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ABSTRACT

The pamphlet is a collection of four articles. "Tuned-in" Blind People, by C. Stanley Potter, describes at length the Radio Talking Book program of the Minnesota State Services for the Blind and Visually Handicapped and the work of the Communications Center, charged with coordinating all facets of programing and airing. A Private Sonic Boom reports on a sound sensing device installed in "sonic glasses" for the blind. Tasters and Smellers in the Food and Fragrance Industry, by Elisabeth D. Freund, describes how blind people are using their senses of taste and smell in gainful employment in quality control and preference testing for two food processors and a manufacturer of flavoring and perfumery chemicals. The Sky's the Limit, by Kurt Milam, illustrates with a blind meteorologist the possibility that new areas of employment may be opened through specialized training provided counselors for the blind accept their responsibilities. (NH)

THE BLIND

on the go and at work

SELECTED ARTICLES FROM THE
REHABILITATION RECORD

"Tuned-in" Blind People

C. Stanley Potter

The Radio Talking Book program of the Minnesota State Services for the Blind and Visually Handicapped was inaugurated in January 1969. The pioneering program has grown steadily ever since and now numbers over 2,000 listeners. We estimate that as funds become available the service will be expanded and eventually will reach from 10,000 to 15,000 handicapped persons in the State. When that goal has been attained, the Radio Talking Book Network may well constitute the largest consistent radio audience in the State.

At present we have four transmitters and six cable systems in outlying areas which carry our broadcasts.

The service is provided through our Communication Center which coordinates all facets of programing and airing. In addition to this task, the Center is charged with coordinating the preparation of textbooks in Braille and tape and with distributing and repairing the phonograph talking book machines provided by the Library of Congress.

In its overall work, the Center uses the services of some 375 volunteers to Braille and tape textbooks, to prepare and present broadcasts, and to service the 5,000 radios and phonographs now in use. In addition the Center prepares a broadcast calendar that is sent to all users. (See separate feature elsewhere in this article.)

Mr. Potter is Director, State Services for the Blind and Visually Handicapped, Minnesota.

A measure of the program's success to date is the interest that it has awakened in organizations for the blind in other parts of the country. Kansas now has an established program. Although it is new and small, it promises to expand into a full-fledged and statewide service. Interest has also been exhibited for such a service in the States of Oklahoma, Illinois, South Carolina, and Washington.

Closer to home, the assessment is made through such user comments as:

"Beautiful service--this radio—and a great stride forward to the blind who cannot independently keep up with the local news and current issues of the day. . . ."

". . . God's blessing a hundredfold . . . for the very fine programs, news and books. . . ."

"When I lost my sight 5 years ago one of the most difficult things to adjust to was not to do my own reading . . . how thrilled I was to receive my radio and be able to know what people are talking about when they mention a book or some newspaper article. I am probably better informed now than when I could see. . . ."

Objectives of the Radio Talking Book

Because we believe that our constituents have a right to be informed fully if they are to compete in the community at large, we present a full programing experience that includes news, literature, comment, and interview.

In our opinion, the material used in programing must be very much up-to-date. If it does not contain a high content of local information, the radio talking book has no advantage over the phonograph talking book.

Materials are selected for their popularity and availability. They are not edited for content or vocabulary, but will occasionally be edited for timing purposes. Book selections are made from best seller lists and from recommendations by librarians in St. Paul. The St. Paul Public Library, for example, gives the radio talking book first priority for the many new books received each month.

The radio talking book reader can listen to the morning and evening newspapers in full, hear magazines just off the newsstands, and digest best sellers as they are being talked about by friends.

A very important objective is the element of rehabilitation and teaching that is made readily available through the use of round table discussions and interviews. Thus the service offers an opportunity to reach, stimulate, and teach a larger number of blind and visually handicapped persons than ever before—particularly in terms of rehabilitation attitudes, information, and some skills.

The radio service can include information on community resources and provide families with normative information about what visually handicapped people can expect to achieve educationally, socially, and vocationally in society. Occupational information, hobby information, personal grooming, information about job requirements are also given.

Round table discussions by handicapped students, counselors, teachers, and blind persons already engaged in various vocations, businesses, and professions are broadcast. These stimulate the imagination of the listener to an exploration and anticipation of his own unrealized possibilities.

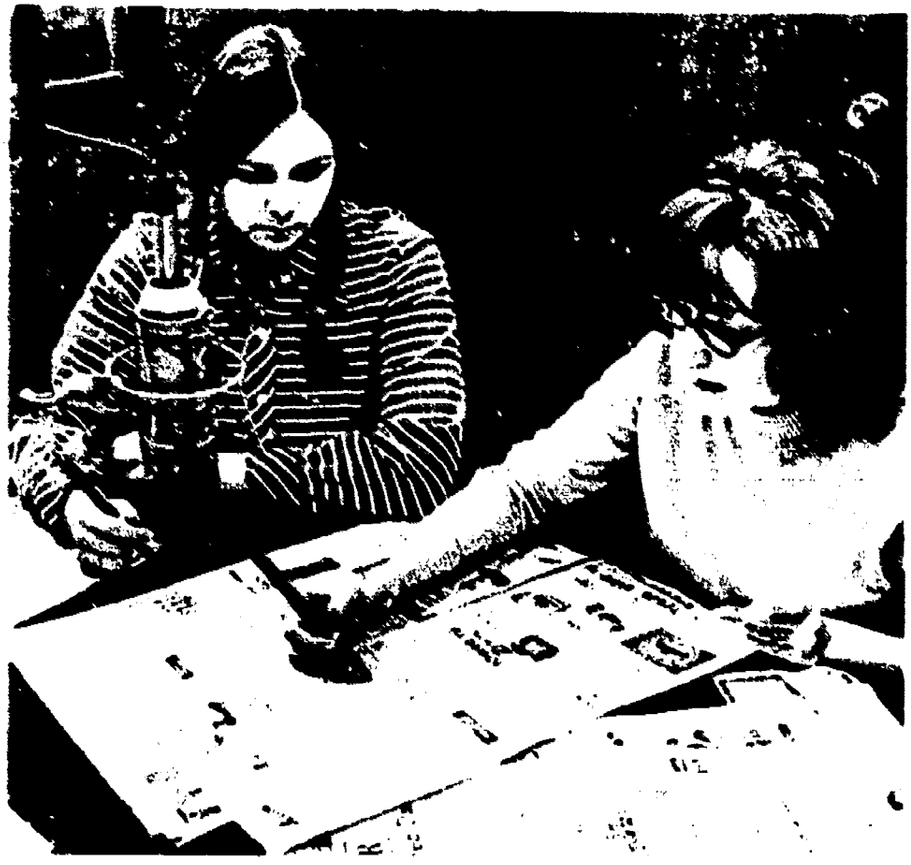
I must reemphasize the fact that the radio talking book should not be considered a substitute for the phonograph talking book. Radio should be used to encourage interests and their further exploration through selective reading via talking book records, tapes, and Braille. However, the radio can be used independently by persons whose disabilities prevent them from physically managing the other media. The radio's chief contribution is in the currentness and localization which it makes possible.

How Does the Service Work?

Every FM station has the capacity to operate at least two subcarrier channels in addition to its main channel. One subcarrier is utilized with the main channel in connection with stereo broadcasting. The second subcarrier often is not used. If it is, it is generally rented to companies who provide background music in department stores, doctors' offices, etc. We use this second subcarrier of FM stations to transmit our radio talking book programs.

Each person receiving the radio talking book service has a receiver that is a single frequency, pretuned unit. The signal received cannot be heard by the general public. The receiver is tuned to the station nearest the listener that broadcasts our programs.

The Radio Talking Book Network is programed and broadcast by us with the collaboration of Minnesota Educational Radio, Inc. Cable systems and other broadcasters also cooperate. Signals are receivable with good quality about as far as are TV signals, that is, within a radius of up to 50 miles, depending upon the terrain, the power of the FM station's transmitter, and the height of its antenna. Greater transmission dis-



Volunteers make last-minute checks before broadcasting "Morning Newspaper" to blind clientele.

tances are attainable wherever community antenna cable systems (CATV) are used, provided the cable system in the area is carrying the FM station which is using its 67 kilocycle subsidiary carrier to transmit radio talking programs. Approval for the use of the 67 kilocycle subcarrier must be obtained from the Federal Communications Commission by the licensee of the station.

Additional information and technical data is available on this project to qualified engineers and administrators from our offices: State Services for the Blind and Visually Handicapped, 1745 University Avenue, St. Paul, Minnesota 55104. Also available is a report on this system prepared by our office and a sample calendar of programing events. Because of the numerous inquiries received about this project, we suggest that contact first be made through your State agency for the blind. This will greatly help us administratively and will avoid duplication of effort.

Who Is Eligible?

Up to a few years ago specialized library services were provided solely for the use of blind persons and for this reason the recordings available now will usually include a statement to this effect. However, legislation now extends talking book services not only to individuals who experience difficulty seeing as a result of visual limitations, partial or total, and are therefore unable to read print effectively, but also to individuals who are physically impaired to the extent that the holding or reading of ordinary books and magazines substantially restricts their reading ability. This includes such persons as those who have lost the use of arms or hands, those whose muscle and nerve control are severely impaired, those who have suffered from the results of strokes or advanced stages of cerebral palsy, multiple sclerosis, muscular dystrophy, polio, and severe arthritis.

It is extremely important that the service be restricted to the audiences defined above since copyright problems could occur otherwise. We therefore determine eligibility on the basis of submitted medical evidence.

Copyright

A careful study of the federal copyright laws was made. In accordance with this study we concluded that the Radio Talking Book Network would be covered by the "Fair-Use Provision" with the carefully restricted audience being served. Anyone taking initiative in establishing such a service should contact and work with his State agency for the blind, since medical eligibility must be established for each person with whom a receiver is placed in order to provide protection under the copyright laws.

Programing

The majority of the programing is prepared by carefully selected and trained volunteers who either prerecord programs or participate in live broadcasts. Staff operators do much live broadcasting as well as hourly station identifications which include announcements of programs scheduled for each day and promotions for upcoming books, weather forecasts, and any newsbreaks which may occur during the day.

The day begins with the morning newspapers from 7:00–9:00, a live program conducted by a staff opera-

tor and one or two volunteers. Questions have arisen from other State personnel as to the value of reading the newspaper. It is our feeling that commercial radio and television present capsulated news, whereas newspapers include background and opinion concerning the news events. The morning and evening newspaper programs on the Radio Talking Book Network emphasize local events and local opinion. Listeners confirm that this is one of the most valuable programs since it allows the blind person to be fully informed on what is happening on the local and national scene and enables him to discuss these happenings most knowledgeably with his friends and associates. In addition to national and local news items, the sections on sports, family life, editorials, business, columns, and reviews are also covered.

Another program along this same line is "Commentary," which covers national and international news magazines and papers such as *Time*, *Newsweek*, *Life*, *Christian Science Monitor*, and the *Manchester Guardian*. These periodicals and papers are broadcast as soon as they are available on the newstands. A regular feature of "Commentary" is the portion of the program devoted to materials of special interest to visually and physically handicapped persons such as the *Braille Monitor*, *Washington Report*, *Listen* and others. Interviews with blind persons or persons involved in programs for the blind and physically handicapped are also presented. It is a time when announcements of meetings of various organizations of blind persons or special activities for blind persons as well as other community activities can be called in for broadcast.

Many books—fiction and nonfiction—provide the listener with hours of enjoyable reading and also keep him informed on current issues of the day.

Other types of programs include interviews, cooking and homemaking shows which include informa-

Author (above, left) interviews E. B. Whitten, Executive Director, National Rehabilitation Association. Such interviews keep blind persons up on national trends in rehabilitation. Two good Radio Talking Book customers (below), Mr. and Mrs. Norman Fettig, can't wait for the end of day for the next chapter of their book-on-radio. Their guide dogs prefer music, the Fettigs say.

Manfredo Fest is Brazilian-born musician who has a nationally-released album on RCA's Daybreak Records label. He was featured on the July 1972 cover of Minnesota Radio Talking Book Calendar, and he is an avid listener since he is himself blind.

tion on new products on the market and best food buys of the week from the ad section of the newspapers, short stories designed for aging listeners who may have shorter attention spans (i.e., nursing home residents), teen-age programs, and programs of children's stories. There are regular programs about nature, about money, about sports.

Earphones are provided so that the blind person can read in privacy as print readers do, without others judging the content of the materials he chooses to hear.

Staff

Personnel resource comes through the Communication Center. There is one full-time programer, a part-time assistant, and a full-time broadcaster. The basic success of the operation comes through the employment of a highly skilled broadcast engineer whose responsibility it is to provide technical quality control, technical innovations, and maintenance of broadcast equipment. Five part-time broadcasters are employed to carry on the weekend and late evening and early morning programing. Additional staff members (13), who carry other prime responsibilities in the Communication Center, also have functions which contribute to the operation of the radio talking book service. Of the approximately 400 volunteers who work with the Communication Center during the year, 130 volunteers are broadcasters. Properly selected, tested, and supervised, volunteers are the greatest single asset.

Funding and Costs

The service was established and is sustained by major grants from The Hamm Foundation of St. Paul. The activities have been extended by grants from The Rochester Foundation (Minnesota), The Joseph Paper Foundation (St. Paul), The St. Croix Foundation (Stillwater, Minnesota), The Lee and Rose Warner Foundation (St Paul), The Seeing Eye (Morristown, New Jersey), public funds, and individual gifts. An RSA innovation grant was also awarded. Rehabilitation funds also help support broadcasts with high vocational rehabilitation impact.

Costs for such a service are variable. Subcarrier service, for example, may be donated or paid for. Receivers cost from $45 to $50 each. In addition, the following material and space must be worked into the total cost of such a service:

- A subcarrier generator and modulation monitor—about $1,600 per station in your system.
- A sound-treated production studio.
- Several sound-treated recording booths.
- Production console—about $2,000
- [illegible]e recorders—cost depends on [illegible]nd.
- Broadcast quality tape reproducing decks—about $800 each. The Minnesota program has six.
- A pair of broadcast quality microphones which are used for live programing—$400 each.
- Rental of equalized telephone lines to take the signal from the studio to the transmitter (cost depends upon distance).
- If more than one station is being utilized, a receiver and antenna at each additional transmitter will be necessary—$300–$400.
- An institutional installation is made in which the FM signal is picked up and rebroadcast through power lines so that the signal is receivable throughout an institution. Each such installation will cost about $500, but will be receivable as an AM signal on radios which most patients already have.

Professional "broadcast quality" equipment covers a wide price range. Actual costs would depend on long term reliability of the brand selected.

Calendar

The *Minnesota Radio Talking Book Calendar* is composed by the Communication Center and issued to its over 2,000 network listeners.

In addition to the daily radio schedules, the *Calendar* brings general schedule and program information in a narrative style. Also carried are features about listeners and other general information about network operation, expansion, and plans. A section entitled "Book Nook" presents a brief synopsis on each of the books that will be aired during the *Calendar's* effective dates.

The *Calendar* is printed in both ink and braille editions.

A Private "Sonic Boom"

Blind woman trains with sonic glasses. They are adjunct to long cane, not meant to replace it.

In Arkansas, a small group of people are wearing eye glasses to hear through rather than to see through. Yet, in an extended sense, their hearing will help them "see" better. The group is composed of blind persons, mobility instructors, and researchers at the Arkansas Enterprises for the Blind in Little Rock. They are testing a device called "ultrasonic binaural sensors."

The device, developed by Leslie Kay of New Zealand, emits ultrasonic sounds from a meshed opening on the bridge of an eye glasses frame. The sound is reflected from objects in its path. It bounces back to the sender and is received through two openings immediately beneath the frame, where the impulses are translated into audible sound. Through two thin plastic tubes, the sound is then transmitted to the person's ears. Because of their construction, the tubes do not obstruct the ear canal, nor do they reduce the person's ability to hear outside sounds.

The sonic implement is not designed to take the place of mobility using the long cane, but to act as an adjunct to it. Researchers say that it helps to extend the perceptual environment of the user by as much as 20 feet. The area covered by the "silent and then audible sound" covers a cone-shaped area of about 60 degrees, with the point starting at the user's forehead.

Blind testers at Arkansas Enterprises are all experienced cane travelers. They begin their training by negotiating an obstacle course composed of weighted-based poles that can be moved in various patterns. Then they move to other areas where other obstacles test their avoidance prowess.

One of the users has this to say about it: "I find the sensor helpful in paralleling a building, locating entrances, avoiding pedestrians and obstacles, walking down aisles of a store and locating landmarks."

And, so, a small sound may have loud repercussions for the blind. ■

Tasters and smellers In the Food and Fragrance Industry

A Limited New Job Possibility for the Blind

Elisabeth D. Freund

The light and airy room smells deliciously of freshly brewed coffee, and the six persons sitting comfortably around the table look as if they had come for a coffee klatch, But it is strange: there is no cream, nor sugar, nor cake on the table; and these people have a queer way of slurping each sip with great noise, spitting it out again, and then scribbling something on a slate.

If you watch them more closely, you will discover that three men and two women are blind, only the sixth person can see; she is the sighted supervisor of the blind taster panel of General Foods Ltd. in Montreal. These persons do the quality product evaluation of instant coffee at the LaSalle plant.

With the standardization of modern food, the customer who buys a certain brand wants it to taste exactly as he thinks it should. If he buys Maxwell House instant coffee, it should not taste like Nestle or vice versa. Therefore, the manufacturers carefully have to supervise their product's uniformity.

For this purpose they keep a "standard"—a sample of how the product should taste or smell. Constantly tests have to be made to compare the daily output with this standard. Besides this procedure, called quality control, there are the "preference tests" (I like this cake better than the other one!"). But for the latter test, a wide selection of consumers is interrogated for their opinions rather than depending on the opinions of a trained panel.

The nose knows! A Glidden Durkee employee checks fragrance to assure consistent product.

Until recently quality control tests usually were made by sighted office or factory workers who were called at random whenever testing was needed. It is not farfetched to ask why blind persons cannot be used as testers—they can taste and smell pretty well, too. Not that they have a special sensory acuity or the mysterious "sixth sense" which well meaning sighted persons would like them to have. But they make the best of the senses left to them; they work with great concentration, will not easily be distracted, and, moreover, have great motivation for doing an outstanding job. So, why not employ blind tasters and smellers?

Very often the managements of corporations have no experience with the visually handicapped and, therefore, are prejudiced. Once I was told: "Of course we cannot use blind testers. They would only upset the bottles!" But there is little breakage with blind workers, and there are amazingly few accidents. That is the reason why insurance and workmen's compensation rates will not be raised when blind workers are employed. The insurance companies know that the blind are more careful and have less accidents than sighted persons.

The industry can be sure, too, that after a very short time everybody will find his way around the plant, especially in the halls, without help. The blind workers will arrange their own transportation to and from the factory by getting lifts from sighted friends or coworkers. And last but not least, the management has not

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A coffee tasting panel at work at Montreal plant of General Foods, Ltd.

to be afraid of how communication with the blind will be achieved. One has not to shout at them (as so many people do) : they can hear; and they will not use this "incomprehensible" Braille script, but Arabic numbers and Roman letters for their evaluations.

On one occasion a laboratory chemist wanted to explain to me in all details the procedure used for tests by sighted panelists in order to show what difficulties there would be with blind workers. But he himself got confused (and I was amused!) when he had to mention that during tests the lights in the lab were dimmed, the testers closed their eyes for better concentration so that their judgments would not be influenced by the appearance of the product and quite often they

were even blindfolded. That's why, in the laboratory world, evaluation tests are called "Blind Tests!" So again: Why shouldn't the blind excel in this kind of work? They definitely would not need blindfolds!

The first company to come to this conclusion was Backus & Johnston, Lima, Peru, the largest brewery in that country. Since 1962 a blind panel has been working there for beer control. Then, in 1964, blind smellers were hired by Glidden Durkee, Jacksonville, Fla., where synthetic flavoring and perfumery chemicals are made. At General Foods Ltd., Montreal, the blind panel began its work in 1971. Now, more firms are considering the idea since it was presented at the May 1971 Convention of the Institute for Food Technologists at Minneapolis.

All three firms mentioned stress the fact that they don't act for sentimental reasons, but because they think that blind testers are definitely better than the comparable sighted panelists and that the keenness of their work is remarkable. They testify that since blind persons have done the evaluations the product quality has improved greatly.

Formerly the greatest obstacle to blind and sighted testing alike was the dreaded fatigue of the sensory organs. Everybody has had the experience, at one time or the other, that after a short period you can no longer differentiate between different smells or tastes: the senses need some rest. General Foods solved this problem by having the blind tasters set, clear, and reset the table after each test, and then wash all used utensils. The whole laboratory suddenly turns into a pantry. By these interruptions, plus two "coffee-breaks," and the lunch hour it became possible to have the panel work for a 5-hour day. Right now they are experimenting with a 7-hour day with reasonable interruptions. It seems to be possible.

Some firms will tell you that their output is not big enough to keep a panel busy for a whole day. But they could hire a small group of blind testers whose main job would be to work as panelists, while they could be used in other capacities in the plant when tests are not going on. This arrangement would be more advantageous for the firms than having a large group of occasional, sighted testers trained who are not always able or willing to interrupt their regular work. Only by specializing in testing is the important taste or smell memory acquired. The firms just don't know in how many different jobs the blind can do good work.

Evaluation tests have to be done slowly to give good results. They should not be conducted in the quick rhythm of the pressure work at a factory. This kind of work is an ideal situation for many blinded war veterans and car accident victims. Unfortunately, even plants with a large production rarely will need more than 5 to 7 specialized panelists.

Not everybody can serve as a tester. The job is not as easy as one would suppose when observing this peaceful group at General Foods. One pretty young woman there, blinded in a car accident when just newly married, told me how lucky she felt because her husband had encouraged her to "go right on and be a person again." She added: "But you won't believe that it took us 6 months of intensive training before we learned to make the right evaluation. It needs a great deal of concentration and sometimes we wondered whether we would ever learn." When I asked whether there was a great turnover within the group, the answer was: "What do you think? We like this work which gives us a great satisfaction because we feel our tests are decisive for the good quality of the instant coffee. The management treats us like experts. But it is true, there was one man

who had to give up voluntarily because he was not able to adapt to the procedure."

Screening of prospective testers is done by the offices for the blind as soon as they get a request for panelists. It would be senseless to train anybody without such a request.

There is no difference in the olfactory senses between men and women, and the same goes for the ages between 20–45 years. It is erroneous to think that only persons with a very acute sensibility of taste and smell can perform well. On the contrary, they should have an average ability, neither too much nor too little.

By some simple tests of the basic tastes (sweet, salty, acid, and bitter) and flavors (flowery and fruity fragrances, peppermint, vinegar, smoked ham, turpentine, etc.) the sensitivity of a candidate can easily be decided.

Most important is the personality of the applicant. Of course, he has to be in good health and has to have an average education. He has to be able to adapt quickly to a new job, to concentrate and memorize, to be punctual and responsible. Working in a group needs certain qualities: one should be neither a bully nor a meek follower. Quite a lot of first-class requirements! You wonder where such prodigies can be found? But in reality a good placement officer knows his clients and will pick the right ones who will be willing and able to learn and adapt.

Another Glidden Durkee employee preparing a sample

The training is done by and in the factory. It is obvious that each product will have to be tested in a slightly different way. After an introductory period of 3 or 4 weeks, the applicant will know whether he is really interested. If he stays in training, some probationary weeks will be followed by work simulation and later, beginner's work. After 6 months, he will be a well-trained tester.

During the training, firms pay an expense allowance of $6 a day. Regular workers get about $3.75 per hour as of May 1972.

If only more jobs as testers were available! Yet there never will be a possibility of many hundreds, only for a few. But it is one of the rare jobs available for the blind where blindness is not a handicap. It was typical that at the convention of the food technologists one producer said to me reproachfully: "Heavens, why didn't you tell me earlier! We just had a whole group of sighted testers trained!" Well, I hope that with enough publicity for the project this won't happen again.

The blind coffee tasters in Montreal have complaints, too. One young man said, with a smile: "Just think what this job is doing to me! How I loved coffee breaks in my former life! Now I avoid them like hell; I wouldn't go even if they paid me for it. And don't you agree that now there is little hope for a happy marriage left for me? Can you imagine a future wife making coffee that will stand up to my criticism?" ■

The Sky's The Limit

Kurt Milam

James F. Wantz was first introduced to the Division of Vocational Rehabilitation at age 15. He expressed a desire to enter the field of meteorology. Because Jim was totally blind, the initial reaction to this was somewhat negative. Nevertheless, his counselor investigated this possibility. A letter from the National Center for Atmospheric Research in Boulder, Colorado revealed that it would be a challenge for them to accept a blind person as a candidate for performing research in the field of meteorology. With this in mind psychological tests were administered. Although the tests could not zero in on a choice of meteorology as a career, they did indicate that he had the ability to pursue a college program.

After high school graduation, Jim attended a rehabilitation center where he received intensive mobility instruction and training in other skills. Without them his outlook for attending college, indeed, would have been slim.

When Jim's case was transferred to me, I perceived that his former counselors had guided him in the right direction. After all, isn't it the counselor's responsibility to see that his client is provided the services to overcome his handicap? And Jim was well on his way when I first met him: he had the mobility skills that unlocked the environment to him; he was furthering his education; and he had the indomitable conviction that he could attain his goals.

James F. Wantz

The counselor has the responsibility of coordinating services and making pertinent decisions that may influence the vocational objective of his client. Every counselor is interested in directing his client toward a vocational area where he may utilize the best of his potential. In addition, the training area must also be compatible with the clients' interests.

In work with the blind, however, vocational choice and client interest are not always possible because only a small percentage of occupations have been performed traditionally by the blind. From the time of the initial interview with a client, the counselor considers the evaluations and tests administered to his client and attempts to advise and recommend various vocational possibilities that blind persons have performed successfully. If an objective arises that has not previously been attempted by a blind person, there is often much opposition and skepticism on the part of the counselor as well as other supervisory people. Many times such criticism is valid. Although if placement opportunities are to be expanded, the counselor must be able to exhibit creativity and be willing to test or establish a hypothesis. Jim Wantz, as an example, shows how one hypothesis was proven to be quite valid.

Upon finishing high school and special instruction at the rehabilitation center, Jim completed the 2-year course at Community College of Baltimore. A critical decision had to be made at that time, regarding a specific vocational objective.

Because Jim's desire for a career in meteorology had never waned, his counselor at that time went ahead to find out all that he could about the possibility of his pursuing this goal. Inquiries revealed that schools having a major in meteorology were at a loss as to the means by which a totally blind person would be able to complete the necessary courses. They did not know of any meteorological instrumenta-

Mr. Milam is a rehabilitation counselor with the Maryland Division of Vocational Rehabilitation.

tion available or adapted for a person with a visual disability. There was also a question on their part regarding the opportunities for placement and what limitations might be imposed due to a visual handicap. Admittedly, these were valid questions because there had never been a totally blind person employed as a meteorologist with the National Weather Bureau.

There was a great deal of concern regarding the sponsorship of this type of curriculum through DVR. Although some people felt that this was an unrealistic goal, the counselor considered it justifiable. He hoped that if his client were successful a new area for employment of the blind would be opened.

Mr. Wantz enrolled at Penn State University which was the only school in the immediate area which offered a bachelor's degree in meteorology. It was at this time that Jim's case was transferred to me. Professors from the Meteorology Department took special interest in Jim. They worked out appropriate lesson plans when needed. Jim successfully completed his undergraduate work after which followed an intense effort to secure employment in meteorology. With the aid of school officials I made several inquiries into job possibilities. Finally we were able to secure employment for Jim with the National Weather Bureau in Kansas City, Missouri.

Jim is presently working as an instructor in meteorology at the Kansas City location. He is responsible for training new employees in the techniques of interpreting and diagnosing various weather conditions.

Because it is necessary for him to keep up to date with current weather conditions, a Braille teletype terminal was purchased by the Maryland DVR. The terminal enables Jim to collect instantaneous weather data which he incorporates into his daily classes. How does Jim receive written messages? Simply. An electric Braille typewriter with a standard keyboard is used by his secretary to type messages, new lesson plans, or any other written material that he might need.

Jim is interested in eventually working as a meteorologist, collecting on-the-spot weather information and mathematically calculating atmospheric changes to predict and analyze their effects. Will he be able to do this? I have no doubts whatever. As every counselor knows, motivation is half the battle. Skill constitutes the other half. And Jim has combined both to bring himself up to an unexplored area in work for blind people. I and his former counselors and the people who cared enough to try a new pursuit were well rewarded in our efforts as guides, advisers, facilitators. Isn't that what it's all about?

I feel that Jim Wantz can serve as a prime example of how stereotypes can be broken. Thinking that a blind person cannot enter a certain field because no blind person has ever entered it is irrational. A prime need of persons working with blind people is more creativity and more objective thinking. Combining creativity on the one hand with client motivation on the other can lead to limitless reaches. Literally, the sky's the limit. ■

Charles A. Boswell (right) Alabama State Revenue Commissioner and a blind golf champion, receives Distinguished Service Award from President Nixon. The presentation is made by two other distinguished disabled people, Governor George Wallace and Mr. Harold Russell.