled people a reality, not an illusion. It will also bring employers closer to the rehabilitation community, thereby resolving many perceived mysteries associated with the idea of rehabilitation.

UNIONS

Unions were formed in this country for the purpose of protecting the rights of the disadvantaged. With changing times and increasing complexities of the business world, as well as changing values and

attitudes of the membership, they have encountered many pressing issues. Although historically unions have been concerned about the health and safety of the working people, the issue of the full employment of the handicapped has been left somewhat on the back burner. Yet, unions have a stake in the issue and a crucial role to play. We have mentioned the giant efforts already made by the AFL-CIO's Human Resource Development Institute and the Amalgamated Clothing and Textile Workers Union (ACTWU), but these should be just the beginning.

Of course, unions are indirectly obligated to work with government contractors and subcontractors to hire and more fully utilize handicapped people with accommodations, where necessary. But not all employers have contracts with government. International unions, because of their experience and knowledge of the broader picture, tend to be more sensitive to the needs of the handicapped than those at the local level, where the "contract" is perceived as something cast in stone without any flexibility. Yet, in some cases, some positions in the bargaining unit need to be restructured, hours made more flexible, and counseling given to coworkers. If the local union is the backbone of the labor movement, international leadership can play several major roles involving people with disabilities. Several areas need consideration.

1. Local leadership has to be educated about disabilities and their consequences. When negotiating contracts, they should keep in mind some flexibilities in the contract language that tend to provide those accommodations needed, if any, for (a) returning workers after rehabilitation, (b) placing new workers with disabilities, and (c) maintaining existing individuals with disabilities so that the disabilities do not get worse. Such provisions have been made in many contracts for rehabilitated alcoholics or drug abuse cases, without hindering productivity of the operation.

2. The whole area of job requirements is a crucial issue. Unions, as well as management, tend to exaggerate the "physical fitness" requirement. We are not suggesting that "physical fitness" be dropped or relaxed. No, what the parties simply need to do is examine those requirements individually for the job in question. In many situations, there appears to be a blanket physical requirement, which adversely impacts handicapped people.

3. Unions across the country can display a more cooperative tone in practice about utilizing the handicapped by (a) sincerely working with management on disability issues, (b) educating

membership to the fact that they and their family members could be disabled, and (c) working closely with the community rehabilitation services to provide the help a new disabled worker and existing workers with disabilities may need. Unions can assist employers in detecting and finding out who the handicapped are within the organizations. Existing employees with invisible handicaps are afraid to reveal their conditions. They are afraid of getting fired or being dumped into meaningless jobs.

4. With millions of union members with disabilities and many more to come (it's a fact of life), it is in the enlightened self-interest of the unions that they launch a vigorous campaign to further humanize the labor movement about disability. Rehabilitation is a new frontier for labor, as well as management. Labor could regain employee loyalty by being more humane in day-to-day practice and less political in its orientation in contract negotiation and administration. Hiding behind "seniority rules," "what the membership will think?", "we have a contract," etc. will only obscure the issue. It does nothing either for labor or for management to gain back employee loyalty and devotion, at the expense of further government restrictions that neither labor nor management want.

HANDICAPPED PERSONS/ADVOCACY GROUPS

Although coming to it slowly, many segments of the so-called nonhandicapped world are beginning to make efforts to understand the problems of the handicapped. The programs and approaches described in this book, we hope, will signal some positive efforts. But, we have a long way to go. People with disabilities must continue to articulate (as many of them have been doing) their needs and work closely with their emerging allies. Two suggestions may be considered.

1. Handicapped persons must pursue those careers for which there are demands. Career choice is a personal choice, a choice that is so much intertwined with the quality of life. Employers are looking for people with specialized skills and knowledge, without which a job seeker today will be continually flustered. Individuals with disabilities and their advocates must see to it that relevant marketable skills are acquired. The absence of such skills is what is seriously handicapping.

Possession of a disability is painful to some, a nuisance to a few, and devastating to many. What is not needed is another disability, i.e., the lack of a marketable skill.

2. This has been repeated, many times, but it is worth repeating again. Handicapped people and the organizations are badly splintered. There has to be unity between organizations of handicapped citizens. Such a united block needs to pressure employers, educators, doctors, government officials, unions, and rehabilitation specialists on an ongoing basis to dismantle the barriers. Our society is not very good in understanding people with disabilities; continuous prodding is necessary. Although helpful, pressuring employers alone will not achieve the objective of restoring dignity and independence. The other groups mentioned, besides employers, play very important roles. If they do not do their share, the task of meaningful employment will only remain a dream

Finally, remember that employing the handicapped is good business. Preparing the handicapped for the world of work is also a good business. The time is right. Justice, although slow, is emerging. As Dr. Martin Luther King, Jr. often said, "the arch of the Universe is long, but it bends toward justice...." We feel we are moving in that direction.

Appendix 1

Legal Information

Exhibit A. Summary of Disability Codes

Date: November, 1975

(1-) VISUAL IMPAIRMENTS (red)

- (10-) Blind, both eyes, no light percep, due to
 - SD 100 Cataract
 - SD 101 Glaucoma
 - SD 102 General infectious, degenerative, and other specified diseases, including ocular and local infections
 - SD 106 Congenital malformations
 - SD 107 Accident, poisoning, exposure or injury
 - SD 109 Ill-defined and unspecified causes
- (11-) Blind, both eyes, (with correction not more than 20/200 in better eye or limitation in field within 20 degrees but not code 10), due to.
 - SD 110 Cataract
 - SD 111 Glaucoma
 - SD 112 General infectious, degenerative, and other specified diseases, including ocular and local infections
 - SD 116 Congenital malformations
 - SD 117 Accident, poisoning, exposure or injury
 - SD 119 Ill-defined and unspecified causes
- (12-) Blind, one eye, other eye defective (better eye with correction less than 20/60, but better than 20/200, or corresponding loss in visual field) due to'
 - SD 120 Cataract
 - SD 121 Glaucoma
 - SD 122 General infectious, degenerative, and other specified diseases, including ocular and local infections
 - SD 126 Congenital malformations
 - SD 127 Accident, poisoning, exposure or injury
 - SD 129 Ill-defined and unspecified causes

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(13-) Blindness, one eye, other eye good, due to:

- SD 130 Cataract
- SD 131 Glaucoma
- SD 132 General infectious, degenerative, and other specified diseases, including ocular and local infections
- SD 136 Congenital malformations
- SD 137 Accident, poisoning, exposure or injury
- SD 139 Ill-defined and unspecified causes

(14-) Other visual impairments due to:

- * 140 Cataract
- * 141 Glaucoma
- * 142 General infectious, degenerative, and other specified diseases, including ocular and local infections
- * 146 Congenital malformations
- * 147 Accident, poisoning, exposure or injury
- * 149 Ill-defined and unspecified causes
- * if, with correction, unable to obtain driver's license for visual reasons

(2-) HEARING IMPAIRMENTS (green)

(20-) Deafness, unable to talk, due to:

- SD 200 Degenerative and other noninfectious and specified ear diseases
- SD 202 Upper respiratory infections and other infectious diseases
- SD 206 Congenital malformations
- SD 208 Accident, poisoning, exposure or injury
- SD 209 Ill-defined and unspecified causes

(21-) Deafness, able to talk, due to:

- SD 210 Degenerative and other noninfectious and specified ear diseases
- SD 212 Upper respiratory infections and other infectious diseases
- SD 216 Congenital malformations
- SD 218 Accident, poisoning, exposure or injury
- SD 219 Ill-defined and unspecified causes

(22-) Other hearing impairments, due to:

- * 220 Degenerative and other noninfectious and specified ear diseases
- * 222 Upper respiratory infections and other infectious diseases
- * 226 Congenital malformations
- * 228 Accident, poisoning, exposure or injury
- * 229 Ill-defined and unspecified causes
- * if loss exceeds 70 decibels in better ear in conversational range with correction

(3-) ORTHOPEDIC DEFORMITY OR FUNCTIONAL IMPAIRMENT, EXCEPT AMPUTATION (blue)

(30-, 31-) (Impairment of 3 or more limbs or entire body, due to:

- SD 300 Cerebral palsy

- SD 301 Congenital malformation and ill-defined birth injury
- SD 303 Other diseases, infectious, and non-infectious (excluding code 646, varicose veins), other infections (including local), and other neurological and mental diseases (excluding code 630, epilepsy)
- SD 310 Arthritis and rheumatism
- SD 312 Intracranial hemorrhage, embolism, and thrombosis (stroke)
- SD 314 Poliomyelitis
- SD 315 Muscular dystrophy
- SD 316 Multiple sclerosis
- SD 317 Parkinson's disease
- SD 318 Accidents and injuries involving the spinal cord
- SD 319 All other accidents, injuries and poisonings
- (32-, 33-)Impairments involving one upper and one lower limb (including side), due to'
 - SD 320 Cerebral palsy
 - SD 321 Congenital malformation and ill-defined birth injury
 - SD 323 Other diseases, infectious, and non-infectious (excluding code 646, varicose veins), other infections (including local), and other neurological and mental diseases (excluding code 630, epilepsy)
 - SD 330 Arthritis and rheumatism
 - SD 332 Intracranial hemorrhage, embolism, and thrombosis (stroke)
 - SD 334 Poliomyelitis
 - SD 335 Muscular dystrophy
 - SD 336 Multiple sclerosis
 - SD 337 Parkinson's disease
 - SD 338 Accidents and injuries involving the spinal cord
 - SD 339 All other accidents, injuries and poisonings
- (34-, 35-)Impairment involving one or both upper limbs (including hands, fingers, and thumbs), due to:
 - * 340 Cerebral palsy
 - * 341 Congenital malformation and ill-defined birth injury
 - * 343 Other diseases, infectious, and non-infectious (excluding code 646, varicose veins), other infections (including local), and other neurological and mental diseases (excluding code 630, epilepsy)
 - * 350 Arthritis and rheumatism
 - * 352 Intracranial hemorrhage, embolism, and thrombosis (stroke)
 - * 354 Poliomyelitis
 - SD 355 Muscular dystrophy
 - SD 356 Multiple sclerosis
 - * 357 Parkinson's disease
 - SD 358 Accidents and injuries involving the spinal cord
 - * 359 All other accidents, injuries and poisonings
 - * If both, and assistance of another person or devices are needed for activities of daily living
- (36-, 37-)Impairment involving one or both lower limbs (including feet and toes), due to:
 - * 360 Cerebral palsy
 - * 361 Congenital malformation and ill-defined birth injury
 - * 363 Other diseases, infectious, and non-infectious (excluding code 646, varicose veins), other infections (including local), and other neurological and mental diseases (excluding code 630, epilepsy)
 - * 370 Arthritis and rheumatism
 - * 372 Intracranial hemorrhage, embolism, and thrombosis (stroke)

Managing and Employing the Handicapped

- * 374 Poliomyelitis
- SD 375 Muscular dystrophy
- SD 376 Multiple sclerosis
- * 377 Parkinson's disease
- SD 378 Accidents and injuries involving the spinal cord
- * 379 All other accidents, injuries and poisonings

- * if locomotion is impaired to a degree that bilateral upper limb assistive devices are required, or individual is unable to utilize public buses or trains

(38-, 39-) Other and ill-defined impairments (including trunk, back, and spine), due to:

- 380 Cerebral palsy
- 381 Congenital malformation and ill-defined birth injury
- 383 Other diseases, infectious, and non-infectious (excluding code 646, varicose veins), other infections (including local), and other neurological and mental diseases (excluding code 630, epilepsy)
- 390 Arthritis and rheumatism
- 392 Intracranial hemorrhage, embolism, and thrombosis (stroke)
- 394 Poliomyelitis
- SD 395 Muscular dystrophy
- SD 396 Multiple sclerosis
- 397 Parkinson's disease
- SD 398 Accidents and injuries involving the spinal cord
- 399 All other accidents, injuries and poisonings

ABSENCE OR AMPUTATION OF (4-) MAJOR AND MINOR MEMBERS (orange)

(40-) Loss of at least one upper and one lower major extremity (including hands, thumbs, and feet) due to:

- SD 400 Malignant neoplasms
- SD 402 Congenital malformation
- SD 404 Diseases, infectious and non-infectious (including peripheral vascular, diabetes, tuberculosis of bones and joints), and infections (including gangrene)
- SD 409 Accidents, injuries, and poisonings

(41 -) Loss of both major upper extremities (including hands or thumbs) due to:

- SD 400 Malignant neoplasms
- SD 402 Congenital malformation
- SD 404 Diseases, infectious and non-infectious (including peripheral vascular, diabetes, tuberculosis of bones and joints), and infections (including gangrene)
- SD 409 Accidents, injuries, and poisonings

(42) Loss of one major upper extremity (including hand or thumb) due to:

- 420 Malignant neoplasms
- 422 Congenital malformation
- 424 Diseases, infectious and non-infectious (including peripheral vascular, diabetes, tuberculosis of bones and joints), and infections (including gangrene)
- 429 Accidents, injuries, and poisonings

(43-) Loss of one or both lower extremities (including feet) due to

- * 430 Malignant neoplasms
 - * 432 Congenital malformation
 - * 434 Diseases, infectious and non-infectious (including peripheral vascular, diabetes, tuberculosis of bones and joints), and infections (including gangrene)
 - * 439 Accidents, injuries, and poisonings
 - * if bilateral at the ankle or above, or if one at mid-thigh that requires bilateral upper limb assistance devices, or individual is unable to utilize public buses or trains
- (44-) Loss of other and unspecified parts (including fingers and toes, but excluding thumbs) due to:
- 440 Malignant neoplasms
 - 442 Congenital malformation
 - 444 Diseases, infectious and non-infectious (including peripheral vascular, diabetes, tuberculosis of bones and joints), and infections (including gangrene)
 - 449 Accidents, injuries, and poisonings

(5-) **MENTAL, PSYCHONEUROTIC, AND PERSONALITY DISORDERS (yellow)**

- (50-) Psychotic disorders due to-
- * 500 Psychotic disorders
 - * if now requiring institutional care in a mental hospital or psychiatric ward of a general hospital; or has history of being institutionalized for treatment for 3 months or more, or on multiple occasions, or meets the description for moderate or severe as explained in Appendix B "Classification of Psychotic Disorders"
- (51-) Psychoneurotic disorders due to:
- * 510 Psychoneurotic disorders
 - * if now requiring institutional care in a mental hospital or psychiatric ward of a general hospital, or has history of being institutionalized for treatment for three months or more, or on multiple occasion, or meets the description for moderate or severe, as explained in Appendix C "Classification of Psychoneurotic Disorders"
- (52-) Other mental disorders due to.
- 520 Alcoholism
 - 521 Drug addiction
 - 522 Other character, personality, and behavior disorders
- (53-) Mental retardation. See Appendix A "*Classification and Coding of Mental Retardation*"
- 530 Mental retardation, mild
 - SD 532 Mental retardation, moderate
 - SD 534 Mental retardation, severe

(6-) **OTHER DISABLING CONDITIONS FOR WHICH ETIOLOGY IS NOT KNOWN OR NOT APPROPRIATE (brown)**

- (60-) Other conditions resulting from neoplasma (n.e.c.)

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- SD 600 Colostomies resulting from malignant neoplasms
- SD 601 Laryngectomies resulting from malignant neoplasms
- SD 602 Leukemia and aleukemia
- 605 Other malignant neoplasms
- 609 Benign and unspecified neoplasms
- (61-) Allergic, endocrine system, metabolic and nutritional diseases
 - 610 Hay fever and asthma
 - 611 Other allergies
 - 614 Diabetes mellitus
 - 615 Other endocrine system disorders (except code 616, cystic fibrosis)
- SD 616 Cystic fibrosis
- 619 Avitaminoses and other metabolic diseases
- (62-) Diseases of the blood and blood-forming organs:
 - SD 620 Hemophilia
 - SD 621 Sickle cell anemia
 - 629 Other anemia and diseases of the blood and blood-forming organs (except code 602, leukemia and aleukemia)
- (63-) Other specified disorders of the nervous system:
 - * 630 Epilepsy
 - 639 Other disorders of the nervous system, n.e.c.
 - * if not seizure-free for two years
- (64-) Cardiac and circulatory conditions:
 - * 640 Congenital heart disease
 - * 641 Rheumatic fever and chronic rheumatic heart disease
 - * 642 Arteriosclerotic and degenerative heart disease
 - * 643 Other diseases or conditions of heart
 - * 644 Hypertensive heart disease
 - 645 Other hypertensive disease
 - 646 Varicose veins and hemorrhoids
 - 649 Other conditions of circulatory system
 - * if classified 2c or worse in the New York Association classification as adopted by the American Heart Association
- (65-) Respiratory diseases
 - 650 Tuberculosis of the respiratory system
 - * 651 Emphysema
 - * 652 Pneumoconiosis and asbestosis
 - * 653 Bronchiectasis
 - * 654 Chronic bronchitis and sinusitis
 - * 659 Other conditions of respiratory system
 - * if maximum breath capacity is less than 55% of predicted or shortness of breath on climbing one flight of stairs or walking 100 yards on the level
- (66-) Disorders of digestive system
 - 660 Conditions of teeth and supporting structures
 - 661 Ulcer of stomach and duodenum
 - 662 Chronic enteritis and ulcerative colitis
 - 663 Hernia
 - SD664 Colostomies (from other than malignant neoplasms)
 - 669 Other conditions of digestive system
- (67-) Conditions of genito-unnary system

- 670 Genito-urinary system conditions (except code 671, end-stage renal failure)
- SD671 End-stage renal failure
- (68-) Speech impairments
- SD680 Cleft palate and hare lip with speech imperfections
- 682 Stammering and stuttering
- SD684 Laryngectomies (from other than malignant neoplasms)
- SD685 Aphasia resulting from intracranial hemorrhage, embolism or thrombosis (stroke)
- 689 Other speech impairments (except code 685, aphasia resulting from stroke)
- (69-) Disabling diseases and conditions, n.e.c.
- 690 Diseases and conditions of the skin and cellular tissue n.e.c.
- 699 Other disabling diseases and conditions, n e.c.

*Compiled by the Management Information Section (C.S.R. Department)
Indiana Rehabilitation Services*

LA	PS
G.B.	P.T.

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Exhibit B. Disability Code Form 256 (EEOC)

Self-Identification of Medical Disability

Last Name _____ Birth Date(Mo./Yr.) _____ Social Security Number _____ ENTER CODE HERE →

DEFINITION OF A REPORTABLE DISABILITY: A physical or mental disability is NOT determined by a person's ability to perform his or her work but by a disability, or a history of such disability, which is likely to cause the employee to experience difficulty in obtaining, maintaining or advancing in employment. This does not apply solely to an employee's current position, but applies to the total career life cycle of that employee. (In the case of multiple disabilities, choose the code which describes the impairment that would most likely result in such difficulties.)

GENERAL CODES		Code
I do not wish to have my disability status officially recorded outside my medical records. (Before using this code, please read the reverse side of this form, which explains the need for obtaining this information. (Note your agency may use this code if, in their judgment you have used an incorrect code.))		01
I have no disability of the types listed in the codes below		04
SPEECH IMPAIRMENTS		
Severe speech malfunction or inability to speak, hearing is normal (Examples: defects of articulation (nasal language sounds); stuttering; aphasia (impaired language function); laryngectomy (removal of the "voice box"))		13
HEARING IMPAIRMENTS		
Hearing impairment (total deafness in one ear or inability to hear ordinary conversation, correctable with a hearing aid)	Code	Total deafness in both ears, with understandable speech
	15	Total deafness in both ears, and unable to speak clearly
		16
		17
VISION IMPAIRMENTS		
Ability to read ordinary size print with glasses, but with loss of peripheral (side) vision (Restriction of the visual field to the extent that mobility is affected - "Tunnel Vision")	Code	Inability to read ordinary size print, not correctable by glasses (can read oversized print or use assisting devices such as glass or projector modifier)
	22	Blind in one eye
		23
		24
		25
MISSING EXTREMITIES		
Code	One leg	32
27	Both hands or arms	33
28	Both feet or legs	34
29	Both hands or arms and both feet or legs	35
	One hand or arm and one foot or leg	36
	Both hands or arms and one foot or leg	37
	Both hands or arms and both feet or legs	38
NONPARALYTIC ORTHOPEDIC IMPAIRMENTS		
(Because of chronic pain, stiffness, or weakness in bones or joints, there is some loss of ability to move or use a part or parts of the body.)	Code	One or both arms
	44	One or both legs
		46
		47
		48
		49
		57
PARTIAL PARALYSIS		
(Because of a brain, nerve, or muscle problem, including palsy and cerebral palsy, there is some loss of ability to move or use a part of the body, including legs, arms, and/or trunk.)	Code	One leg, any part
	61	Both hands
		62
		63
		64
		65
		66
		67
		68
		69
		70
		71
		72
COMPLETE PARALYSIS		
(Because of a brain, nerve, or muscle problem, including palsy and cerebral palsy, there is complete loss of ability to move or use a part of the body, including legs, arms and/or trunk.)	Code	Both arms
	70	One leg
		71
		72
		73
		74
		75
		76
		77
		78
OTHER IMPAIRMENTS		
Heart disease (with no restriction or limitation of activity (History of heart problems with complete recovery))	Code	Mental retardation (A chronic and lifelong condition involving a limited ability to learn, to be educated and to be trained for useful productive employment as certified by a State Vocational Rehabilitation agency under section 213.3102(c) of Schedule A)
	80	Mental or emotional illness (A history of treatment for mental or emotional problems)
		90
		91
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		96
		97
		98
		99

SOURCE: Equal Employment Opportunity Commission

Appendix 2

Directory of Organizations

Exhibit A. Major Private Organizations

Academy of Dentistry for the Handicapped

1726 Champa Street
Denver, CO 80202
(303) 573-0264

Accent on Information Inc.

P.O. Box 700
Bloomington, IL 61701
(309) 378-2961

Advocates for the Handicapped

2200 Merchandise Mart
Chicago, IL 60654
(312) 822-0435

AFL-CIO Department of Community Services

815 16th Street, N.W.
Washington, D.C. 20006
(202)637-5189

Alexander Graham Bell Association for the Deaf

3417 Volta Place, N.W.
Washington, D.C. 20007
(202) 337-5220

American Alliance for Health, Physical Education, Recreation, and Dance—Programs for the Handicapped

1201 16th Street, N.W.
Washington, D.C. 20036
(202) 833-5547

American Association on Mental Deficiency

5101 Wisconsin Avenue, N.W.
Washington, D.C. 20016
(202) 686-5400

American Association of Occupational Health Nurses, Inc.

575 Lexington Avenue
New York, NY 10022
(212) 355-7733

American Association for Rehabilitation Therapy, Inc.

P.O. Box 93
North Little Rock, AR 72116
Ext. 469 (501) 725-9100

"Information taken from the *Directory of Organizations Interested in the Handicapped*. People to People Committee for the Handicapped, Suite 1130,1522 K Street, N.W.. Washington, D.C. 20005

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**American Association of
Workers for the Blind, Inc.**
1511 K Street, N.W.
Washington, D.C. 20005
(202) 347-1559

American Cancer Society, Inc.
777 Third Avenue
New York, NY 10017
(212) 371-2900

**American Coalition of Citizens
with Disabilities Inc.**
1200 15th Street, N.W., Suite 201
Washington, D.C. 20005
(202) 785-4265

**American Congress of
Rehabilitation Medicine**
30 N. Michigan Avenue
Chicago, IL 60602
(312) 236-9512

**American Deafness and
Rehabilitation Association, Inc.
(Formerly Professional
Rehabilitation Workers with
The Adult Deaf, Inc.)**
814 Thayer Avenue
Silver Spring, MD 20910
(301)589-0880

**American Foundation for
the Blind, Inc.**
15 West 16 Street
New York, NY 10011
(212) 620-2000

The American Legion
700 N. Pa. St.
P.O. Box 1055
Indianapolis, IN 46204
(317) 635-8411

American Leprosy Missions Inc.
1262 Broad Street
Bloomfield, NJ 07003
(201) 338-9197

American Lung Association
1740 Broadway
New York, NY 10019
(212) 245-8000

**American Medical Association
Department of Environmental,
Public, and Occupational Health**
535 North Dearborn Street
Chicago, IL 60610
(312) 751-6526

American Red Cross
17th and D Streets, N.W.
Washington, D.C. 20006
(202) 737-8300

**American Occupational
Therapy Association**
6000 Executive Blvd.
Rockville, MD 20852
(301) 770-2200

**American Orthotic and
Prosthetic Association**
1444 N Street, N.W.
Washington, D.C. 20005
(202) 234-8400

**American Osteopathic
Association**
212 East Ohio Street
Chicago, IL 60611
(312)944-2713

**American Personnel and
Guidance Association**
2 Skyline Place, Suite #400
and 5203 Leesburg Pike
Falls Church, VA 22401
(703) 820-4700

**American Physical Therapy
Association**
1156 15th Street, N.W.
Washington, D.C. 20005
(202) 466-2070

American Podiatry Association
20 Chevy Chase Circle
Washington, D.C. 20015
(202) 537-4900

American Printing House for the Blind, Inc.
1839 Frankfort Avenue
Louisville, KY 40206
(502) 895-2405

American Psychiatric Association
1700 Eighteenth Street, N.W.
Washington, D.C. 20009
(202) 797-4950

American Speech, Language and Hearing Association
10801 Rockville Pike
Rockville, MD 20852
(301) 897-5700

AMVETS (American Veterans of WWII, Korea, and Vietnam)
1710 R.I. Ave., N.W.
Washington, D.C. 20036
(202) 223-9550

The Arthritis Foundation
3400 Peachtree Road, N.E.
Atlanta, GA 30326
(404) 266-0795

The Association on Handicapped Student Service Programs in Post-Secondary Education
Box 8256 University Station
Grand Forks, ND 58202
(701) 777-3425

The Association of Junior Leagues, Inc.
825 Third Avenue
New York, NY 10022
(212) 355-4380

Blinded Veterans Association
1735 DeSales Street, N.W.
Washington, D.C. 20036
(202) 347-4010

Boy Scouts of America-Scouting for the Handicapped Division
Boy Scouts of America
P.O. Box 61030
Dallas/Ft. Worth Airport, TX 75261
(214) 659-2000

Joseph Bulova School of Watchmaking
40-24 62nd Street
Woodside, NY 11377
(212) 424-2929

Bureau of Education for the Handicapped, U.S. Office of Education
400 Maryland Ave., S.W.
Washington, D.C. 20202
(202) 245-9661

CHAP (Children Have a Potential)
AF/SGPC-CHAP, Air Force Medical Service Center
Brooks Air Force Base
San Antonio, TX 78235
(512) 536-2031

The Council for Exceptional Children
1920 Association Dr.
Reston, VA 22091
(703) 620-3660

Council of State Administrators of Vocational Rehabilitation
1522 K Street, N.W., Suite 610
Washington, D.C. 20005
(202) 638-4634

Damien Dutton Society for Leprosy Aid Inc.
616 Bedford Avenue
Bellmore L.I., NY 11710
(516)221-5909

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**Disabled American Veterans,
National Service and Legislative
Headquarters**

807 Maine Avenue, S.W.
Washington, D.C. 20024
(202) 554-3501

EPI-HAB, L.A., Inc.

5533 S. Western Ave.
Los Angeles, CA 90062
(213) 299-2305

Epilepsy Foundation of America

1828 L Street, N.W.
Washington, D.C. 20036
(202) 293-2930

**Federation Employment and
Guidance Service**

114 5th Ave.
New York, NY 10011
(212) 777-4900

**Federation of the Handicapped,
Inc.**

211 West 14th Street
New York, NY 10011
(212) 242-9050

The 52 Association, Inc.

147 East 50th Street
New York, NY 10022
(212) 752-1855

Gallaudet College

7th and Florida Ave., N.E.
Washington, D.C. 20002
Voice and TTY (202) 651-5005

**Girl Scouts of the U.S.A.
Services for Girls with
Special Needs**

830 Third Avenue
New York, 10022
(212) 940-7500

Goodwill Industries of America

9200 Wisconsin Avenue, N.W.
Washington, D.C. 20014
(301) 530-6500

Helen Keller International, Inc.

22 West 17th Street
New York, NY 10011
(212) 620-2100

Human Resources Center

Willets Road
Albertson, NY 11507
(716) 747-5400

**ICD Rehabilitation and
Research Center**

340 East 24th Street
New York, NY 10010
(212) 679-0100

Industrial Home for the Blind

57 Willoughby Street
Brooklyn, NY 11201
(212) 522-2122

**International Association of
Laryngectomees**

777 Third Avenue
New York, NY 10017
(212) 371-2900

International Handicapped Net

Post Office Box B
San Gabriel, CA 91778
(213) 282-0014

**The Joseph P. Kennedy, Jr.
Foundation**

1701 K Street, N.W., Suite 205
Washington, D.C. 20006
(202) 331-1731

**Junior National Association of
the Deaf**

Gallaudet College
Washington, D.C. 20002
(202) (Voice) 651-5100
(TTY) 651-5104

**Library of Congress,
National Library Service for the
Blind and Physically
Handicapped**

Washington, D.C. 20542
(202) 882-5500

**March of Dimes
Birth Defects Foundation**
1275 Mamaroneck Ave.
White Plains, NY 10605
(914) 428-7100

The Menninger Foundation
P.O. Box 829
Topeka, Kansas 66601
(913) 234-9566

Muscular Dystrophy Association
810 Seventh Ave.
New York, NY 10019
(212) 586-0808

**National Association for
Retarded Citizens**
2709 Ave. E East, POB 6109
Arlington, TX 76011
(817)261-4961

National Association of the Deaf
814 Thayer Avenue
Silver Spring, MD 20910
(301) 587-1788

**National Association of the
Physically Handicapped, Inc.**
76 Elm Street
London, Ohio 43140
(614) 852-1664

**National Association of
Private Psychiatric Hospitals**
1701 K Street, N.W., Suite 1205
Washington, D.C. 20006
(202) 223-6691

**National Association of
Rehabilitation Facilities**
5530 Wisconsin Ave., N.W., #955
Washington, D.C. 20015
(301) 654-5882

**National Association of State
Directors of Veterans Affairs**
State Capitol
Des Moines, IA 50319
(515) 278-9331

**National Association of
State Mental Health
Program Directors**
1001 Third Street, S.W., Suite 114
Washington, D.C. 20024
(202) 554-7807

**National Center for a
Barrier Free Environment**
1140 Connecticut Avenue, N.W.
Room 1006
Washington, D.C. 20036
(202) 466-6896 (Voice or TTY)

**National Congress of
Organizations of the Physically
Handicapped, Inc.**
1627 Deborah Avenue
Rockford, IL 61103
(815) 877-4900

**National Easter Seal Society
for Crippled Children and Adults**
2033 West Ogden Avenue
Chicago, IL 60612
(312) 243-8400

National Federation of the Blind
1629 K Street, N.W.,
#701, Office #10
Washington, D.C. 20006
(202) 785-2974

**National Foundation of
Dentistry for the Handicapped**
1726 Champa Street, Suite 422
Denver, CO 80202
(303) 573-0264

**National Handicapped Sports
and Recreation Association
(NHSRA) (Formerly National
Inconvenienced Sportsman
Association)**
Capitol Hill Station, P.O. Box 18664
Denver, CO 80218
(303) 978-0564

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The National Hemophilia Foundation

25 West 39th Street
New York, NY 10018
(212) 869-9740

National Industries for the Blind

1455 Broad Street
Bloomfield, NJ 07003
(201) 338-3804

National Mental Health Association

1800 North Kent Street
Arlington, VA 22209
(703) 528-6405

National Multiple Sclerosis Society

205 East 42nd Street
New York, NY 10017
(212) 986-3240

National Rehabilitation Association

1522 K Street, N.W.
Washington, D.C. 20005
(202) 659-2430

National Rehabilitation Counseling Association

1522 K Street, N.W.
Washington, D.C. 20005
(202) 296-6080

National Safety Council

425 Michigan Avenue
Chicago, IL 60611
(312) 527-4800

The National Society for Autistic Children

1234 Mass. Ave., N.W., Suite 1017
Washington, D.C. 20005
(202) 783-0125

National Society for the Prevention of Blindness, Inc.

79 Madison Avenue
New York, NY 10016
(212) 684-3505

National Spinal Cord Injury Foundation (Formerly National Paraplegia Foundation)

369 Elliot Street
Newton Upper Falls, MA 02164
(617) 964-0521

National Therapeutic Recreation Society

1601 North Kent Street
Arlington, VA 22209
(703) 525-0606

National Wheelchair Athletic Association

40-24 62nd Street
Woodside, NY 11377
(212) 424-2929

Paralyzed Veterans of America

4330 East-West Highway
Suite 300
Washington, D.C. 20014
(301) 652-2135

Paraplegics Manufacturing Co., Inc.

304 North York Road
Bensenville, IL 60106
(312) 766-0350

Partners of the Americas Rehabilitation Education Program (PREP)

2001 S Street, N.W.
Washington, D.C. 20009
(202) 332-7332
Cables: NAPAR Telex 64261

Perkins School for the Blind

175 North Beacon Street
Watertown, MA 02172
(617) 924-3434

**Placement and Referral Center
for Handicapped Students
Division of Special Education
and Pupil Personnel Services,
Board of Education of the
City of New York**
362 Schermerhorn Street
Brooklyn, NY 11217
(212) 624-0854

**The President's Committee on
Employment of the Handicapped**
1111 20th Street, N.W.
Washington, D.C. 20036
(202) 653-5044

**President's Committee on
Mental Retardation**
7th and D Streets, S.W.
Washington, D.C. 20201
(202) 245-7634

**Rehabilitation International
U.S.A. (RIUSA)**
20 West 40th Street
New York, NY 10018
(212) 869-9907

**Rehabilitation Services
Administration, Department of
Health, Education and Welfare
(To be transferred in mid '80 to
new Department of Education)**
330 C Street, S.W.
Washington, D.C. 20201
(202) 245-8492

**Social Security Administration
Department of Health, Education
and Welfare**
Baltimore, MD 21235

**Society of the Rehabilitation of
the Facially Disfigured, Inc.**
550 First Avenue
New York, NY 10016
(212) 679-1534

**United Cerebral Palsy
Associations, Inc.**
66 East 34th Street
New York, NY 10016
(212) 481-6300

**United Mine Workers of
America Health and
Retirement Funds**
2021 K Street, N.W.
Washington, D.C. 20006
(202) 452-5000

United Ostomy Association, Inc.
1111 Wilshire Blvd.
Los Angeles, CA 90017
(213)481-2811

**U.S. Council of the World
Veterans Federation**
1508 19th Street, N.W.
Washington, D.C. 20036
(202) 232-4000

**United States
Employment Service**
Washington, D.C. 20213
(202) 376-6289

**United States Wheelchair
Sports Fund**
40-24 62nd Street
Woodside, NY 11377
(212) 424-2929

**The Veterans Administration
Department of Medicine and
Surgery**
810 Vermont Avenue, N.W.
Washington, D.C. 20420
(202) 393-4120

**Veterans of Foreign Wars of the
United States**
34th and Broadway
Kansas City, MO 64111
(816) 756-3390

Welfare of the Blind, Inc.
5647 Bent Branch Rd.
Washington, D.C. 20016
(301)229-0154

World Rehabilitation Fund, Inc.
400 East 34th Street
New York, NY 10016
(212) 679-3200

Exhibit B. State Agencies and Councils

STATE EMPLOYMENT SECURITY AGENCIES

ALABAMA

Dept. of Industrial Relations
Industrial Relations Building
Montgomery, Alabama 36230
(205) 832-3626

ALASKA

Employment Security Division
Department of Labor
4th & Harris Streets
P.O. Box 3-7000
Juneau, Alaska 99811
(907) 465-2714

ARIZONA

Department of Economic Security
1717 W. Jefferson Street
Phoenix, Arizona 85007
(602) 271-4900 x56

ARKANSAS

Employment Security Commission
P.O. Box 2981, Capitol Mall
Little Rock, Arkansas 72203
(501)371-2121

CALIFORNIA

Employment Development
Department
800 Capitol Mall
Sacramento, California 95814
(916)445-9212

COLORADO

Division of Employment and
Training
1210 Sherman Street
Denver, Colorado 80230
(303) 893-2400 x223

CONNECTICUT

Employment Security Division
Weathersfield, Connecticut 06115
(203) 566-4280

DELAWARE

Department of Labor
801 West Street
Wilmington, Delaware 19899
(302) 571-2710

DISTRICT OF COLUMBIA

D.C. Department of Manpower
500 C Street, N.W.
Washington, D.C. 20001
(202) 724-3928
District Unemployment
Compensation Board
6th & Pennsylvania Avenue, N.W.
Washington, D.C. 20001
(202) 727-1000

FLORIDA

Department of Commerce
Collins Building, Suite 510
Tallahassee, Florida 32304
(904) 488-3104

GEORGIA

Employment Security Agency
290 State Labor Building
Atlanta, Georgia 30334
(404) 656-3014

GUAM

Deaprtment of Labor
Government of Guam
P.O. Box 2950
Agana, Guam 96910

HAWAII

Department of Labor
& Industrial Relations
825 Mililani Street
Honolulu, Hawaii 96813
(808) 548-3150

IDAHO

Department of Employment
317 Main Street, P.O. Box 35
Boise, Idaho 83707
(208) 384-2731

ILLINOIS

Bureau of Employment Security
910 South Michigan Avenue
Chicago, Illinois 60605
(312) 793-3500

INDIANA

Employment Security Division
10 North Senate Avenue
Indianapolis, Indiana 46204
(317) 633-7670

IOWA

Iowa Department of Job Service
1000 East Grand Avenue
Des Moines, Iowa 50319
(515)281-5361

KANSAS

Division of Employment
Department of Human Resources
401 Topeka Avenue
Topeka, Kansas 66603
(913) 296-5000

KENTUCKY

Department of Human Resources
Room 237, Capitol Annex
Frankfort, Kentucky 40601
(502) 564-7130

LOUISIANA

Department of Employment
Security
1001 N. 23rd Street
Baton Rouge, Louisiana 70804
(504) 387-2192

MAINE

Employment Security Commission
20 Union Street
Augusta, Maine 04332
(207) 289-3814

MARYLAND

Employment Security
Administration
1100 North Eutaw Street
Baltimore, Maryland 21201
(301) 383-5070

MASSACHUSETTS

Division of Employment Security
Charles F. Hurley ES Bldg.
Boston, Massachusetts 02114
(617) 727-6600

MICHIGAN

Michigan Employment Security
Commission
7310 Woodward Avenue
Detroit, Michigan 48202
(313) 876-5000

MINNESOTA

Department of Employment
Services
390 N. Robert Street
St. Paul, Minnesota 55101
(612)296-3711

MISSISSIPPI

Employment Security Commission
1520 W. Capital Street
P.O. Box 1699
Jackson, Mississippi 39205
(601)354-8711

MISSOURI

Division of Employment Security
421 E. Dunklin Street
P.O. Box 59
Jefferson, City, Missouri 65101
(314) 751-3215

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MONTANA

Employment Security Division
Corner of Lockett & Roberts
P.O. Box 1728
Helena, Montana 59601
(406) 449-3662

NEBRASKA

Division of Employment
550 S. 16th Street
P.O. Box 94600
Lincoln, Nebraska 68509
(402) 475-8451 x257 or 258

NEVADA

Employment Security Department
500 East 3rd Street
Carson City, Nevada 89713
(702) 885-4635

NEW HAMPSHIRE

Department of Employment
Security
32 S. Main Street, Room 204
Concord, New Hampshire 03301
(603)224-3311x21

NEW JERSEY

Department of Labor & Industry
John Fitch Plaza
P.O. Box V
Trenton, New Jersey 08625
(609) 292-2323

NEW MEXICO

Employment Security Commission
401 Broadway NE, P.O. Box 1928
Albuquerque, New Mexico 87103
(505) 842-3239

NEW YORK

Department of Labor
State Campus, Building 12
Albany, New York 12240
(518) 457-2727

NORTH CAROLINA

Employment Security Commission
P.O. Box 25903
200 W. Jones Street
Raleigh, North Carolina 27611
(919) 829-7546

NORTH DAKOTA

Employment Security Bureau
1000 E. Divide Avenue
P.O. Box 1537
Bismarck, North Dakota 58505
(701) 224-2837

OHIO

Bureau of Employment Services
145 S. Front Street
P.O. Box 1618
Columbus, Ohio 43216
(614) 466-2100

OKLAHOMA

Employment Security Commission
Will Rogers Memorial Office Bldg.
Oklahoma City, Oklahoma 73105
(405) 521-3794

OREGON

Employment Division
875 Union Street, N.E.
Salem, Oregon 97311
(503)378-3211

PENNSYLVANIA

Bureau of Employment Security
Labor & Industry Building
7th & Forster Streets
Harrisburg, Pennsylvania 17121
(717) 787-6223

PUERTO RICO

Bureau of Employment Security
414 Barbosa Avenue
Hato Rey, Puerto Rico 00917
(809) 765-3570

RHODE ISLAND

Department of Employment
Security
24 Mason Street
Providence, Rhode Island 02903
(401) 277-3732

SOUTH CAROLINA

Employment Security Commission
1550 Gadsden Street, P.O. Box 995
Columbia, South Carolina 29202
(803) 758-2686

SOUTH DAKOTA

Employment Security Department
607 North Fourth Street
Aberdeen, South Dakota 57401
(605) 224-3101

TENNESSEE

Department of Employment
Security
536 Cordell Hull Building
Nashville, Tennessee 37219
(615)741-2131

TEXAS

Employment Commission
638 Tec Bldg., 15th & Congress Ave.
Austin, Texas 78778
(512)472-6251

UTAH

Department of Employment
Security
174 Social Hall Avenue
P.O. Box 11249
Salt Lake City, Utah 84147
(801) 533-2201

VERMONT

Department of Employment
Security
5 Green Mountain Drive
P.O. Box 488
Montpelier, Vermont 05602
(802)229-0311

VIRGINIA

Employment Commission
703 East Main Street
P.O. Box 1358
Richmond, Virginia 23211
(804) 786-3001

VIRGIN ISLANDS

Employment Security Agency
35 Norre Gade Street
P.O. Box 1092
Charlotte Amalie
St. Thomas, Virgin Islands 00801
(809) 773-1994

WASHINGTON

Employment Security Department
ES Building, 212 Maple Park
Olympia, Washington 98504
(206)753-5114

WEST VIRGINIA

Department of Employment
Security
112 California Avenue
Charleston, West Virginia 25305
(304) 348-2630

WISCONSIN

Job Service Division
201 E. Washington Avenue
P.O. Box 7398
Madison, Wisconsin 53701
(608) 266-7074

WYOMING

Employment Security Commission
ESC Building, Center and
Midwest Streets, P.O. Box 2760
Casper, Wyoming 82601
(307) 237-3701 x21

**STATE PLANNING COUNCILS ON DEVELOPMENTAL
DISABILITIES: STAFF DIRECTORS/PLANNERS**

Region I

CONNECTICUT
Staff Dir., Dept. of Mental
Retardation
79 Elm St.
Hartford, Conn. 06115
Phone: 203/566-5490

MAINE
DD Planning Coordinator
Bureau of Mental Retardation
State Office Bldg., Rm. 411
Augusta, Maine 04330
Phone: 207/289-3167

MASSACHUSETTS
Director
Mass. DD Council
One Ashburton Place, Rm. 2133
Boston, Mass. 02108
Phone: 617/727-6374

NEW HAMPSHIRE
Planning Dir., for DD
Div. of Mental Health
105 Pleasant St.
Concord, New Hampshire 03301
Phone: 603/271-2671

RHODE ISLAND
Dir., DD Council
Aime J. Forand Bldg.
600 New London Ave.
Cranston, R.I. 02920
Phone: 401/464-3231

VERMONT
Director
Department of Mental Health
79 River Street
Montpelier, Vermont 05602
Phone: 802/832-2481

Region II

NEW JERSEY
Executive Director
N.J. DD State Council
169 West Hanover Street
Trenton, New Jersey 08625
Phone: 609/292-3745

NEW YORK
Director
Bureau of Developmental
Disabilities
Office of M.R. & DD
44 Holland Avenue
Albany, New York 12208
Phone: 518/474-3656

PUERTO RICO
Dir. Div. of M.R. & Handicapped
Children
Maternal & Infant Care Bldg.
University Hospital
Caparra Heights Station, Box 11321
Rio Piedras, Puerto Rico 00935

PUERTO RICO
Executive Director
Puerto Rico DD Council
Box 9543
Santurce, Puerto Rico 00908
Phone: FTS: 8-967-1221
809/722-0590
809/722-0595

VIRGIN ISLANDS
Director
MCH, CC&DD Services
Estate SLOB
Christiansted
St. Croix, Virgin Islands 00820
Phone: 809/778-1200

Region III

DELAWARE

Council Coordinator, DD
Delaware State Hospital
Admin. Bldg., Rm. 25—1st Floor
New Castle, Delaware 19720
Phone: 302/654-5141 or 571-3544

DISTRICT OF COLUMBIA

Planning Dir., DD Council
Dept. of Human Resources
Rm. 1056
Div. of Comprehensive Health
Planning
1329 E Street, N.W.
Washington, D.C. 20004
Phone: 202/727-0567

MARYLAND

Planning Dir., DD Council
Off. of Mental Health & Hygiene
O'Connor Bldg.—4th Floor
201 West Preston Street
Baltimore, Maryland 21202
Phone: 301/382-3358

PENNSYLVANIA

Dir. DD Council
2101 N. Front St.
Riverside Office Bldg.
Harrisburg, Pa. 17110
Phone: 717/787-6057

VIRGINIA

Planning Director, DD Council
9th Street Office Bldg.—Suite 1005
Richmond, Virginia 23219
Phone: 804/936-7787

WEST VIRGINIA

Planning Director, DDSA
c/o Commission on Mental
Retardation
State Capitol Bldg.
Charleston, West Virginia 25305
Phone: 304/348-5358

Region IV

ALABAMA

Executive Director
Ala. Department of Mental Health
502 Washington Street
Montgomery, Alabama 36130
Phone: 205/265-2301

FLORIDA

DD Administrator
Retardation Program Office
1311 Winewood Blvd., Bldg. 5
Tallahassee, Florida 32301
Phone: 904/488-4257

GEORGIA

Director
DD Staff to Council
Department of Human Resources
618 Ponce de Leon Avenue, N.E.
Atlanta, Georgia 30308
Phone: 404/894-5790

KENTUCKY

Center for Comprehensive Health
System Development
Bureau for Health Services
275 East Main Street
Frankfort, Kentucky 40601
Phone: 502/564-7690

MISSISSIPPI

Planning Coordinator
Mississippi DD Planning Council
1404 Woolfolk Building
Jackson, Mississippi 39201
Phone: 601/354-6692

NORTH CAROLINA

Executive Director of NCDDC
325 N. Salisbury Street
Albermarle Building, Rm. 612
Raleigh, North Carolina 27611
Phone: 919/733-7787

SOUTH CAROLINA

Director, DD Program
Edgar A. Brown Bldg., Rm. 408
1205 Pendleton Street
Columbia, South Carolina 29201
Phone: 803/758-7886

TENNESSEE

Executive Director
Tennessee Planning Council
501 Union Building, 4th Floor
Nashville, Tennessee 37219
Phone: 615/741-1742

Region V

ILLINOIS

Council Administrator
Governor's Advisory Council on
Developmental Disabilities
222 South College
Springfield, Illinois 62706
Phone: 217/782-9696

INDIANA

Staff Director
Planning & Advisory Board for
Developmental Disabilities
Room 117—State House
Indianapolis, Ind. 46204
Phone: 317/633-7562

MICHIGAN

Executive Director
Michigan State Planning Council
for Developmental Disabilities
Lewis-Cass Building—6th Floor
Lansing, Michigan 48926
Phone: 517/373-7988

MINNESOTA

Director
Minnesota DD Planning Office
Governor's Planning Council on
Developmental Disabilities
200 Capitol Square Building
550 Cedar Street
St. Paul, Minnesota 55101
Phone: 612/296-4018

OHIO

Executive Director
Ohio Developmental Disabilities
Planning Council
30 East Broad Street
State Office Towers
Columbus, Ohio 43215
Phone: 614/466-5205

WISCONSIN

Executive Director
Wisconsin Council on
Developmental Disabilities
1 West Wilson Street, Room 1120-C
Madison, Wisconsin 53702
Phone: 608/266-7826

Region VI

ARKANSAS

Coordinator, DD Services
Arkansas Department of MR/DD
Waldon Building, Suite 400
7th and Main
Little Rock, Arkansas 72201
Phone: 501/371-3491

LOUISIANA

Director
Office of Mental Retardation
Department of Health and Human
Resources Administration
721 Government Street
Baton Rouge, Louisiana 70802
Phone: 504/389-6804

NEW MEXICO

Planning Director
Division of Vocational
Rehabilitation
P.O. Box 1830
Sante Fe, New Mexico 87503
Phone: 505/827-2301

OKLAHOMA

Dept. of Institutions, SRS
Box 25352
Oklahoma City, Okla. 73125
Phone: 405/521-3617

TEXAS

Texas Dept. of Mental Health/
Mental Retardation
P.O. Box 12268
Capitol Station
Austin, Texas 78711
Phone: 512/454-3761

Region VII

IOWA

Director
Developmental Disabilities
Program
Office of Planning & Programming
523 East 12th Street
Des Moines, Iowa 50319
Phone: 515/281-3711

KANSAS

Executive Director
Kansas Planning Council on DD
Biddle Bldg. 2nd Floor
2700 W. 6th Street
Topeka, Kansas 66606
Phone: 913/296-2608

MISSOURI

Coordinator
Division of Mental Retardation and
Developmental Disabilities
Department of Mental Health
2002 Missouri Boulevard
Jefferson City, Missouri 65101
Phone: 314/751-4054

NEBRASKA

Director
Division of Developmental
Disabilities
Department of Health
P.O. Box 95007
Lincoln, Nebraska 68509
Phone: 402/471-2981

Region VIII

COLORADO

Director, DD Council
4150 South Lowell Blvd.
Denver, Colo. 80236
Phone: 303/761-0220

MONTANA

Acting Executive Director,
DD Council
1218 East Sixth Avenue
Helena, Montana 59601
Phone: 406/449-3878

NORTH DAKOTA

Director
Department of Health
909 Basin Avenue
Bismarck, North Dakota 58501
Phone: 701/224-2769

SOUTH DAKOTA

Division of Mental Health &
Mental Retardation
Third Floor, Office Building
Pierre, South Dakota 57501
Phone: 605/224-3438

UTAH

Executive Secy.
Utah Advisory Council for the
Developmentally Disabled
P.O. Box 11356
Salt Lake City, Utah 84147
Phone: 801/533-6323

WYOMING

Executive Director
Developmental Disabilities Council
P.O. Box 1205
Cheyenne, Wyoming 82001
Phone: 307/632-7105

Region IX

ARIZONA

Executive Director
DD Planning and Advocacy Council
1333 W. Camelback Road, Suite 209
Phoenix, Arizona 85013
Phone: 602/271-4049, 4040, 3645

CALIFORNIA

Executive Director
State Developmental Disabilities
Council
1517 L Street, 1st Floor, Suite 100
Sacramento, Calif. 95814
Phone: 916/322-8481

GUAM

Coordinator
Developmental Disabilities
Program
P.O. Box 10-C
Agana, Guam 96910
Phone: Overseas Operator: 472-8806

HAWAII

Executive Secretary
State Council on Developmental
Disabilities
P.O. Box 3378
Honolulu, Hawaii 96801
Phone: 808/521-6866 or 548-5994

NEVADA

Planner, State Developmental
Disabilities Council
Health Planning and Resources,
D/HR
604 Kinkead Building,
Capitol Complex
Carson City, Nevada 89710
Phone: 702/885-4720

Region X

ALASKA

Health Planner
Developmental Disabilities
Planning Council
University Plaza Offices West-
Suite C
600 University Avenue
Fairbanks, Alaska 99701
Phone: 907/479-6507

IDAHO

Planning Director
Idaho State DD Planning Council
Statehouse Mall
700 West State Street
Boise, Idaho 83720
Phone: 208/554-2426

OREGON

Executive Director
Developmental Disabilities Council
Department of Human Resources
326 Public Service Bldg.
Salem, Ore. 97310
Phone: 503/378-2314

WASHINGTON

Planning Director
Developmental Disabilities
Planning and Advisory Council
Department of Social & Health
Services
Mail Stop P.J. -11
Olympia, Washington 98504
Phone: 206/434-0412

**STATE VOCATIONAL REHABILITATION AGENCIES
(BLIND)**

CONNECTICUT

Board of Education & Services
for the Blind
170 Ridge Road
Wethersfield, Connecticut 06109
203-249-8525

DELAWARE

Delaware Bureau for the
Visually Impaired
Dept. of Health & Social Services
305 W. Eight Street
Wilmington, Delaware 19801
302-571-3333

FLORIDA

Office of Blind Services
Department of Education
2571 Executive Center Circle, East
Howard Building
Tallahassee, Florida 32301
904-488-1330

IDAHO

Idaho Commission for the Blind
Statehouse
Boise, Idaho 83720
208-384-3220

IOWA

Commission for the Blind
Fourth and Keosauqua
Des Moines, Iowa 50309
515-283-2601

KANSAS

Services for the Blind & Visually
Handicapped
State Dept. of Social &
Rehabilitation Services
Biddle Building
2700 West 6th Street
Topeka, Kansas 66606
913-296-4454

KENTUCKY

Bureau for the Blind
503 E. Main Street
Frankfort, Kentucky 40601
502-564-4754

LOUISIANA

Department of Health &
Human Resources
Office of Human Development
Blind Services Program
1755 Florida Street
Baton Rouge, Louisiana 70821
504-342-5284

MASSACHUSETTS

Massachusetts Commission for
the Blind
110 Tremont Street—6th Floor
Boston, Massachusetts 02108
617-727-5550

MICHIGAN

Commission for the Blind
300 S. Capitol Avenue
Lansing, Michigan 48926
517-373-2062

MINNESOTA

State Services for the Blind and
Visually Handicapped
1745 University Avenue—1st Floor
St. Paul, Minnesota 55104
612-296-6034

MISSISSIPPI

Vocational Rehabilitation for the
Blind—P.O. Box 4872
Jackson, Mississippi 39216
601-354-6411

MISSOURI

Bureau for the Blind
Department of Social Services
Division of Family Services
619 East Capitol
Jefferson City, Missouri 65101
314-751-4249

MONTANA

Visual Services Division
Dept. of Social & Rehabilitation
Services
P.O. Box 1723
Helena, Montana 59601
406-449-3434

NEBRASKA

Division of Rehabilitation
Services for the Visually Impaired
Dept. of Public Institutions
1047 South Street
Lincoln, Nebraska 68502
402-471-2891

NEW JERSEY

Commission for the Blind &
Visually Impaired
1100 Raymond Boulevard
Newark, New Jersey 07102
201-648-2324

NEW YORK

State Dept. of Social Services
Commission for the Visually
Handicapped
Ten Eyck Office Building
40 North Pearl Street
Albany, New York 12243
518-474-6739

NORTH CAROLINA

Division of Services for the Blind
N.C. Dept. of Human Resources
410 N. Boylan Avenue
P.O. Box 2658
Raleigh, North Carolina 27602
919-733-4231

OREGON

Commission for the Blind
535 S.E. 12th Avenue
Portland, Oregon 97214
503-238-8375

PENNSYLVANIA

Commonwealth of Pennsylvania
Dept. of Public Welfare
Bureau for the Visually
Handicapped
P.O. Box 2675
Harrisburg, Pennsylvania 17120
717-787-6176

RHODE ISLAND

Dept. of Social & Rehabilitation
Services
Services for the Blind & Visually
Impaired
46 Aborn Street
Providence, Rhode Island 02903
401-277-2300

SOUTH CAROLINA

Executive Director
Commission for the Blind
1430 Confederate Avenue
Columbia, South Carolina 29201
805-758-2434

TENNESSEE

Services for the Blind
Dept. of Human Services
303-304 State Office Building
Nashville, Tennessee 37219
615-741-3163

TEXAS

State Commission for the Blind
314 W. 11th Street—P.O. Box 12866
Austin, Texas 78711
512-475-6810

UTAH

Services for the Blind &
Visually Handicapped
309 East First South
Salt Lake City, Utah 84111
801-533-9393

VERMONT

Division for the Blind &
Visually Handicapped
Dept. of Social & Rehab. Services
Vocational Rehab. Division
State Office Building
Montpelier, Vermont 05602
802-241-2210

VIRGINIA

Virginia Commission for the
Visually Handicapped
3003 Parkwood Avenue
Richmond, Virginia 23221
804-257-0591

WASHINGTON

State Commission for the Blind
3411 South Alaska Street
Seattle, Washington 98118
206-721-4422

**STATE VOCATIONAL REHABILITATION AGENCIES
(GENERAL)**

ALABAMA

Division of Rehabilitation &
Crippled Children Service
2129 E. South Boulevard
Montgomery, Alabama 36111
205-281-8780

ALASKA

Office of Vocational Rehabilitation
Pouch F. Mail Station 0581
Juneau, Alaska 99811
907-586-6500

ARIZONA

Rehabilitation Services Bureau
Dept. of Economic Security
1400 W. Washington Street
Phoenix, Arizona 85007
602-271-3332

ARKANSAS

Dept. of Social &
Rehabilitation Services
1801 Rebsamen Park Road
P.O. Box 3781
Little Rock, Arkansas 72203

CALIFORNIA

Dept. of Rehabilitation
830 K Street Mall
Sacramento, California 95814
916-445-3971

COLORADO

Division of Rehabilitation
Dept. of Social Services
1575 Sherman Street
Denver, Colorado 80203
303-839-2652

CONNECTICUT

State Dept. of Education
Division of Vocational
Rehabilitation
600 Asylum Avenue
Hartford, Connecticut 06105
203-566-7329

DELAWARE

Department of Labor
Division of Vocational
Rehabilitation
820 N. French Street
Wilmington, Delaware 19801
302-571-2860

DISTRICT OF COLUMBIA

Bureau of Rehab Services
Department of Human Resources
1350 E Street, N.W.
Washington, D.C. 20004
202-727-0518

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FLORIDA

Office of Vocational Rehabilitation
Dept. of Health & Rehabilitation
Services
1323 Winewood Boulevard
Tallahassee, Florida 32301
904-488-6210

GEORGIA

Dept. of Human Resources
Division of Vocational
Rehabilitation
47 Trinity Avenue
Atlanta, Georgia 30334
404-656-2621

GUAM

Dept. of Vocational
Rehabilitation
P.O. Box 10-C
Agana, Guam 96910
472-8806

HAWAII

Division of Vocational
Rehabilitation
Dept. of Social Services & Housing
Room 216, Queen Liliuokalani
Building
P.O. Box 339
Honolulu, Hawaii 96809
808-548-6367

IDAHO

Division of Vocational
Rehabilitation
1501 McKinney
Boise, Idaho 83704
208-384-3390

ILLINOIS

Division of Vocational
Rehabilitation
623 East Adams Street
P.O. Box 1587
Springfield, Illinois 62705
217-782-2093

INDIANA

Indiana Rehabilitation Services
1028 Illinois Building
17 W. Market Street
Indianapolis, Indiana 46204
317-633-5687

IOWA

Dept. of Public Instruction
Rehabilitation Education &
Services Branch
507 10th Street—Fifth Floor
Des Moines, Iowa 50309
515-281-4311

KANSAS

Division of Vocational
Rehabilitation
Dept. of Social & Rehabilitative
Services
2700 West 6th
Topeka, Kansas 66606
913-296-3911

KENTUCKY

Bureau of Rehabilitation Services
Capital Plaza Office Tower
Frankfort, Kentucky 40601
502-564-4440

LOUISIANA

Division of Vocational
Rehabilitation
State of Louisiana
Dept. of Health & Human Resources
Office of Human Development
1755 Florida Boulevard
P.O. Box 44371
Baton Rouge, Louisiana 70804
504-342-2285

MAINE

Bureau of Rehabilitation
32 Winthrop Street
Augusta, Maine 04330
207-289-2266

MARYLAND

Division of Vocational
Rehabilitation
Box 8717, Baltimore-Washington
International Airport
Baltimore, Maryland 21240
301-796-8300

MASSACHUSETTS

Rehabilitation Commission
11th Floor Statler Office Bldg.
20 Providence Street
Boston, Massachusetts 02116
617-727-2172

MICHIGAN

State of Michigan
Department of Education
Vocational Rehabilitation Service
P.O. Box 30010
Lansing, Michigan 48909
517-373-3390

MINNESOTA

Division of Vocational
Rehabilitation
Dept. of Economic Security
Space Center, 3rd Floor
444 Lafayette Road
St. Paul, Minnesota 55101
612-296-5619

MISSISSIPPI

Vocational Rehabilitation Division
932 N. State Street
P.O. Box 1698
Jackson, Mississippi 39205
601-354-6825

MISSOURI

Dept. of Elementary and
Secondary Education
Division of Vocational
Rehabilitation
3523 North Ten Mile Drive
Jefferson City, Missouri 65101
314-751-3251

MONTANA

State of Montana
Social & Rehabilitation Services
Rehabilitative Services Division
P.O. Box 4210
Helena, Montana 59601
406-449-2590

NEBRASKA

State Department of Education
Division of Rehabilitative Services
301 Centennial Mall—6th Floor
Lincoln, Nebraska 68508
402-471-2961

NEVADA

Dept. of Human Resources
Rehabilitation Division
Kinkead Building, 5th Floor
505 E. King Street
Carson City, Nevada 89701
702-885-4440

NEW HAMPSHIRE

State Department of Education
Division of Vocational
Rehabilitation
105 Loudon Road, Building No. 3
Concord, New Hampshire 03301
603-271-3121

NEW JERSEY

Division of Vocational
Rehabilitation Services
Labor and Industry Bldg., Rm. 1005
John Fitch Plaza
Trenton, New Jersey 08625
609-292-5987

NEW MEXICO

Vocational Rehabilitation
Department of Education
231 Washington Avenue
P.O. Box 1830
Santa Fe, New Mexico 87503
505-827-2266

NEW YORK

The State Education Department
Office of Vocational Rehabilitation
99 Washington Avenue
Albany, New York 12230
518-474-3941

NORTH CAROLINA

Division of Vocational
Rehabilitation Services,
Dept. of Human Resources
State Office
620 N. West Street, Box 26053
Raleigh, North Carolina 27611
919-733-3364

NORTH DAKOTA

Division of Vocational
Rehabilitation
1025 N. 3rd Street, Box 1037
Bismarck, North Dakota 58501
701-224-2907

OHIO

Rehabilitation Services Commission
4656 Heaton Road
Columbus, Ohio 43229
614-466-5157

OKLAHOMA

Social & Rehabilitative Services
Division of Rehabilitative and
Visual Services
P.O. Box 25352
Oklahoma City, Oklahoma 73125
405-521-3374

OREGON

Vocational Rehabilitation Division
Dept. of Human Resources
2045 Silverton Road, N.E.
Salem, Oregon 97310
503-378-3830

PENNSYLVANIA

Bureau of Vocational Rehabilitation
Labor and Industry Building
7th and Forster Streets
Harrisburg, Pennsylvania 17120
717-787-5244

PUERTO RICO

Vocational Rehabilitation
Department of Social Services
P.O. Box 1118
Hato Rey, Puerto Rico 00919
809-725-1792

RHODE ISLAND

Vocational Rehabilitation
40 Fountain Street
Providence, Rhode Island 02903
401-421-7005

SOUTH CAROLINA

Vocational Rehabilitation
Department
3600 Forest Drive
P.O. Box 4945
Columbia, South Carolina 29240
803-758-3237

SOUTH DAKOTA

Dept. of Vocational
Rehabilitation
Division of Rehabilitative Services
State Office Building, Illinois Street
Pierre, South Dakota 57501
605-224-3195

TENNESSEE

Division of Vocational
Rehabilitation
Suite 1400—1808 W. End Building
Nashville, Tennessee 37203
615-741-2095

TEXAS

Texas Rehabilitation Commission
118 East Riverside Drive
Austin, Texas 78704
512-447-0100

UTAH

Division of Rehabilitation Services
250 East Fifth South
Salt Lake City, Utah 84111
801-533-5991

VERMONT

Vocational Rehab Division
State Office Building
Montpelier, Vermont 05602
802-241-1000

VIRGINIA

Dept. of Rehabilitative Services
4901 Fitzhugh Avenue
P.O. Box 11045
Richmond, Virginia 23230
804-257-0316

VIRGIN ISLANDS

Dept. of Social Welfare
Division of Vocational Rehab
P.O. Box 539
St. Thomas, Virgin Islands 00801

WASHINGTON

Division of Vocational
Rehabilitation
Dept. of Social and Health Services
P.O. Box 1788 (Mail Stop 311)
Olympia, Washington 98504
206-753-2544

WEST VIRGINIA

Division of Vocational
Rehabilitation
P & G Building, Washington Street
Charleston, West Virginia 25305
304-348-2375

WISCONSIN

Division of Vocational
Rehabilitation
Dept. of Health and Social Services
131 West Wilson Street, 7th Floor
Madison, Wisconsin 53702
608-266-7450

WYOMING

Division of Vocational
Rehabilitation
Hathaway Building, West
Cheyenne, Wyoming 82002
307-777-7387

TRUST TERRITORY

Office of the High Commissioner
Trust Territory of the
Pacific Islands
Saipan, Mariana Island 96550
9422

AMERICAN SAMOA

Palauni Puiasosopo
Assistant to the Governor of
American Samoa
Pago Pago, American Samoa 96799
633-0116

Exhibit C. Additional Organizations

Alcoholics Anonymous

4530 Connecticut Avenue, N.W.
Washington, D.C. 20008

**Alliance of American Insurers
(Rehabilitation program)**

20 North Wacker Drive
Chicago, IL 60606

**American Academy of
Pedodotics**

211 East Chicago Avenue,
Suite 1235
Chicago, IL 60611

**American Academy of Physical
Medicine and Rehabilitation**

30 North Michigan Avenue,
Suite 922
Chicago, IL 60602

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American Association of Retired Persons
1909 K Street, N.W.
Washington, D.C. 20049

American Council on Alcohol Problems
119 Constitution Avenue, N.W.
Washington, D.C. 20002

American Dental Association (clearinghouse for dental public health)
211 East Chicago Avenue
Chicago, IL 60611

American Diabetes Association
600 Fifth Avenue
New York, NY 10020

American Health Foundation
1320 Avenue of the Americas
New York, NY 10019

American Heart Association
7320 Greenville Avenue
Dallas, TX 75231

American Nurses Association
2420 Pershing Road
Kansas City, MO 64108

American Veterans Committee
1346 Connecticut Avenue, N.W.
Suite 930
Washington, D.C. 20036

Ancient and Accepted Scottish Rite, Northern Masonic Jurisdiction, Supreme Council, 33rd Degree Masons (fraternal, civic)
33 Marrott Road
Lexington, MA 02173

Architecture and Transportation Barriers Compliance Board
U.S. Department of Health, Education and Welfare
Room 1010, Mary Switzer Building
3rd and Independence Avenue, S. W.
Washington, D.C. 20201

Asthma and Allergy Foundation of America
801 Second Avenue
New York, NY 10017

B'nai B'rith (Jewish fraternal, community service and action)
1640 Rhode Island Avenue, N.W.
Washington, D.C. 20036

CARE (Cooperative for American Relief Everywhere—overseas relief and development assistance)
660 First Avenue
New York, NY 10016

Child Welfare League of America
67 Irving Place
New York, NY 10003

Conference of Executives of American Schools for the Deaf
5034 Wisconsin Avenue, N.W.
Washington, D.C. 20016

Deafness Research Foundation
342 Madison Avenue
New York, NY 10017

Fight for Sight, Inc.
41 East 57th Street
New York, NY 10019

Fraternal Order of Eagles (handicapped veterans, civic)
2401 Wisconsin Avenue
Milwaukee, WI 53233

Handicapped Artists of America
8 Sandy Lane
Salisbury, MA 01950

Handy-Cap Horizons, Inc. (non-profit handicapped traveling service and magazine, and other work for handicapped)
3250 E. Loretta Drive
Indianapolis, IN 46227

Handicapped Sportspersons of Sacramento

2215 Allegheny Road
El Dorado Hills, CA 95630

Helen Keller National Center for Deaf-Blind Youths and Adults

111 Middle Neck Road
Sands Point, NY 11050

Hull House Association (poor, handicapped children)

3719 North Broadway
Chicago, IL 60657

Institute of Reconstructive Plastic Surgery

New York University
Medical Center
550 First Avenue
New York, NY 10016

International Association of Industrial Accident Boards and Commissions

P.O. Box 480
Arkadelphia, AR 71923

International Association of Machinists and Aerospace Workers (employment)

1330 Connecticut Avenue, N.W.
Washington, D.C. 20036

Interstate Conference of Employment Security Agencies (employment)

444 North Capitol Street
Suite 126
Washington, D.C. 20001

Jewish Braille Institute of America (serving religious and cultural needs of Jewish blind)

110 East 30th Street
New York, NY 10016

Jewish War Veterans of the USA

1712 New Hampshire Avenue, N.W.
Washington, D.C. 20009

Kessler Institute for Rehabilitation

1199 Pleasant Valley Way
West Orange, New Jersey 07052

Kiwanis Foundation

1735 DeSales Street, N.W.
Washington, D.C. 20036

Kiwanis International (civic, benevolent, fraternal)

101 East Erie Street
Chicago Illinois 60611

Knights of Columbus (fraternal, benevolent, religious)

Columbus Plaza
New Haven, CT 06510

Leonard Wood Memorial for Leprosy

5400 Pooks Hill Road
Bethesda, MD 20014

Lions Eye Bank and Research Foundation

919-18th Street, N.W.
Washington, D.C. 20006

Lions International (civic, benevolent)

300 22nd Street
Oak Brook, IL 60570

Loyal Order of Moose (fraternal, benevolent)

Mooseheart, IL 60539

Maryland School for the Blind (education K-12, employment)

3501 Taylor Avenue
Baltimore, MD 21236

Masonic Service Association of the U.S. (fraternal, benevolent)

8120 Fenton Street
Silver Spring, MD 20910

**Medic Alert Foundation
International**
(patients' ID badges)
Turlock, CA 95380

**Mental Disability Legal
Resources Center 9**
(American Bar Association)
1800 M Street, N.W.
Washington, D.C. 20036

Mobility International—USA
(MIUSA is U.S. affiliate of MI,
dedicated to travel accessibility
for disabled persons)
P.O. Box 219
Ottawa, Illinois 61350

Myasthenia Gravis Foundation
(research, cure, and prevention)
15 East 22nd Street
New York, NY 10010

National Amputation Foundation
12-45 150th Street
Whitestone, NY 11357

**National Association of Hearing
and Speech Action**
6110 Executive Boulevard, #1000
Rockville, MD 20852
(301)897-8682

**National Association of Jewish
Vocational Services (vocational
services U.S. and Canada)**
225 Park Avenue South
New York, NY 10003

**National Association for the
Visually Handicapped**
(reading materials, research)
3201 Balboa Street
San Francisco, CA 94121

**National Center for Law and
the Deaf**
7th and Florida Avenue, S.E.
Washington, D.C. 20002

**National Center for Law and the
Handicapped**
1235 North Eddy Street
South Bend, IN 46617

National Children's Center
6200 2nd Street, N.W.
Washington, D.C. 20011

**National Conference of
Catholic Charities**
(coordination of information
and programs)
1346 Connecticut Avenue, N.W.
Washington, D.C. 20036

National Council on Alcoholism
(public information, prevention,
education, research and evalua-
tion, community services)
733 Third Avenue
New York, NY 10017

**National Council to Combat
Blindness**
41 West 57th Street
New York, NY 10019

**National Council for Home-
Maker Health Aide Services**
67 Irving Place
New York, NY 10013

**National Council of Young Men's
Christian Associations**
291 Broadway
New York, NY 10007

**National Cystic, Fibrosis
Research Foundation**
(Supports research, care,
education, and training)
3379 Peachtree Road, N.W.
Atlanta, GA 30326

**National Federation of
Business and Professional
Women's Clubs (program
support)**
2012 Massachusetts Avenue, N.W.
Washington, D.C. 20036

National Industries for the Severely Handicapped

4350 East-West Highway,
Suite 1120
Bethesda, MD 20014

National Kidney Foundation (research, treatment, prevention, care)

2 Park Avenue
New York, NY 10016

National Pituitary Agency (pituitary hormones for investigative therapy)

210 West Fayette Street
Baltimore, MD 21201

National Retired Teachers Association

1909 K Street, N.W.
Washington, D.C. 20049

National Society for Medical Research (versus anti-vivisection)

1000 Vermont Avenue, N.W.
Washington, D.C. 20005

Office of Equal Employment Opportunity

U.S. Department of Health, Education and Welfare
Washington, D.C. 20201

Office for Handicapped Individuals

U.S. Department of Health, Education and Welfare
Washington, D.C. 20201

Operation Ninos (Pan American Development Foundation project for poor and handicapped children)

1625 I Street, N.W.
Washington, D.C. 20006

Optimist International (civic service)

4494 Lindell Boulevard
St. Louis, Missouri 63108

Pan American Development Foundation (infrequent wheelchair donations)

1625 I Street, N.W.
Washington, D.C. 20006

Parkinson's Disease Foundation

William Black Research Building
640 West 168th Street
New York, NY 10032

Rehabilitation International (international cooperation)

432 Park Avenue South
New York, NY 10016

Research to Prevent Blindness

598 Madison Avenue
New York, NY 10022

Rotary International (community service)

1600 Ridge Avenue
Evanston, IL 60201

Sertoma Foundation (regional center for speech and hearing impaired)

750 Montclair Road
Birmingham, AL 35213

SIECUS (Sex Information and Education Council of the U.S.)

137 North Franklin Street
Hempstead, NY 11550

Sister Kenny Institute (formerly America Rehabilitation Foundation)

Chicago Avenue at 27th Street
Minneapolis, MN 55407

Speech Communication Association

5205 Leesburg Pike
Falls Church, VA 22041

Typewriters for the Deaf Inc.

P.O. Box 28332
Washington, D.C. 20005

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United States Jaycees
(individual, management and
community development)
P.O. Box 7
Tulsa, OK 74121

Volunteers of America
(residential facilities for mentally
retarded)
340 West 85th Street
New York, NY 10024

Young Men's Christian
Association (YMCA)
1711 Rhode Island Avenue, N.W.
Washington, D.C. 20036

Young Women's Christian
Association (YWCA)
1649 K Street, N.W.
Washington, D.C. 20036

Appendix 3

Some Information Sources

Exhibit A. Major Information Centers

Accent on Information

P.O. Box 700
Bloomington, IL 61701

Center for Rehabilitation Information

Library of the Health Sciences
University of Illinois
506 South Mathews Avenue
Urbana, IL 61801
(217)333-0183

Clearinghouse on the Handicapped

Office of Special Education
Rehabilitation Services
U.S. Dept. of Education
Room 3106 Switzer Bldg.
Washington, D.C. 20202
(202) 245-0080

Closer Look

Box 1492
Washington, D.C. 20013
(202) 833-4160

Council for Exceptional Children

1920 Association Dr.
Reston, VA 22091
(800) 336-3728

Delaware Valley Resource & Information Center for Disabled Individuals

Moss Rehabilitation Hospital
12th St. & Tabor Rd.
Philadelphia, PA 19141
(215) 329-5715

Educational Resources Information Center (ERIC)

National Institute of Education
(NIE) Office of Dissemination & Resources
Washington, D.C. 20208
(202) 254-5555

IMPART (Innovative Matching of Problems to Available Rehabilitation Technology)

Texas Rehabilitation Commission
118 E.Riverside Dr.
Austin, TX 78704
(512)447-0106

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Information & Research Utilization Center (IRUC)

American Alliance for Health,
Physical Education Recreation
and Dance
1201 16th St. N.W.
Washington, D.C. 20036
(202) 833-5541

Information Center for Individuals with Disabilities

20 Providence St., Room 329
Boston, MA 02116
(617) 727-5540/5236 TTY

Materials Development Center

Stout Vocational Rehabilitation
Institute
School of Education
University of Wisconsin-Stout
Menomonie, WI 54751
(715) 232-1342

National Center for A Barrier Free Environment

1140 Connecticut Avenue, N.W.
Suite 1006
Washington, D.C. 20036
(202) 466-6896 (800) 424-2809

National Clearinghouse of Rehabilitation Training Materials

Oklahoma State University
115 Old USDA Bldg.
Stillwater, OK 75074
(405) 624-7650

National Health Council, Inc.

1740 Broadway
New York, NY 10019
(212) 582-6040

National Rehabilitation Information Center (NARIC)

The Catholic University of America
4407 Eighth St., N.E.
Washington, D.C. 20064
(202) 635-5826/5884 TTY

President's Committee on Employment of the Handicapped (PCEH)

Washington, D.C. 20210
(202) 653-5008

Exhibit B. Major Films About Disabilities

Alcoholism: The Bottom Line. 16 mm, color. Motivational Media, 8271
Melrose Ave., Suite 204, Los Angeles, California 90046.

A Day In The Life Of Bonnie Consolo. 16 mm, color. Arthur Burr
Productions, P.O. Box 7-C Pasadena, California 91104.

A Different Approach. 16 mm, color, captioned. South Bay Mayor's
Committee, 2409 N. Sepulveda Blvd., Suite 202, Manhattan Beach,
California 90266.

Get It Together. 16 mm, color. Pyramid Films, Box 1048, Santa Monica,
California 90406.

Gravity Is My Enemy. 16 mm, color. Churchill Films, 622 N. Robertson
Blvd., Los Angeles, California 90069.

It's O.K. To Be Deaf, Denise. 16 mm, color, captioned. YASNY Production, 1976. (no address available).

Understanding The Deaf. 16 mm, color. Perennial Education, Box 236, 1825 Millon Road, Northfield, Illinois 60093.

Walk Awhile In My Shoes. 16 mm, color. National Film Board of Canada, 1251 Avenue of the Americas, New York, New York 10020.

What Do You Do When You See A Blind Person? 16 mm, color. American Foundation for the Blind, 13 West Sixteenth Street, New York, New York 10011.

You can also contact the three major television networks for documentaries on the subject.

Exhibit C: A Few Books About Disabilities

Block, J.R. and H.E. Yuker. *Challenging Barriers to Change*. Albertson, New York: Human Resources Center, 1979.

Bowe, F. *Handicapping America: Barriers to Disabled People*. New York: Harper & Row, 1978.

Conley, R.W., *The Economics of Mental Retardation*, Baltimore: Johns Hopkins University Press, 1974.

Egdahl, R.H. and D.C. Walsh. *Mental Wellness Programs for Employees*. New York: Springer-Verleg, 1980.

Greengross, W. *Entitled To Love: The Sexual and Emotional Needs of the Handicapped*. London: Malaby Press in association with the National Fund for Research into Crippling Diseases, 1976.

Hull, K. *The Rights of Physically Handicapped People*. New York: Avon Books, 1979.

Robinault, L.P. *Sex, Society, and the Disabled: A Developmental Inquiry Into Roles, Reactions, and Responsibilities*, Hagerstown, Maryland: Harper & Row, 1978.

Scott, R. *The Making of Blind Men*. New York: Russell Sage Foundation, 1969.

Spiegel, A.D., S. Podair, and E. Fiarito. *Rehabilitating People with Disabilities into the Mainstream of Society*. Park Ridge, New Jersey: Noyes Medical Publications, 1981.

Subins, J. *Social and Psychological Aspects of Disability: A Handbook for a Practitioner*, Baltimore: Harper & Row, 1978.

Wright, B.A. *Physical Disability: A Psychological Approach*. New York: Harper & Row, 1960.

Yinger, M. *A Minority Group in American Society*. New York: McGraw-Hill, 1965.

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