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AUTHOR Freebairn, Thomas
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ABSTRACT

Television projects for the deaf are described with special focus on activities by the Deafness Research and Training Center to develop a cable television cooperative to produce and distribute programs for the deaf. The chapter on cable television considers principles of cable television, the model for a cable television cooperative, steps in establishing the cooperative, television training and production workshops for deaf people, program production by agencies other than cable television operators, and distribution models for the cooperative. Among conclusions noted is that cable operators are willing to telecast but reluctant to produce programs for the deaf. Discussed are aspects of original television programing derived from a national survey of programing needs of deaf people and activities of the Deafness Research and Training Center. Conclusions and recommendations center on increasing the production, dissemination, and evaluation of television programs appropriate for deaf viewers. Alternative visual supplements including sign language inserts and captions are compared. It is concluded that use of the insert is easier and cheaper for the broadcaster, while captions can be understood by more people. Research is urged in all areas of television for deaf people. Local broadcasters are encouraged to produce original materials for the deaf, modify regular programs, and rent specially modified programs. Local deaf communities are encouraged to ask broadcasters for special programing. Publicity brochures, illustrations, and survey results are appended. (DB)

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Deaf People

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TELEVISION FOR DEAF PEOPLE

Selected Projects

Thomas Frecbairn

Deafness Research & Training Center
School of Education
New York University

1974

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I especially want to thank Ms. Nancy Othmer, who coordinated most of the cable television activities for one year ending in the fall of 1973, and three reliable consultants whose judgement and suggestions were so valuable, Mr. Joel Ziev, Mr. David Othmer and Mr. David Benjamin.

As with other Deafness Center projects, we were able to draw freely upon the full resources of the Deafness Center for assistance. Dr. Alan Stewart and his assistant, Ms. Estelle Hochberg began researching the displays of sign language and captions on television through the Visual Communication Laboratory. Mr. Frank Bowe helped to develop project goals and led one of the television training workshops for deaf people. Mr. Marcus Delk reviewed and improved our audience evaluation questionnaires. Ms. Carol Tipton was always ready to interpret a television program when we needed her, often on very short notice.

We appreciate very much the continued support of the federal and regional offices of Social and Rehabilitation Services which provided the funds that made the projects possible. Special thanks go to Dr. Boyce Williams, Dr. Joe Fenton, Mr. George Engstrom, and Ms. Lita Colligan who approved the original goals for developing television for deaf people at the Deafness Center and who have all provided valuable advice as the projects have developed. We also thank Dr. William M. Usdane for alerting others in the federal government to the Deafness Center's activities and to Dr. Malcolm Norwood who assisted with the project to caption the President's Inauguration program and with securing special programs for cable television operators. Mr. Elmer Smith, Commissioner of SRS Region II, has provided welcome encouragement and perspective from the beginning.

We wish to thank the National Association of Broadcasters for assisting with the development and mailing of a national survey questionnaire to local television broadcasters regarding television for deaf people. We are especially proud of the stations and networks which worked with us on several projects:

1. NBC-TV for the interpreted Watch Your Child series and for a segment on the Today Show regarding inner ear surgery;
2. the Christophers which produce and nationally distribute the interpreted public affairs program, Christopher Close-Up;
3. CBS-TV for the series Search for Tomorrow which includes a deaf actress and a hearing actor who both use sign language;
4. WGBH-TV, Boston, for the captioned version of the President's Inauguration;
5. the Eastern Educational Television Network (EEN) for carrying the captioned version of the President's Inauguration and for encouraging the Public Broadcasting Service to do the same;

6. WNET-TV, New York City, for the 51st State segment, "A Sign of Christmas" and for the encouragement of future projects;
7. WNBC-TV, New York City, for a special program about inner ear surgery on the series, Research Project;
8. WCBS-TV, New York City, for a feature about the Deafness Center's interpreter training program on the Six O'Clock Report;
9. WXYI-TV, Rochester, New York, for audience survey research;
10. WPIX-TV, New York City, for signed editions of their Equal Time series;
11. WOR-TV, New York City, for the program, "The World of the Deaf" on the Straight Talk series.

The National Cable Television Association and their member cable operators have been generous with their time and encouragement. Without their help, the Cable Television Cooperative project would have been impossible. Activities such as the Television Training and Production Workshops relied very heavily upon the voluntary support of local cable systems and leaders in the nearby deaf communities. We are particularly indebted to Mr. Joe Masciotti at Berks Co. Cable TV in Reading, Pennsylvania, for developing special programming; to Mr. Hubert Schlafly of TelePromoTer for engineering advice regarding captions and related problems; and to Ms. Charlotte Schiff Jones of TelePrompTer who encouraged the distribution of special programs for deaf people through the TelePrompTer company.

We appreciate the renewed interest in television which has been generated here in our local area, New York City, by several active members of the deaf community, including Mr. Max Friedman, Ms. Ruth Sturm and Mr. Taras Denis.

Finally, I wish to thank Dr. Jerome D. Schein, Director of the Deafness Research & Training Center, for his welcome support of our television projects for deaf people during the past two years and to thank Ms. Leeme Coutts who with considerable patience prepared the manuscript and assembled the appendix materials for this report.

RECENT TELEVISION ACTIVITIES

DEAFNESS RESEARCH & TRAINING CENTER

I. Cable Television
   A. Cable Television Cooperative
      (Demonstration grant from SRS/HEW)
   B. Production for NYC Public Access Channels
   C. Television Training Workshops for Deaf People
      (Reading, Pennsylvania; Orlando, Florida)

II. Original Programming
   A. WCBS-TV, Six O'Clock Report, January 4, 1974
      (Feature on the interpreter training program at DR&TC)
   B. WNET-TV, 51st State, December 21, 1973
      (Feature on deafness, "A Sign of Christmas")
   C. WOR-TV, Straight Talk, April 18, 1972
      (Panel discussion on deafness, "World of the Deaf")

III. Programs with Sign Language Interpretation
   A. NBC-TV Network, Today Show, March 11, 1974
      (Feature on inner ear surgery with Dr. William House and Dr. Howard House)
   B. NBC-TV Network, Watch Your Child, daily series, 1972-1973
      (Program series for parents about preschool children)
   C. Christopher Close-Up, 220 station syndication, 1973-1974
      (Public affairs interview program)
   D. WNBC-TV, Research Project, March 24, 1974
      (Feature on inner ear surgery with Dr. William House and Dr. Howard House)
   E. WPIX-TV, Equal Time, four programs, May 6, 13, 20, 27, 1972
      (Political interview program with NYC candidates)

IV. Programs with Captions
   A. WGBH-TV, PBS, Captioned Inauguration, January 20, 1972
      (Captioned version of President Nixon's Inauguration)

V. Research
   A. WGBH-TV, PBS, Captioned Inauguration, January 20, 1972
      (Audience evaluation)
   B. WNET-TV, 51st State, December 21, 1973
      (Audience evaluation)
   C. WNBC-TV, Research Project, March 24, 1973
      (Audience evaluation)

D. National Survey of Broadcasters Regarding Television for Deaf People
(Joint project with the National Association of Broadcasters)
E. Signed News vs. Captioned News
(Comparison of WXXI-TV news vs. WGBH-TV news)
F. Sign Language and Finger Spelling on Television
(Laboratory research on viewer responses)

VI. Other Projects
A. Orientation to Deafness Seminar
(Introduction to deafness offered to interested broadcasters)
B. In-House Videotape Production
(Videotape used in selected DR&TC projects)

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I. INTRODUCTION

The projects described in this booklet are all devoted to making television more visual and therefore more accessible to deaf people. This may mean supplementing existing programs with subtitles or with sign language inserts or it may mean producing wholly new programs which include actors who use sign language on camera for themselves. Or, it may mean modifying the actual broadcasting and receiving hardware so that 'closed' or 'optionally-received' captions can be telecast simultaneously with regular programming.

The primary concern of this booklet is with projects administered by the Deafness Research & Training Center. Particular emphasis is on the activities initiated during the recent demonstration grant to the Deafness Center from the Social and Rehabilitation Service division of HEW to develop a Cable Television Cooperative for producing and distributing programs for deaf people. In addition, however, several other major projects from around the country are included for example and perspective.

Television offers an extraordinary communications opportunity for deaf people. Television, unlike other modern electronic mediums such as the radio and the telephone, has the potential for providing information through visual images--a fundamental necessity for communicating effectively with deaf people.

Unfortunately, however, television rarely utilizes its full visual potential. In fact, most current television programming relies so heavily on an audio track that it is extremely difficult, or simply impossible, for deaf people to understand it.

Our challenge therefore is to encourage the fuller use of television's visual component. Major difficulties still exist, however, which require substantial infusions of technical and manpower resources to overcome. An outline of conclusions and recommendations follows each section.

A collection of supplemental materials is included as an appendix.

II. CABLE TELEVISION: PROGRAMMING FOR DEAF PEOPLE

A. INTRODUCTION: A SHORT COURSE ON CABLE TELEVISION

Cable television is a very special television hybrid which delivers television signals to one's home through a direct wire cable rather than through the air from the top of a tall building or transmission tower like broadcast television.

In spite of its relative obscurity up until the past few years, cable television has been evolving gradually, side by side with broadcast television since the late 1940's. Cable now reaches approximately 10 percent of the homes in the country and continues to grow at a rate of about 22 percent per year. Cable television was first known as Community Antenna Television, or by its acronym CATV, when it began in the small mountain valley towns of Pennsylvania and Oregon. Enterprising merchants in these towns, blocked by the surrounding mountains from receiving broadcast television signals, built large antennas on the crests of nearby peaks and extending connecting cables down to any townspeople who were eager to receive the newly available programming and willing to share in the cost of the antennas and the connecting cables. In many of these towns over 75 percent of the homes subscribed to the service.

Cable television later spread to the suburbs, where most people could already receive one or more channels. Nevertheless, there was an eager market for receiving additional channels which cable television soon provided. Finally, cable television reached the major cities where people wanted better reception of the channels which they were already receiving. (The cities pose a special problem to airborne broadcast signals because high buildings tend to block or distort them.)

As the cable systems grew, they began to add more and more channel space--often far more than they could fill with the programs that they were capturing off-the-air from nearby broadcast television stations. So, they began to fill the extra channel space with such features as the time and temperature, or unedited copy from the AP newswire teletype, or even special, rented films. In many areas the cable systems began to produce their own local programs. In New York City, for instance, the two local cable systems have the exclusive television rights to the Knicks basketball games and to the Rangers hockey games, thus "blacking out" all of the New York City broadcasters for these two major professional sports events.

The critical difference in transmission modes between cable television and broadcast television (wire cable vs. air) results in several other important differences between them as well:

- A broadcast television station can radiate only one program at a time whereas a modern cable system can transmit 20 to 30 simultaneous programs per cable to subscribers. And many new systems have two or more cables.[1]
- The economic base for an over-the-air broadcaster is revenues from advertisers whereas the economic base for a cable system is revenues from monthly subscribers.[2]
- The costs of program production are much higher for a broadcaster than for a cable television operator.[3]

As a result of these differences, cable television often may be a more effective vehicle than broadcast television for producing and distributing programming for deaf people. This is especially true when low cost, locally-based production is desired.

However, cable television is seriously limited in several important ways. In spite of its gradual evolution during the past 20 years, cable television is still primarily a community-wide television antenna service for its subscribers, pulling in previously unreceivable distant broadcast stations and sharpening the pictures captured from nearby stations. The production and distribution of original programming is still only of secondary concern to most cable operators, who see only a slim chance of returning their investment on the necessary studio production equipment. There is no national on-line programming network for cable systems and there have been only sporadic activities with regional networking. Instead, the limited amount of film and videotape syndication which does exist is usually accomplished by mail and is usually produced and supplied by outside sources.

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[1]The potential for signal interference inherent in over-the-air broadcasting and the resulting national FCC scheme for placement of broadcast stations, make it extremely unlikely that an individual broadcaster could transmit on more than one television frequency (channel) at a time.

[2]In addition, however, a cable operator may also charge advertiser fees for "additional programs" which are rented or produced especially for cable telecast, though these programs rarely generate more than relatively inconsequential revenues for the operator. The typical installation charges to a cable subscriber is about $10.00 and the typical monthly fee is about $6.00 to $8.00.

[3]Due to the nature of the differing types of signal transmission, broadcast television requires more sophisticated and substantially more expensive recording and transmitting equipment than does cable television.

Even if all cable systems were eager to produce original program materials on their own initiative, syndication of materials between stations would still be extremely difficult. At this time there are very few industry-wide equipment standards for videotape recording and playback. Without such standards, there can be no assurance that a videotape produced by one operator can be replayed by another operator--who probably owns a different brand or format of equipment. This failure to standardize makes convenient, wide distribution of cable-produced programs virtually impossible.

Nevertheless, several independent producers continue to watch the cable television industry as a potential outlet for their programs. Most of them believe that industry-wide equipment standards will be established much as they were in the over-the-air broadcast television industry. In addition, new distribution techniques, such as satellite transmission, may soon be attempted for linking together remote cable systems.

A more important long-range set of concerns seems to be the potentials for regulatory and legislative restrictions which the Federal Communications Commission and Congress may impose upon cable television. In particular, individual cable operators may be required to pay copyright fees to the producers of programs which the cable operators have captured off-the-air from local broadcast television stations.[4] In addition, cable operators may be prohibited some day from originating any of their 'own' programs, which they have rented or actually produced themselves.[5]

In spite of present and potential worries, however, cable television still offers an exciting communications opportunity for deaf people.

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[4]The Copyright Act of 1929 protects certain authors and artists from unauthorized use or performances of their works by other people. In most cases, the artist receives payment for any such performance. The key issue is whether transmission of a program by the cable system constitutes a 'rebroadcast' or distinct 'performance' of that program, or if cable television should be considered simply as an antenna service which simply extends the range of the local broadcasters. In 1968, in Fortnightly Corp. vs. United Artists Inc., the Supreme Court found that transmission by cable television does not necessarily constitute a true 'performance' and therefore that copyright fees may not always be required. However, it is expected that Congress may soon rewrite the Copyright Act to include special provisions for cable television.

[5]A cabinet-level task force chaired by Mr. Clay T. Whitehead, the Director of the Office of Telecommunications Policy, recommended in its January 16, 1974 report that cable television should be regulated as a common carrier. Much like the regulatory policy governing telephone companies, this would probably require that the owner of the transmission facility (the cable system) be barred from producing his own programs and sending them over the system.

The Deafness Center was encouraged by the Social and Rehabilitation Service in the Department of Health, Education and Welfare to apply the Deafness Center's previously developed concept of a television cooperative to cable television. The resulting project is termed simply, the Cable Television Cooperative. As in most cooperatives, all members contribute their goods or services into a central pool of goods and services from which all members may draw what they need. In the case of the cable television cooperative, the contribution has been the production and/or the telecast of videotaped programs. In the project described here, the burden of producing programs rests primarily with outside producers and with deaf people. The cable television operators in the cooperative provide the distribution outlets.

The Distribution Hardware of a Cable Television System

The heart of a cable television system is the combination of antennas and connecting cables which bring the captured broadcast television pictures to individual homes. The incentives for an entrepreneur to build such a system are, first, the free broadcast signals which he is allowed by law to capture "off-the-air" using his large antennas, and second, the large market of people willing to pay for these signals once they are conveniently provided over the cable.

The average cable television operator simultaneously carries approximately five or six, or perhaps seven, of these diverted signals to each of his subscribers, who pay an initial installation fee and a monthly charge of about six dollars for this service. Several very large systems are being constructed which can bring forty or more separate channels into individual homes, far exceeding the number of available broadcast signals which the cable operator can capture off-the-air in any single area. This leaves considerable channel space for non-traditional uses. It is this 'extra' space which makes possible the distribution of additional, non-broadcast programming.

In order to encourage the greatest variety of uses for this extra space and to provide the opportunity for community residents to offer their own programs over cable, the Federal Communications Commission issued guidelines on February 3, 1972 which require all new cable systems to have a minimum signal capacity which is equivalent to 20 broadcast television channels. Further, the systems must include separate, specifically dedicated non-commercial channels for free, uninhibited use by local educational and government agencies and by the general public. For example, the city council might wish to cablecast important hearings (government channel), the local school board may wish to debate an upcoming bond issue (education channel), or the local deaf community may wish to present a sign language version of the news (public access channel). Actual videotape production facilities may also be available--for free or at modest rental charge depending upon the local franchise agreements between the city and the cable operator. In addition to the specific provisions for new systems, the Federal Communications Commission (FCC) strongly encourages all existing cable television systems which have more than 3,500 subscribers to provide

"local origination programming" of some kind; that is, programs which are actually produced in the local area.

In any case, individual cable operators seem very eager to telecast fresh, inexpensive programming over their underutilized systems. Special programming for deaf people has been accepted and telecast without reservation by nearly every cable system operator we have approached. In fact, most operators were disappointed that we could not supply even more programs. Our experience with the local New York City cable systems is typical of the responses from other systems. Without exception we have been able to telecast our programs on or very near the exact day and hour we requested. The systems have also offered technical advice for improving the signal quality of the videotapes and have promptly referred callers interested in our programs to us.

A recurring problem is the difficulty in supplying cable operators with programs which can be played. As mentioned above, there is no national programming network for cable systems. And because of equipment and videotape format incompatibilities, even rudimentary barter arrangements are quite difficult to make. See Table 1 below (Local Origination Directory, 1973).

TABLE 1

COMMONLY USED VIDEOTAPE FORMATS*

	Most Commonly Used Formats	Other Formats
1/2" EIA-J:	Sony	Diamond Power 1"
	Panasonic	Concord 1/2"
	Shibaden	JVC 1"
	Diamond Power	Ampex 1/2"
	JVC	Ampex 2" helical
		Akai 1/4"
3/4" Cassette:	Sony	Concord 1"
	Wollensak	JVC 1/2" (non EIA-j)
	JVC	Westinghouse 1"
	Panasonic	Sony 2" helical
IVC 1":	IVC	
	Bell & Howell	
Ampex 1":	Ampex	
Sony 1":	Sony	
	Panasonic	
	RCA	
	GE	

*The videotape equipment models listed above are grouped by format. The most commonly used format is listed first and the least commonly used format is listed last. Within each group, manufacturers are similarly listed, from most to least commonly used.

A few of the larger national cable companies (Multiple System Operators or MSO's) are now installing compatible equipment in several of their many systems so that syndication is possible at least within their own companies. Another promising trend is the voluntary state-wide agreements of cable television associations to standardize on compatible playback equipment. Unfortunately, however, not all states have chosen the same format. The California Association for instance, has decided to standardize on the one-inch format IVC recorder/player, whereas the Pennsylvania Association prefers the 3/4-inch format Sony videocassette players.

Production of Programs for Cable Television

The production of programs is a much more difficult commitment to secure from cable operators than the distribution of programs because production requires substantially greater contributions of both time and money. And regardless of a cable operator's desire to help, he simply may not have the necessary camera equipment or studio facilities for production.

The availability of production facilities varies closely with the size of a cable system. Seventy-nine percent (79%) of the systems in the U.S. with 10,000 or more subscribers (150 systems) have facilities for production and/or transmission of local programming. Fifty-one percent (51%) of the systems with 3,500-10,000 subscribers (428 systems) have such facilities. And only ten percent (10%) of the systems with less than 3,500 subscribers (2400 systems) have such facilities. (See Figs. 1, 2, and 3.)

Whatever the size of his system, however, the cable operator has a significant hardware advantage over the broadcaster because producing programs for cable is so much cheaper. The broadcaster must produce a program with a technical quality sufficient enough that it can be radiated through the air from his broadcasting tower for up to 40-50 miles without significant deterioration in picture quality. This, of course, requires sophisticated, usually very expensive production and broadcast equipment. The cable operator, on the other hand, telecasts his signal for only 5-10 miles or less and uses coaxial cable wire to carry his signal which is fully shielded from outside interference. The cable operator can therefore use much simpler and cheaper equipment to produce and to transmit his programs.

Cable television production at its most modest extreme can involve deaf people themselves in all stages of program planning and development, so that deaf people can literally make their own television shows. A new portable videotape recorder, the Sony Portapak which costs only about $1,600, permits the recording and playback of videotapes whenever and wherever needed. The half-inch format tapes cost about $13 for thirty minutes and can be erased and reused as often as needed.

The Portapak can be taken into the community, to peoples' homes, to meetings, and to work so that stories can be videotaped on location. With a supportive structure of regular meetings--for training, planning and review--the process of making programs becomes a shared activity, where participants gain experience, skills, and confidence.

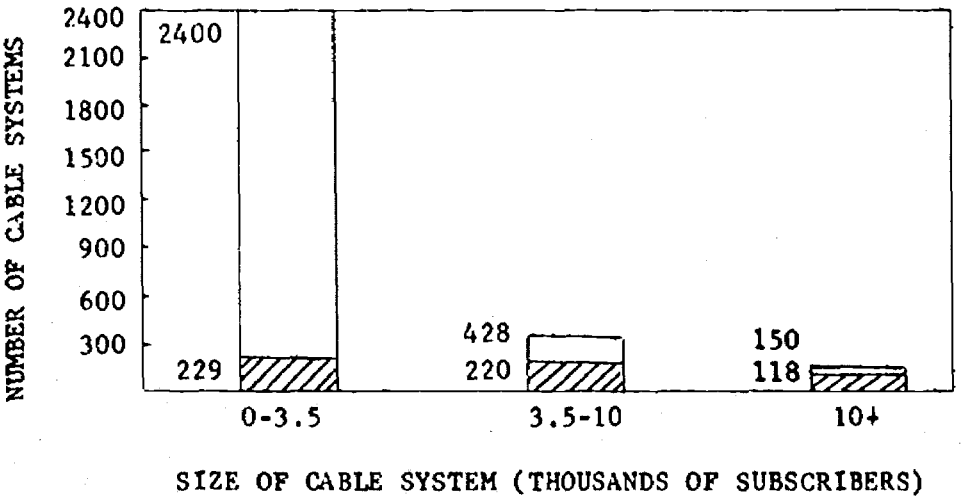

Fig. 1. Total cable systems with and without local origination. (The darkened part of the graph indicates the number of cable systems which offer local origination.)

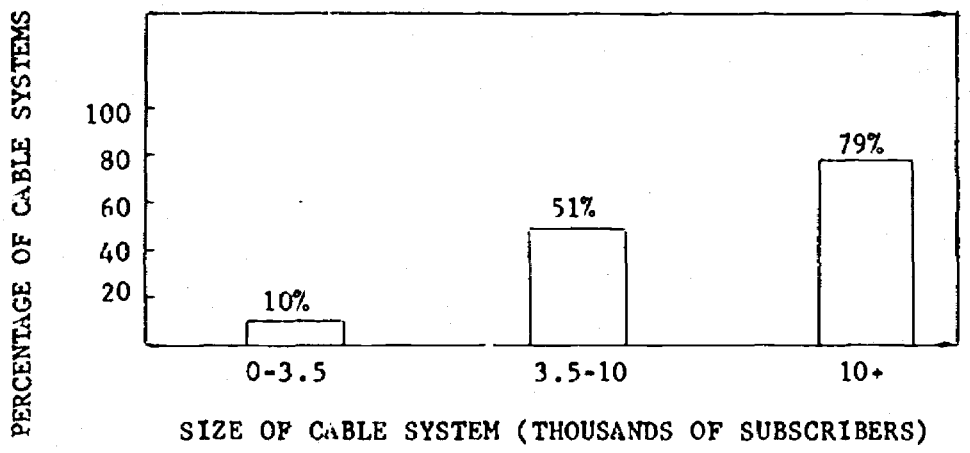

Fig. 2. Percentage of cable systems with local origination.

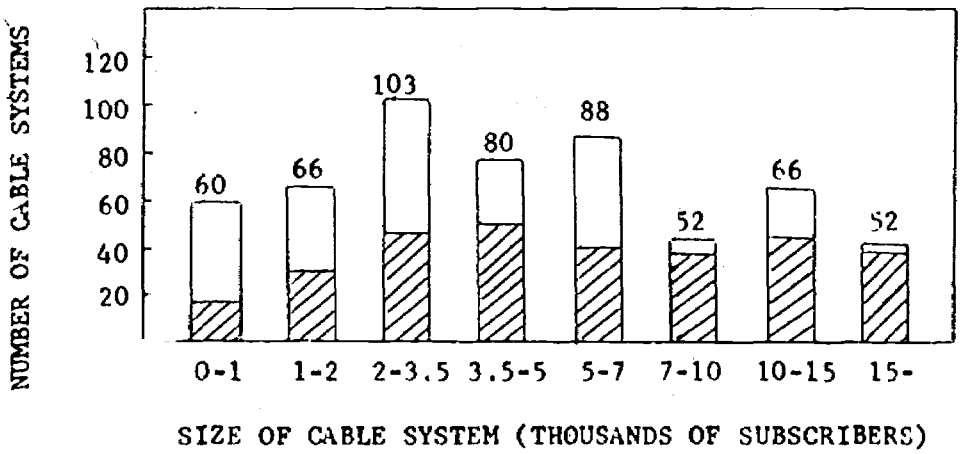

Fig. 3. Cable systems with local origination. (The darkened part of the graph indicates the number of systems which offer more than 15 hours of programming per week.)

The Portapak, of course, is not the only type of videotape equipment available to the cable television operator. In fact, there is such a variety of equipment and videotape formats that the broad selection is actually a considerable problem. Again, without industry-wide equipment standards, a cable operator can never be sure that the programs he produces can ever be shown on other cable systems. This makes national or even regional syndication of videotapes presently uneconomical.

Economic and Regulatory Issues

The cable television industry is no longer the darling of Wall Street. As a result of recent major financial shocks to several of the larger cable companies (especially to TelePrompTer, the largest in the industry) and the uncertainties of legislative and regulatory pressures, the cable television industry's future is no longer viewed with hopes of the glamorous short-term investments as it was even a year ago.

In spite of the recent trend by the FCC to support cable television as a legitimate communications competitor to broadcast television, cable operators cannot overlook the substantial and continuing lobbying effort by broadcasters against cable in general and against "Pay TV"[6] in particular. The question of copyright fees, which broadcasters feel cable operators should pay for the use of captured signals, is already in the courts and up for discussion in Congress. (See footnote 4, page 4.) Finally, the special cabinet-level task force which has been formulating national communications policy, recommended that cable television should be regulated as a common carrier; that is, cable television should be regarded as a neutral communications carrier, which provides service at fixed rates and on a first-come-first-served basis to anyone who requests transmission space. (See footnote 5, page 4.)

B. THE MODEL FOR A CABLE TELEVISION COOPERATIVE

During the past year, the Deafness Research & Training Center has worked to demonstrate the concept of a Cable Television Cooperative for the production and distribution of television programs especially for deaf people. Initial funding was supplied by the Social and Rehabilitation Service Office (SRS) in the Department of Health, Education and Welfare. The project has included the production of wholly original programs, the post-production modification of existing programs with captions or sign language, and the distribution of these materials to interested cable operators.

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[6]Pay TV is a special form of television in which the customer literally pays for the programming on a program by program basis. Pay TV programming can be provided via a closed circuit network (usually in a hotel or motel) or by several of the cable television systems in the country--and theoretically could also be provided using broadcast television equipment. Standard cable television programming services are currently provided on a monthly basis rather than program by program.

The basic model for the Cooperative is, in theory, a very simple one. Each member agrees in advance to submit completed programs into a central pool of programs, from which each member can draw whenever desired. For example, if there were 25 agencies in the Cooperative, each producing just one program, then each member could share in the use of the entire collection of 25 programs--for an exchange rate of 25 programs for one program. The success of the Cooperative depends upon the initiative and mutual support of the individual member agencies.

In practice, however, the model is extremely difficult to apply to the cable television industry. As a result, additional support has been requested from non-cable producers.

(a) Distribution

Distribution of materials has been difficult because there is no national programming network for cable television systems and because of incompatibilities of equipment and videotape formats between systems.

However, major attempts are now being made within the industry for syndication within a few of the largest national Multiple System Operators and among regional associations, particularly in the Southeast and California.

(b) Production

Production commitments will continue to be very difficult to secure until the Cooperative has established the central pool of materials. And of course without commitments for new production, it is very difficult to build up the central pool.

(c) Economic Self-Interest

The cable television operator's basic economic goal is to increase his subscribership without a disproportionate increase in his costs. If telecasting programs for deaf people will increase his revenues, then he will definitely be interested. Otherwise, without reasonable assurances that such efforts will be cost-effective for him, he probably will not begin except perhaps for community relations purposes.

The burden for producing programs therefore must be shifted to outside producers, who wish a vehicle for distributing their programs, and to deaf people themselves, who after all should have the greatest interest in the project. With this in mind we have solicited the support of several outside production agencies and have established two television workshops for deaf people so that they can begin to make their own programs.

C. ESTABLISHING THE CABLE TELEVISION COOPERATIVE

A primary concern during the project has been to supplement the original SRS grant by securing substantial commitments of time and support from cable operators and outside agencies.

The planning and initiation of a Cable Television Cooperative began in late summer 1972 with cable operators and other industry representatives.

Contacts were also renewed with deaf clubs and associations around the country through the National Association of the Deaf, which has helped throughout the project.

Five target states (California, Florida, New York, Ohio and Pennsylvania) were selected for special attention on the basis of high cable television penetration and numerous active organizations of the deaf.

Packets of information about the proposed Cooperative and about deafness were mailed to 215 cable systems, including the 100 largest cable systems in the country and the 115 systems in the five target states which had more than 3,500 subscribers. Over 125 systems responded and nearly all indicated a desire to participate.

The twenty largest MSO's were also contacted. The response was overwhelmingly favorable. Over half of the MSO's contacted suggested immediate meetings to discuss a firm schedule for beginning distribution. The primary problem, of course, was to locate or produce suitable programs.

Local deaf clubs, served by the cable systems which we had previously contacted, also received information about the potentials of cable television and were urged to contact their local cable system. We had hoped that meetings between the local deaf clubs and the cable operators would occur spontaneously once each group knew about the other. It soon became clear, however, that the encouragement from printed information was simply not enough. Personal contacts by Deafness Research & Training Center staff were needed to overcome the barriers.

D. TELEVISION TRAINING AND PRODUCTION WORKSHOPS FOR DEAF PEOPLE

In order to encourage the production of television programs by deaf people themselves, we have established two ongoing television training and production workshops for deaf people and are planning three more. The first, in Reading, Pennsylvania, has stimulated similar activities in several nearby cities and is a good example of how successive groups will join the activity once it is successfully underway. As a result of the Reading workshop, deaf leaders in Pennsylvania requested an orientation meeting which was attended by about 35 people from southeast Pennsylvania and cable operators from three nearby systems. The full cooperation of the cable systems was secured and it is expected that ongoing workshops can develop throughout the area when technical facilities become available. Deaf people from Lancaster, Shamokin, Lebanon, Harrisburg and York are now involved and plan to circulate videotapes between cities. The Reading Deaf Club is subscribing to cable as part of the project. The Berks County Association for the Hearing Impaired, Inc. plans to buy a Portapak videotape recorder and has approached several agencies for special funding. In the interim, Deafness Research & Training Center has offered to loan a Portapak videotape recorder.

Over 10 programs were made last summer by the Reading workshop despite unavoidable start-up difficulties. Tapes were originally cablecast three times a week over the Reading system, but have now settled to a more comfortable

rate of one tape per week. Tapes have included an interview with a deaf person at work, a panel on deaf people and the law, and coverage of local and national meetings of organizations of deaf people. Such tapes provide role models for deaf people and their relatives, increase knowledge about problems and issues important to deaf people, and foster broader community perspectives.

A second workshop has been started in Orlando, Florida and planning has begun for workshops in Illinois, in New York City, and in California.

Using current workshop experience, Deafness Research & Training Center has prepared a packet describing how local groups can enlist the cooperation of local cable operators and start a workshop. The packet has already been tested in Pennsylvania and Florida and will be revised and printed for wider distribution in May 1974.

Contingent upon adequate funding, the Deafness Center will actively encourage the establishment of additional television production workshops.

Each workshop will be different since it will reflect the particular characteristics of the local deaf community and the local cable system. However, many similarities will still exist. Preliminary meetings will be held with the cable company staff to secure their cooperation; and with people in the deaf community to gauge their interests and concerns and to determine when and how a workshop can best be initiated. Regular meetings between the cable company and the deaf community will follow, for training, planning, producing, and reviewing. With an emergency reserve of programs completed, cablecasting schedules will be fixed. Publicity--through newpapers, newsletters, postcards, posters, and word of mouth--will begin. And the completed programs will be telecast.

Staff from the Deafness Research & Training Center will provide support to the workshops for the first several months and then will monitor them as they become more independent. When possible, part-time coordinators will be hired and paid by the local communities. Two basic methods of encouragement will be attempted: in one, a member of the Deafness Center staff will be physically present at all initial workshop meetings; in the other, all instructional materials will be delivered by mail and by telephone or teletypewriter.

Independent local funding will be solicited during the initial phase of the workshops based upon a formulation of needs prepared by the local workshop itself. It is important that each local workshop be self-sustaining. Experience and skills developed within the workshop can later be transferred to other media, such as local commercial television broadcasters and Public Broadcasting Service (PBS) television stations.

E. PRODUCTION BY AGENCIES OTHER THAN CABLE TELEVISION OPERATORS

Several additional production models are being encouraged in order to supply the Cooperative with program materials. In most cases, these production sources already produce a regular supply of materials, but have never distributed them over cable television.

A continuing task for the Deafness Center will be to inform these producers of the availability of time on local cable television systems. The response from these outside producers and suppliers has been reassuring so far and significant progress has been made with all four production models.

We expect that these additional production sources may supply the bulk of the programming for the Cooperative because of the economic and engineering limitations of the individual cable operators.

(a) Schools for Deaf Students

Coverage of the 1973 National Deaf Basketball Tournament was handled by the Lexington School for the Deaf, which videotaped the regional finals in New York City and by the Texas School for the Deaf, which videotaped the national championships in Dallas, Texas. This event was ignored by all over-the-air broadcasters.

(b) Public Broadcasting Service (PBS) Stations

Station WEDH, Hartford, supplied a monthly 30-minute program, The Deaf Citizen. Station WGBH, Boston, plans to release the captioned version of the French Chef series and other captioned programs to the Public Broadcasting Service Library which in turn may be released to cable systems.

(c) Film Libraries

Mr. Malcolm Norwood, Chief, Media Services and Captioned Films, co-signed a letter with the Deafness Center requesting film distributors listed in the Captioned Films Educational Catalogue to review their contracts for possible release of their films to the Cable Cooperative. (See Appendix B20-21.) However, no films have yet been released. We are also contacting other film libraries.

(d) Independent Producers

The Deafness Center assisted the Christophers, a non-profit educational organization, in modifying the format of their weekly public affairs television series, Christopher Close-Up,[7] to include a sign language interpreter. Several other agencies, including the Deafness Center itself, have agreed to supply materials occasionally.

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[7]We were first skeptical about the possible quality and tone of a series of "religious" programs, and were concerned that the programs might not appeal to a broad spectrum of deaf people, but we were very pleasantly surprised by the thorough professionalism of the Christophers. The program (Continued on next page.)

F. DISTRIBUTION MODELS FOR THE CABLE TELEVISION COOPERATIVE

Effective syndication of programs among cable systems has become feasible only during the past few months of the project and then among only a relatively few systems. Nevertheless, we are exploring, beginning or continuing the following distribution models:

(a) National Multiple System Operators
(b) State and regional cable television associations
(c) Clubs for deaf people
(d) Schools for deaf students

The Deafness Center is acting as a clearinghouse for information about programming for deaf people. Actual exchanges of materials are handled on a voluntary basis between the producers and the cable operators.

G. CONCLUSIONS

Our three basic conclusions are that:

(1) cable television operators are very eager to telecast special programs for deaf viewers
(2) cable television operators are reluctant to produce special programs for deaf viewers
(3) the Television Training and Production Workshops for Deaf People have produced a variety of successful local programs.

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[7]has a lively interview format and includes well-known people discussing their jobs or favorite projects--not religion. Recent guests have included actress Nanette Fabray, newscaster Harry Reasoner, historian Harrison Salisbury, and the founder of the Children's Television Workshop, Joan Ganz Cooney. The program is currently syndicated to over 220 broadcasters for a distribution larger than any of the three major commercial television networks.

H. RECOMMENDATIONS

Based upon the Deafness Center's 18 month experience with the planning and encouragement of the Cable Television Cooperative and upon the preceding conclusions, we recommend that the Cooperative be continued for one more year, but with the following changes in emphasis.

First, the Cooperative should be considered primarily as a distribution facility rather than as both a distribution and a production facility.

Second, additional Television Workshops for Deaf People should be established for local training and production.

Third, the administrative functions should be transferred directly to members of the Cooperative, to outside producers and to the deaf viewing audience.

Fourth, we suggest that a central library for the film and television materials which are telecast by the Cooperative be established within one of several similar, existing facilities. We believe that it should be administered jointly with a national consumer organization of deaf people such as the National Association of the Deaf.

These four basic recommendations can be restated as the following series of specific suggestions:

For Government Support

Production

1. Additional Television Training and Production Workshops for deaf people should be initiated and supported.
2. Additional outside producers should be enlisted for the Cooperative.
3. A booklet describing program ideas and production techniques should be prepared for cable television operators as well as for outside producers.

Distribution

1. The membership of the Cooperative should be expanded to include additional groups of cable operators who are already syndicating programming of some kind.
2. A brief film sampler of programs should be prepared which can be shown to prospective Cooperative members.

Administration

1. A central library facility should be established for programs telecast by members of the Cooperative.
2. Cable television releases should be secured for materials currently unavailable for distribution over cable.
3. Publicity about the Cooperative should continue to be concentrated in the original five target states (Pennsylvania, California, Ohio, New York and Florida) to ensure maximum impact.
4. Changes in FCC regulations regarding local origination should be carefully monitored.

For Deaf Community Support

1. Television training and production workshops for deaf people should be encouraged at the community level.

2. Local deaf clubs, schools for the deaf, and state organizations should contact cable television operators with specific program suggestions.

3. Local clubs for the deaf should secure local funding support (grants and advertising contributions) for local training and production workshops and for local programming.

4. Efforts should be made to exchange completed programs and program ideas with nearby deaf communities and cable systems.

Additional Research Interests

1. A long-term test site should be developed which has both a major city-wide cable television system and a large deaf community so that extensive program evaluation studies can be conducted.

2. Potential deaf viewing audiences should be carefully surveyed to learn their program preferences.

3. Alternative methods of adding visual supplements (especially captions and sign language inserts) should be compared for intelligibility and audience preference.

III. ORIGINAL PROGRAMMING FOR BROADCAST TELEVISION

A. NATIONAL SURVEY OF TELEVISION PROGRAMMING FOR DEAF PEOPLE

Interest in broadcasting original television programs for deaf audiences has increased remarkably during the past few years. However, there has been little success in coordinating or even in documenting these many efforts. As a result, there is very little information available to local broadcasters about where to rent suitable programming or, alternatively, about how to produce their own materials.

The Deafness Center is therefore working closely with the National Association of Broadcasters on a national survey of local television stations in order to document all current television programming activities for deaf people in the country. These programs range from one-time public-service specials about deaf people in the local community to daily news summaries and extended, multiple-program series. They also include a variety of approaches, some including visual supplements (with captions or a sign language interpreter) while others include deaf people on-camera using sign language for themselves. (The programs with visual supplements will be discussed in section IV.) The final report of the survey will include a catalogue of materials available for television broadcast rental as well as production advice for broadcasters interested in creating their own original programs.

We expect that the survey report will encourage local broadcasters to share their programs and their advice with other broadcasters. Several programs or program series may be going virtually unnoticed by broadcasters interested in obtaining them and by deaf people who would wish to view them. For instance, a 65-episode weekly series about and for deaf people is broadcast early Sunday mornings by WJZ-TV, Baltimore, but has received so little publicity that even many local deaf people are unaware of it.

Local Production

An outstanding example of original, local programming is the daily news summary program, Newsign-4, which is hosted by two deaf newscasters at KRON-TV, San Francisco. The program has been very well received by local audiences and has gained national recognition through two Emmy awards for outstanding community service.

The five-minute length of the Newsign-4 program is typical of other local news summaries for deaf people elsewhere. The format, however, is

considerably different. In most other programs, the visual supplements for the deaf audience are introduced by a sign language interpreter who usually appears in a small insert on the screen. In the Newign-4 program, however, the two deaf newscasters work closely with the news department to write and produce their own show and actually appear on-screen as the newscasters themselves.

Program Rental

Searching for rental materials can often be even more frustrating for a broadcaster than producing his own programs. The few well-made programs which he might be able to locate are probably well-known already within the deaf community. Even mediocre programs are difficult to find.

Two of the most important programming activities have been the filmed drama of the National Theatre of the Deaf and the special television program, "An Evening on Deafness", originally co-sponsored by the Maryland Center for Public Broadcasting with Western Maryland College. (The former is available through the National Theatre of the Deaf and through the Public Broadcasting Service. The latter is also available through the Public Broadcasting Service.) Still another recent success--and a substantially larger program resource for stations wishing to rent materials--has been the British Broadcasting Corporation (BBC) production, Vision On, a weekly entertainment and educational series produced for hearing impaired children. Top winner at the 1973 Munich International Children's Television Festival, Vision On uses mime and sign language in an imaginative mix with animation and other visual techniques. The series is distributed by Time-Life Films and is broadcast in nearly all of the top 50 television markets in the United States.

B. DEAFNESS RESEARCH & TRAINING CENTER SERVICES AND ACTIVITIES

In addition to an active campaign to encourage the production of new programs for deaf people, the Deafness Center provides comprehensive consultancy services to those broadcasters, networks, or independent producers who actually begin production. This arrangement permits the Deafness Center to provide consultancy services without the necessity of also providing extensive production facilities. The broadcasters and producers, on the other hand, have the facilities, but require the outside professional advice which the Center can provide.

Typical services include:

1. Identifying program needs
   (i.e., news vs. sports, etc.)
2. Estimating potential audience sizes
   (The Deafness Center also manages the National Census of the Deaf Population.)
3. Assisting with actual production
   (captions vs. sign language, lighting, framing, editing, etc.)
4. Assessing audience reaction to the programs
   (sampling and surveying audiences)

WNET-TV, NEW YORK, The 51st State, "A Sign of Christmas", December 21, 1973

Deafness Research & Training Center assisted WNET-TV with the planning, production and follow-up of a special 15-minute feature on deaf people and Christmas for the WNET-TV news feature program, the 51st State.

The scheduling of the segment was not determined until less than a week prior to its broadcast, leaving us very little time to publicize the event and to prepare for surveying audience reactions. Nevertheless, we were able to contact by mail a selection of approximately 250 deaf people (and their families) whose addresses were available to us, alerting them to the broadcast and requesting their assistance in a program evaluation survey. (The names were drawn from a list of people in New York and New Jersey who own teletype-writers and therefore may represent a more affluent and more socially and professionally active group than would a truly random sample of deaf people.

Sixty-two percent of those responding actually watched "A Sign of Christmas". Among those who replied that they did not watch the program most (75%) indicated that they did not learn about the program until after it was broadcast or that they had already made other plans for the evening. (The program was scheduled for the Friday evening before Christmas.)

Unfortunately, because of severe time limitations, the producer was not able to fully caption the program, nor was he willing to include a sign language insert for the benefit of deaf people. As a result, deaf people were able to understand only isolated segments of the feature.

Nevertheless, over 75% of the respondents "enjoyed" the program and an even larger number responded that they would watch future WNET-TV programs if they were suitably modified.

We also asked about their preferences for the mode of future visual supplements.

62 respondents (53%) preferred "c. both captioned and signed".
51 respondents (44%) preferred "a. captioned".
3 respondents (3%) preferred "b. signed".

We should remember, however, that all respondents owned TTY's and presumably were comfortable with written information. This does not reflect the preferences of a true cross-section of the deaf population.

We hope that "A Sign of Christmas" will be followed by other joint projects between WNET-TV and the Deafness Center.

(See Appendix C24-27, for a more extensive report of the survey.)

CBS Television Network, Search for Tomorrow, nationally syndicated daily series

The Deafness Center provided intensive sign language instruction for Mr. Robert Phelps, an actor who plays the role of a young doctor fluent in sign language on the daytime series Search for Tomorrow. The plot requires that Mr. Phelps be able to communicate effectively with another cast member who actually is deaf, Ms. Linda Bove, from the National Theatre of the Deaf. As a result of the instruction and his continuing practice, Mr. Phelps's use of signs has become remarkably convincing.

WCBS-TV, New York City, Six O'Clock Report, "Interpreter Training", Jan. 4, 1974

WCBS-TV included a feature about the Deafness Center's interpreter training program on the New York City Six O'Clock Report and then offered it two days later for syndication to all local CBS affiliates over the national CBS network interconnection.

In spite of an extremely tight schedule, which permitted only one afternoon for planning and then one afternoon for filming, we were able to produce a coherent segment about the interpreter training program. We were pleased that the WCBS-TV reporter, Mr. Arnold Diaz, was also able to include a broad introduction to the problems of deafness in his introduction.

An oval insert which included a sign language interpreter (Ms. Carol Tipton, a member of the Deafness Center staff) was added at the last minute for the benefit of any deaf people in the audience. This addition was an extremely important precedent both locally and nationally. (See section IV, Visual Supplements, Sign Language Inserts.)

WETA-TV, Washington, D.C., The Rock Gospel, December, 1973

The Deafness Center's role in this project was mainly that of providing initial encouragement to the station and providing an on-set consultancy reserve. Staff and performers from Gallaudet College for the Deaf, which is also in Washington, D.C., provided the bulk of the outside consultancy support.

Our early suggestions and encouragement to WETA-TV coincided with the station's reevaluation of programming for deaf audiences. Three attempts were subsequently made to stage and videotape a performance at Gallaudet. The first program was stalled because of the reluctance of the playwright's agent to permit television releases for the play. The second project was cancelled because of scheduling difficulties. The third--and successful attempt--was the Rock Gospel production.

The Deafness Center sponsored a preliminary videotaping of the Rock Gospel production using inexpensive 1-inch format videotape when the cast performed on tour in Hartford, Connecticut. A copy of the tape was supplied to WETA for review in preparation for the station's final broadcast recording the following month. The Deafness Center also provided consultancy support at the WETA-TV studio during the actual broadcast recording.

Other New York City Programs

During the past two years the Deafness Center has worked with local New York City television stations to produce or to modify several programs about or for deaf people. These programs have all been described in earlier Deafness Center reports.

Orientation to Deafness

An important aspect of the general promotion of television for deaf people has been the use of the Deafness Center's "Orientation to Deafness" seminars with broadcasters and producers. The Deafness Center regularly conducts these seminars for a broad range of government agencies and other social service organizations as an intensive, preliminary introduction to deafness. Modifying the seminars so that they would be more appropriate to an audience of television broadcasters was a logical extension of the orientation project. For example, the "Workshop on Television and Deafness" sponsored by the Eastern Educational Television Network (EEN) on June 21-22, 1973, was planned and offered jointly with the Deafness Research & Training Center. The Workshop was attended by all twenty-six member stations of the EEN, including WGBH, Boston; WETA, Washington; and WNET, New York. (See attached letter from Mr. Steve Rabin, program director of EEN, and additional workshop materials.)

Inhouse, 1/2-Inch Format Videotape Projects

The Deafness Center has also been involved in several 'inhouse' television activities using 1/2-inch videotape. It is hoped that some of the materials can be restaged for 16 mm. film recording and eventual television release. The most extensive production so far has been the Inservice Training Project for Residential School Counselors. Videotape simulations of common problems facing school counselors have been videotaped to supplement a previously completed lesson book. The videotapes are being used at regional conferences to introduce the project to additional school staff and to encourage discussion by conference participants.

The Communication Services Unit of the Deafness Center has used videotape as a means for recording and presenting standardized lessons in sign language classes and to record and to improve student performance. These activities may be expanded during the next few months.

C. CONCLUSIONS

Relatively few programs which can be easily understood by deaf viewers are available to local broadcasters.

Those programs which do exist vary considerably in quality and are often very difficult to locate.

D. RECOMMENDATIONS

We recommend that efforts be continued in three major areas:

1. Collection and Dissemination of Information
2. Production of Television Programs
3. Evaluation of Television Programs

These three recommendations can be restated as follows for government and community action:

Government

1. The joint, national survey of local television broadcasters conducted by the National Association of Broadcasters and the Deafness Research & Training Center regarding television programming for deaf people should be supported and expanded.

2. A national survey of potential deaf viewers regarding preferences for television programming (content, type of visual supplement, etc.) should be developed and supported.

3. Direct support for production of original television programming for deaf people should be considered seriously, especially for programs which could be distributed through the Public Broadcasting Service television network.

4. Appropriate agencies in federal, state, and local governments should be alerted to the potentials of television for reaching and serving deaf clients.

5. Support for adequate evaluation of programs produced especially for deaf people is very important to the continued development of such programming. Evaluations of both government and privately funded programs should be conducted.

6. A handbook for making special programs for deaf people should be written and distributed to interested television broadcasters. The handbook should include descriptions of deafness and of the national deaf population; program content preferences of potential deaf viewers; alternative formats for visual supplementation; special production techniques and suggestions.

Deaf Community

1. Deaf community leaders should contact local television broadcasters and encourage them to provide special programming for deaf people.

2. Deaf community leaders should encourage written and personal follow-up from as many deaf people as possible in their community after each special television program has been broadcast.

IV. VISUAL SUPPLEMENTS: SIGN LANGUAGE AND CAPTIONS

A. INTRODUCTION

The two primary techniques for supplementing television programs are:

- the addition of a sign language interpreter
- the addition of full captions (subtitles).

The use of a sign language insert is easier, cheaper and quicker for local broadcasters than the use of captions. In addition, the appearance of sign language on television can be an important source of pride for the deaf community.

On the other hand, sign language can be understood by very few people outside the deaf community. This leaves a substantial audience[8] of people who are hearing impaired, but not deaf, who would not benefit from the sign language supplements. For these people, captioning is a logical solution.

A third technique, which is not currently available to local broadcasters, is the use of "closed captions". The closed captioning technique relies upon special equipment for broadcasting captions simultaneiously with regular programming but in such a way that the captions can be received only by special receiver/decoders in the homes of deaf people. This technique is still in an early experimental stage and has only temporary FCC authorization to continue. Similar results can be obtained over cable television.

B. SIGN LANGUAGE INSERTS

The direct benefit of using sign language inserts is, of course, the substantial increase in useful visual information for deaf people. There may be important intangible benefits as well. The appearance of sign language being freely used on television can provide a profound boost to a deaf person's self-image and self-confidence. A forthright presentation of sign language also introduces the hearing audience to deafness in a positive, non-threatening manner.

A major disadvantage to the sign language supplements, however, is that they reach a much smaller audience than do captions. The use and understanding of sign language is primarily limited to people who became deaf or severely hearing impaired early in life, whereas captions can be useful to anyone who can read.

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[8]According to the National Census of the Deaf Population which is administered by the Deafness Center, there are 13.4 million hearing impaired people, including 1.8 million people who are deaf.

Producing the Sign Language Insert

Producers who supplement television materials for deaf audiences commonly prefer to use sign language supplements rather than captions. This is especially true for full-length, half-hour or hour-long television programs, because sign language inserts are so much easier, cheaper and quicker to produce.

- The primary production advantage of a sign language supplement is that it can be produced 'live', that is, simultaneously with a regular program. This simultaneous recording of both the action and the supplementary sign language may represent considerable savings in salary, equipment and videotape costs over captioning. (Captioning cannot be accomplished 'live'. In fact, a single program may take up to several full days to caption.)

- Secondly, nearly all local broadcasters already own the equipment necessary to produce sign language supplements whereas very few broadcasters are equipped to produce successful captions except with great difficulty.

Making a sign language insert in a professional studio is a rather straightforward procedure. While the main cameras are directed toward the primary action, an additional camera is directed toward the sign language interpreter. The two signals are then electronically mixed so that the interpreter is superimposed onto the screen over the action. The superimposed insert will probably appear as an oval or as a corner of the screen which has been "cut out" of the picture. The sign language interpreter appears in this "cut out" space. Alternatively, a "chroma-key" insert may be used which permits the superimposition of the interpreter directly over the action without an intervening background. This technique is commonly used by newscasters and sportscasters who appear "in front of" the action they are describing. The chroma-key insert is often a much more attractive format, but requires a considerably more difficult mixing of signals from the two cameras.

Deafness Research & Training Center Production Assistance

The Christophers, Christopher Close-Up, nationally syndicated weekly series

A series of over 30 Christopher Close-Up programs have been produced which include a sign language insert with Ms. Carol Tipton, the Deafness Center's full-time interpreter and sign language instructor. The series is a top-quality interview program with such featured guests as Nanette Fabray (talking about deafness), Joan Ganz Cooney (talking about children's television), and Harry Reasoner (talking about news coverage). The series is produced by the Christophers, a nonprofit, educational and religious organization. It is syndicated to over 220 television stations, for a larger distribution than any major television network. The Deafness Center helped with all stages in developing the sign language format, from the initial studio testing to preliminary audience reaction to promotion and follow-up for the final programs.

The Christophers are now eager to attempt full captioning on the series if adequate funding can be secured.

NBC Television Network, Watch Your Child, daily series

The Deafness Center worked closely with the NBC Television Network last year to develop and to produce the nationally syndicated program series, Watch Your Child. The programs, which appeared each weekday morning, included an oval insert for sign language interpretation.

Originally, NBC hired a deaf girl for the job of the interpreter rather than a qualified, hearing professional. She found it impossible to interpret the program in sign language, because she could not hear the words spoken by the regular cast and because the cast was too far away for lipreading. As soon as the problem was realized, the Deafness Center was contacted and urged to help. Ms. Carol Tipton, the Deafness Center's full-time interpreter and sign language instructor agreed to tutor the on-camera 'interpreter' so that the girl's sign language could be improved and agreed to coach her during the actual videotaping of each program. A rather complicated arrangement was planned so that the deaf girl could be cued word by word. Off-camera, Ms. Tipton interpreted the program for the deaf girl, who then mimed the signs for the camera. The result was a doubly delayed translation of what the cast was saying, but it was still convincing enough that the insert was retained for the duration of the series. This series became the first nationwide use of a manual interpreter on a continuing basis. (See Appendix D35-37 for additional materials.)

NBC Television Network, Today Show, March 11, 1974

Carol Tipton appeared on the popular NBC morning program, Today Show, to interpret a segment which featured Dr. William House and Dr. Howard House, who described a special type of experimental inner ear surgery which they are developing at the Ear Research Institute in Los Angeles. The operation is called a cochlear implant and includes the insertion of a tiny electrical wire directly into the cochlea in order to stimulate the 8th or auditory nerve.

Ms. Tipton was contacted by NBC to interpret the program as a result of an earlier Deafness Center project with the NBC program series Watch Your Child.

The Deafness Center also provided consultancy advice in selecting the proper screen format and for publicizing the program among the national deaf community.

WNBC-TV, New York City, Research Project, March 24, 1974

The Deafness Center provided a variety of supportive services to WNBC-TV for a 30-minute program about inner ear surgery on the award winning series, Research Project, hosted by Dr. Frank Fields. The program was an expansion of the earlier Today Show feature (see p.26).

Deafness Center staff publicized the program among the deaf community and followed-up with a mail questionnaire to solicit audience responses. Carol Tipton interpreted the program.

Sign Language Activities by Other Broadcasters

WXXI-TV, Rochester, N.Y., Signed News, nightly series

One of the earliest and still very important examples of adding sign language to a television program is the regular production by station WXXI-TV, Rochester, N.Y., of a special sign language version of the ABC Nightly News program. In addition, the station regularly adds sign language interpretation to televised Presidential announcements and to emergency weather and news bulletins. The Deafness Center has followed the project with keen interest during the past two years and has offered informal advice and encouragement when appropriate.

The Deafness Center and WXXI have completed preliminary arrangements for conducting audience evaluations of the series, pending adequate funding. The program, which has now progressed through several stages of development, started as a college project at the nearby National Technical Institute for the Deaf, a division of the Rochester Institute of Technology. With permission of the local ABC affiliate, NTID picked up the program and added a sign language interpreter for closed circuit rebroadcast throughout the campus. The original format included an interpreter in the foreground who filled nearly three-fourths of the screen and a television receiver tuned to the ABC news which filled the remaining upper quadrant above the interpreter's shoulder.

WXXI-TV later secured permission from the same local ABC affiliate to broadcast a similarly modified program to the entire Rochester, N.Y. community, thus setting the precedent for other PBS stations around the country to carry modified commercially-produced programs.

The program as currently produced provides an attractive chroma-key insert of an experienced interpreter from the station's pool of several part-time interpreters recruited from NTID. Throughout the development and production phases of the series, the station has included representatives from the deaf community--especially as an aid in making the public service announcements and features which are inserted in place of the commercials that normally appear in the program.

C. CAPTIONS

A growing interest in the production of captions for television programs offers hope for deaf and hearing impaired viewers that regular captioned television may someday be available to them. In addition, experiments are underway to test new techniques using broadcast television and cable television for the transmission of special "closed" captions which can be optionally received. This technique could avoid the possible negative reactions of hearing viewers who did not wish the captions to appear on their television sets.

Producing the Captions

There is an impressive range of captioning techniques and equipment available to broadcasters today--from the cheapest, using a typewriter and a roll of paper; to the most expensive, using a computer-activated character generator coupled directly to a videotape recorder. Most of the cheaper captioning techniques rely upon a physical display which is received through a television camera and then electronically mixed in the control room. The display to be recorded may be a scroll of paper with typed words, or handprinted cardboard cards, or slides projected onto a screen.

Sophisticated equipment available on the market today make full captioning of extended program segments possible (and relatively convenient) for the first time. In particular, the CBS Laboratories' Vidifont captioning unit is capable of producing a high quality caption with a clear letter style. An integral part of the unit is a computer, which is used for storage and quick retrieval of all necessary programming information. The speed and flexibility of these units are extraordinary. As with other similarly sophisticated units, however, a major limitation of the Vidifont is its initial cost--about $35,000 to $70,000, depending upon accessories. Cable television systems and schools for the deaf, of course, must rely on more modest equipment, which is available for purchase at about $5,000 to $15,000.

One of the most pressing needs of broadcasters is a comprehensive instruction booklet on producing television captions. There has been very little applicable research on the effectiveness of captions on television and virtually no studies of the comparative effectiveness of the equipment now on the market. The Deafness Center is therefore committed to expanding the work of the Visual Communications Laboratory in both of these areas.

Deafness Research & Training Center Captioning Activities

WGBH-TV, Boston, Captioned Version of the President's Inauguration, Jan. 20, 1973

Just over one year ago, the Deafness Center assisted WGBH-TV, Boston, in producing the captioned version of the President's Inauguration and Oath of Office which was broadcast later the same night over the Eastern Educational Television Network and then rebroadcast the following night over the national

Public Broadcasting Service (PBS) network. The event was chosen for captioning because of its national importance and because it dramatized the necessity of captioning programs for deaf people.

The idea was first suggested at a meeting between representatives from station WGBH-TV, the Eastern Educational Television Network (EEN), and the Deafness Center. The Deafness Center provided staff support for planning and production of the program and paid out-of-pocket expenses ($500) for connecting WGBH to a direct video feed from Washington. The Deafness Center also initiated the effort to announce the program nationally and coordinated the audience evaluation follow-up.

An exciting additional benefit of the project was the cooperation between so many different government and private agencies. Of special help in notifying the national deaf community were the National Association of the Deaf and the Council of Organizations Serving the Deaf. Media Services and Captioned Films helped facilitate negotiations with the commercial networks for release of the program. The National Census of the Deaf Population and the National Technical Institute for the Deaf provided interviewers for the audience evaluation.

The follow-up audience evaluation relied upon close cooperation between NTID, Gallaudet College, the National Census of the Deaf Population and the Deafness Center. We consider this mutual support to be extremely valuable and expect to build upon it in future projects.

Emergency Bulletins

Most local broadcasters routinely add a few standard captions and/or other visual cues to their regular news and weather reports. They have learned through experience that these visual effects create a livelier, more effective presentation for their hearing audiences. Few, however, include visual explanations with their emergency bulletins--which usually consist of little more than a standard, but often distressing slide, such as "EMERGENCY BULLETIN", which appears on the screen while an off-camera announcer describes the emergency to the audience. Deaf people, of course, never hear the explanation and are forced to guess what the emergency might be.

The Deafness Center is researching state and federal laws and regulatory guidelines to see if additional legislative encouragement might be useful. As part of this activity, staff members from the Deafness Center have been invited to participate in two meetings regarding television by the New York State Temporary Commission to Study the Problems of the Deaf.

Captioning Activities by Other Agencies

WGBH-TV, Boston, Captioned News; daily

WGBH-TV recently began broadcasting a delayed, captioned version of the ABC Nightly News program especially for deaf people. The program is a direct successor to WXXI-TV's sign language version of the same news program, but is delayed for five hours so that the captions can be prepared. The program is carried by the Eastern Educational Television Network to ten additional stations, which have all agreed to broadcast the program. As soon as additional legal arrangements have been completed (especially with AFTRA) the program may be offered to the Public Broadcasting Service network for national broadcast.

The ABC Television Network granted permission to WGBH-TV to caption the program and to the Eastern Educational Network to provide the captioned version to its several member stations. However, permission to actually broadcast the captioned version must be secured by each local EEN station from the corresponding local ABC affiliate; otherwise the captioned version cannot be broadcast in that local area.

The project builds from considerable captioning experience gained by WGBH in an earlier project, also funded by the Bureau of Education for the Handicapped (BEH), to caption selected television programs including the popular French Chef show with Julia Child and assorted other programs including Lassie. Selected captioned versions of the French Chef were broadcast during the regular rerun schedule in the summer of 1972, and received generally favorable responses. Because of administrative difficulties at BEH, however, the planned audience evaluations of the programs were not completed.

WEDH-TV, Hartford, Connecticut, The Deaf Citizen; monthly

Other television captioning activities tend to be local or regional efforts, such as the Deaf Citizen series which is produced and captioned by station WEDH-TV, Hartford, Connecticut, with the leadership of the American School for the Deaf. The program is inexpensively captioned using slides and considerable volunteer assistance, instead of an electronic character generator.

D. NEW TECHNIQUES FOR TRANSMITTING CAPTIONS

A serious deterrent to the regular use of captions with television programs has been the possible negative reaction of hearing viewers, who find the captions annoying. In response to this problem, at least two new techniques are being tested which would permit the optional reception of captions on the home receiver. The first technique is appropriate for both broadcast television and for cable television; and the second, for cable television only.

Optional Captions for Broadcast Television and/or for Cable Television

A technically feasible method for optional captioning is now being tested and developed by the Public Broadcasting Service (PBS). The captions are broadcast in such a way that they appear only on television receivers equipped with a special adaptor box. Television sets which do not have the adaptor box receive the programs in standard form, without captions.

The captions are electronically encoded by the local television broadcast station or by the network and then transmitted in a currently underused portion of broadcast space called the 'vertical blanking interval'. When the encoded signal is received in the home, it is translated back into readable captions by a small adaptor box and displayed on the television screen, superimposed directly over the regular program. It has been estimated by PBS that the adaptor box necessary for receiving, decoding and displaying the special captions could be mass produced for about $100 per unit.

The National Bureau of Standards (NBS) originally developed the transmission techniques and the prototype equipment in order to broadcast accurate time and frequency information nationally. However, NBS soon realized that several additional uses could be made of the equipment. Under a contract from Media Services and Captioned Films, NBS fabricated twenty special decoder boxes designed primarily for captioning use and supplied them to the Public Broadcasting Service for testing. Formal testing and evaluation of the technique was originally scheduled to begin in September 1973 but delays have pushed the starting date forward to at least February 1974. A second, similar system which has been developed by Hazeltine Research, Inc., will also be tested by PBS.

Optional Captions for Cable Television

Cable television offers several options for telecasting captioned programs:

First, a special channel could be set aside especially for captioned movies and other programs for deaf people. These materials can be rented by the cable operator. This is the most straightforward solution and does not involve any special additional equipment for the cable operator or the deaf viewer. Anyone tuning to the special channel would receive the programming.

Second, the NBS and Hazeltine techniques described above could be used on a program by program basis--on any or all of the channels.

Third, a full channel could be set aside as a special data channel. The channel would be used for carrying a type of encoded captions similar to those described above in the closed captioning technique. However, it could provide hundreds of times as many captions. For instance, there could be captions in French and Spanish as well as English. Or, there could be edited captions with reduced vocabulary levels. A small converter box attached to the television set would permit the viewer to transfer the captions from the special data channel to the appropriate program and channel.

The Deafness Center is in contact with equipment manufacturers and with one of the largest national cable television companies to encourage the adaption of available hardware to provide these captioning facilities.

E. CONCLUSIONS

The use of a sign language insert is easier, cheaper and quicker for the local broadcaster than the use of captions. However, captions can be understood by a significantly larger audience than the sign language inserts.

F. RECOMMENDATIONS

Again, we recommend that efforts be continued in three major areas:
1. Collection and Dissemination of Information
2. Production of Television Programs
3. Evaluation of Television Programs

However, we also recommend that a major research effort be conducted to refine each of the basic visual supplementation techniques and to compare their relative effectiveness.

Government

1. The joint, national survey of local television broadcasters by the National Association of Broadcasters and the Deafness Research & Training Center regarding television programming for deaf people should be supported and expanded. (Same as for section III, Original Programming)

2. A national survey of potential deaf viewers regarding preferences for television programming (content, type of visual supplement, etc.) should be developed and supported. (Same as for section III, Original Programming)

3. Direct support for production of original television programming for deaf people should be considered seriously, especially for programs which could be distributed through the Public Broadcasting Service television network. (Same as for section III, Original Programming)

4. Appropriate agencies in federal, state, and local governments should be alerted to the potentials of television for reaching and serving deaf clients. (Same as for section III, Original Programming)

5. Support for adequate evaluation of programs produced especially for deaf people is very important to the continued development of such programming. Evaluations of both government and privately funded programs should be conducted. (Same as for section III, Original Programming)

6. A handbook for making special programs for deaf people should be written and distributed to interested television broadcasters. The handbook should include descriptions of deafness and of the national deaf population; program content preferences of potential deaf viewers; alternative formats for visual supplementation; special production techniques and suggestions. (Same as for section III, Original Programming)

7. The new techniques for transmitting "closed" captions should be more extensively tested--by producing the captions under the realistic conditions of an operating broadcast station and by evaluating audience responses to the captions and to the necessary decoding equipment in the homes of deaf people. (Neither of these conditions has existed in the preliminary testing of the techniques.)

8. Concerted efforts should be made to amend or otherwise revise contracts made by government agencies which prohibit television broadcast of films for deaf people which are wholly produced by government funds or which have been later modified with captions by government funds.

9. Considerable additional research is needed in several areas, especially the comparisons of effectiveness between the alternate visual supplements. (See section V, Research.)

Deaf Community

1. Deaf community leaders should contact and encourage local television broadcasters to provide special programming for deaf people. (Same as for section III, Original Programming)

2. Deaf community leaders should encourage written and personal follow-up from as many deaf people as possible in their community after each special television program. (Same as for section III, Original Programming)

V. RESEARCH

Information

In spite of the considerable and growing interest in television for deaf people, there is a surprising lack of information about:

(a) current activities around the country;
(b) viewing preferences of deaf audiences.

The programs and projects, other than our own, which are mentioned in the preceding sections are only the most dramatic, the most successful or simply the most publicized activities we know about. In too many cases projects are going unnoticed outside their local areas. Therefore, in cooperation with the National Association of Broadcasters, the Deafness Center is conducting a national survey of all local commercial television stations (about 700) regarding television for deaf people. (See page 17.)

As a regular part of our individual television projects, we include an opportunity in the audience evaluations for deaf viewers to indicate their preferences for the types of programs they wish to be visually supplemented in the future. (See Appendix E 50-51.) Consistently, the most desired programming has been the news.

The Deafness Center is conducting an evaluation of audience reactions to two similar news programs which include visual supplements for deaf people. One is the WXXI-TV program which includes sign language interpretation (see page 27) and the other is the WGBH-TV program which includes captions (see page 28). The evaluation is being conducted jointly with WXXI-TV, Rochester, New York, which has agreed to broadcast both programs to its local audience for one month.

Production

A second important information need is for studio production guidelines. How wide should camera framing be for a person using sign language? Should lighting be any different? How should the director control editing?

The Deafness Center is therefore exploring the possibility of collaborating with interested broadcasters on the development and publication of such a set of guidelines.

Visual Displays

There has been very little rigorous, systematic research regarding the comparative effectiveness of alternative visual supplements on television for deaf people. The bulk of the important work has been done outside the immediate field, in scientific disciplines which are generally inaccessible to television broadcasters or to the deaf community for direct application. Visual perceptual psychology in particular has an impressive history of relevant research and development. Therefore, it is essential that a survey of related research literature--including visual perception--be completed very soon and be made available to researchers in the newly developing field of television for deaf people.

The establishment of the Visual Communication Laboratory at the Deafness Center three years ago was a major step in developing close ties with the important scientific and engineering developments in related fields. The Laboratory has the dual responsibilities of monitoring research progress in these related areas and of initiating new research, particularly that which is directly applicable to the visual needs of deaf people. One of the most obvious needs of course is the refinement of visual supplements on television.

The Laboratory is currently conducting a series of studies on the intelligibility of sign language and fingerspelling on television. The variables being explored are the duration of the sign or letter on the screen and the characteristics of the display itself (size, lighting, position on the screen, and angle of the signer to the camera). An unexpected result of the studies has been the preliminary documentation of unusual levels of memory storage in the processing of the visual information. Forthcoming articles will describe the observations more fully.

The Laboratory, in conjunction with the Television Projects Unit of the Deafness Center, is also planning to repeat the field tests of the WXXI-WGBH news program comparisons using much stricter audience controls and using additional test materials. Four versions of the news program are planned:

1. standard program;
2. program with captions (WGBH);
3. program with sign language interpretation (WXXI);
4. program with both sign language interpretation and captions.

Objective as well as subjective measures will be taken. The project is conditional upon additional funding support.

A. CONCLUSIONS

One of the weakest areas of television for deaf people is research. This is true for all levels of research, from the lack of useful information about current activities around the country or the lack of information about viewing preferences of deaf people to the lack of rigorous measurements about the comparative effectiveness of alternative visual supplements.

B. RECOMMENDATIONS

1. The joint, national survey of local television broadcasters by the National Association of Broadcasters and the Deafness Research & Training Center regarding television programming for deaf people should be supported and expanded. (Same as for section III, Original Programming)

2. A national survey of potential deaf viewers regarding preferences for television programming (content, type of visual supplement, etc.) should be developed and supported. (Same as for section III, Original Programming)

3. Current efforts to improve the display of captions on the television screen should be continued. Particular concerns here are the size, placement, and font of the captions.

4. Additional, related studies should be initiated regarding the appropriate word rate of the captions and regarding the various types of interaction between the captions and the regular pictorial material of the television programs.

5. Current efforts to improve the display of sign language on the television screen should be continued. Particular concerns here are the size and lighting of the signs as they are displayed and the angle of the signer relative to the camera. Related concerns such as the comparative effectiveness of two dimensional presentations (television screen) versus three dimensional presentations (live action) or the accurate recording of viewer performance in trials for measuring different aspects of perception, recognition, and memory lead to basic research in visual processing. This is useful well beyond the immediate applications in the displays of sign language on television.

6. Current efforts to compare the comparative effectiveness of alternative visual supplements should be expanded. These efforts include the comparisons of the news programs supplemented by WGBH (captions) and by WXXI (sign language). It is planned that two types of comparisons will be conducted, one as a field test out in the homes of deaf viewers and the other in a controlled setting.

VI. SUMMARY FOR LOCAL BROADCASTERS

Deafness is a communications handicap. It is an invisible barrier that isolates deaf people from the normal, constant flow of information, entertainment and even face to face communication which hearing people take for granted. Over 13 million people in the United States have significant hearing impairments. Over 2 million people are profoundly deaf. (See Appendix E53-56 for regional and statewide estimates.)

Television can help to reduce the relative isolation caused by these hearing impairments. Unlike other media--such as the telephone and the radio which rely solely on audio information--television can communicate visually. This visual aspect is of course a fundamental necessity for communicating with deaf people.

Unfortunately, however, television rarely reaches its full visual potential. As a result, even television programs must be supplemented with special visual reinforcements. Without these visual supplements, deaf audiences find it extremely difficult--or simply impossible--to understand most television programs. For instance, voice-over narration, off-camera dialogue, reaction shots, actors facing away from the camera, and several other standard production techniques conspire to exclude the deaf viewer from understanding the spoken dialogue of a program. Visual supplements such as sign language or captions (subtitles), therefore, can be extremely important to potential deaf viewers.

The preceding sections of this booklet have described several methods for improving the visual component of television for deaf people. Again, local television broadcasters have three basic options for providing special programming:

1. <u>To produce</u> wholly original materials especially for deaf people.

   This would include deaf newscasters presenting the news in sign language.

   It would also include special features about and for deaf people such as the International Deaf Olympics or the American Athletic Association of the Deaf National Basketball Tournament.

2. To modify regular programs with captions or sign language.

   The addition of sign language is easier, quicker and cheaper than the addition of captions. However, captions reach a much larger audience--which includes hard of hearing people who do not use sign language.

3. To rent specially modified programs from outside suppliers.

   This would include such special programs as Vision On (see page 18) or Christopher Close-Up (see page 13) or such other programs as foreign films (with subtitles) or silent films.

According to our preliminary audience evaluation surveys, news is the overwhelming first choice among deaf people for the kind of program that they want supplemented with captions or sign language. Movies, variety shows, and sports or drama vie for the next three positions, depending upon the particular characteristics of the audience sample responding.

Several new television projects for deaf people have developed spontaneously around the country within the past few years. Three of the most outstanding examples are the news summary programs at KRON-TV, San Francisco, and at WTOP-TV, Washington, D.C., which feature deaf newscasters and the special full-length news program offered by WXXI-TV, Rochester, New York, which is supplemented with a sign language interpreter. Similar programs could be started by almost any commercial broadcaster and by many PBS stations.

The Deafness Center is working closely with the National Association of Broadcasters to develop and conduct a national survey of local television broadcasters regarding local activities with television for deaf people. The final report of the survey may also include a catalogue of programs available for rental.

The two activities which have received the most national publicity, however, are probably beyond the capacity of all but a few local broadcasters. This of course may lead to considerable disappointment for the local deaf community. These projects are the captioned version of the ABC Evening News program which is captioned by PBS station WGBH-TV, Boston (see page 30) and the "closed" captioning technique (or vertical-interval technique) which is being tested by PBS with the assistance of several of its member stations (see page 31).

Few deaf people understand the differences between these two projects or the practical limitations that such projects would have for local commercial and PBS stations. Some of this misunderstanding is due to the unfamiliarity of deaf people with television in general and some of it is due to the optimistic reporting about these new projects in newspapers and publications with wide deaf readership. Local broadcasters should not be surprised, then, if the first, loudest and most persistent demand from deaf people is for captioned news.

With this booklet the Deafness Center begins a national campaign to help reduce these misunderstandings. But as so often happens, the information may arrive too late or too early to be of maximum benefit to the broadcaster or local deaf community. Therefore, much of the responsibility for realistically describing the programming options open to the local television broadcaster will fall to the local broadcasters themselves. We therefore urge broadcasters to be patient with the initial demands from the deaf community, some of which may at first seem unrealistic.

At the same time, broadcasters should not underestimate the importance of what they may consider to be rather modest improvements, such as the addition of visual explanations to emergency bulletins or to reports or to introductions for news programs. Modest activities such as these can be initiated immediately. They are not as dramatic as introducing full-length, fully modified programs, but they are an important start and help build the trust and support of the deaf community while more ambitious projects are being developed.

We urge broadcasters, when in doubt about the potential of producing or renting a series of special programs, to sponsor trial broadcasts of the programs in order to guage audience response. Total numbers in the viewing audience should not be the only criteria for continuation, however, even though a substantial, loyal audience of deaf and hearing impaired people and their families may be quickly developed. Offering news, entertainment and educational programming in the home to deaf and hearing impaired viewers is a unique public service which can be provided by no other medium.

VII. SUMMARY FOR THE DEAF COMMUNITY

A. Introduction

Interest in television programming for deaf people has grown remarkably during the past two years. Deaf people in many cities around the country now receive specially supplemented news and other television programs for the first time. A survey of all stations is now being prepared by the Deafness Center jointly with the National Association of Broadcasters so that these many activities can be clearly documented. (See page 17.) The final report of the survey will be made available to local clubs around the country and to local television stations.

Deaf communities everywhere are playing an important part in this growth by contacting their local television stations and asking for special programming. The whole process, from the time of the first contact to the first actual broadcast of a specially supplemented program, may take weeks or months or even a year. Most stations are willing to cooperate, however, so one should not be too upset by any initial delays.

Local television stations have the following basic options for providing special programming:

1. To produce wholly original materials especially for deaf people.

   This would include deaf newscasters presenting the news in sign language.

   It would also include special features about and for deaf people such as the International Deaf Olympics or the American Athletic Association of the Deaf National Basketball Tournament.

2. To modify regular programs with captions or sign language.

   The addition of sign language is easier, quicker and cheaper than the addition of captions. However, captions reach a much larger audience--which includes hard of hearing people who do not use sign language.

3. To rent specially modified programs from outside suppliers.

This would include such special programs as Vision On (see page 18) or Christopher Close-Up (see page 25) or such other programs as foreign films (with subtitles) or silent films.

The easiest way for a television station to provide special programs is to rent the programs directly from outside film distributors. Several kinds of programs are easily obtainable for rental in this way--from silent movies to subtitled foreign films to programs featuring the National Theatre of the Deaf. Renting programs avoids the considerable time and expense involved in producing new programs.

Many stations, however, in addition to renting materials, are willing to begin special productions of their own. Modest program production is feasible by nearly all commercial television stations and by many of the Public Broadcasting Service (PBS) stations in the country. The most popular types of local production are first, the addition of a small circle or rectangle on the screen which contains a sign language interpreter; second, the use of a deaf person as a featured newscaster. (See section III and section IV for examples.)

By far the most difficult and expensive technique for producing special programs for deaf people is to add captions. In fact, it is so difficult and so expensive that only one television station in the country does it regularly. (See below, "Captioned News".) So, deaf people should not be too surprised if local television stations will not be willing to produce captions on a regular basis. Nevertheless, most stations would be willing to adapt their "Emergency Bulletin" announcements with some type of captions. And a few stations would be willing to attempt captioning for an occasional full-length program if they were encouraged. Therefore, it usually does not hurt to ask.

The most effective way to approach the local broadcaster is by knowing in advance what types of programming are wanted by local deaf people and, if possible, by realistically anticipating how much programming the television stations can actually provide. The audience evaluation surveys conducted by the Deafness Center indicate that news is the overwhelming first choice among deaf people for programs to be visually supplemented, followed by movies, variety shows, and sports or drama, depending upon the audience sample. The production capabilities of local television stations vary considerably from city to city and even within a single city. One of the few appropriate generalizations that one can safely make, then, is that commercial stations have substantially greater production resources than do PBS stations.

Deaf community leaders should be careful not to confuse well-publicized national projects with their own local efforts. Two projects in particular have led to misunderstandings. The captioned news project sponsored by the PBS member station in Boston, WGBH-TV, is currently available to several PBS stations on the East coast, but is not available to any commercial television stations. Likewise, the PBS experiment with the "closed" captioning technique which requires a "black box" adaptor is being tested in only a few

cities and is not available to deaf people in their homes.

Brief descriptions of these two projects are included here for reference:

B. Captioned News (Also see page 30.)

Television station WGBH-TV, Boston, recently received permission from the national ABC Television Network to caption the ABC Evening News programs and to rebroadcast them later the same night. WGBH receives the program at 6:00 p.m. each night and then spends the next 4-5 hours adding captions to the program before rebroadcasting it at 11:00 p.m. WGBH is the only station in the country to regularly caption the news.

As a result of the program's success in Boston, many other PBS stations have requested the program in their cities, too. Therefore, WGBH now sends the program out through the Eastern Educational Television Network (EEN) to PBS stations from Washington, D.C. to Maine.

The one major catch is that each of the PBS stations on the East Coast that wishes to broadcast the captioned news program must secure permission from the nearby local ABC affiliate television station before the program can be shown.

So far, the captioned news is sent only to PBS stations on the East Coast. And less than one-half of these stations broadcast the program. However, WGBH hopes to be able to release the program to all PBS stations nationally sometime before 1975.

C. "Closed" Captions (Also see page 31.)

The Public Broadcasting Service is testing a special new system for sending "closed" captions along with regular programs. The captions are broadcast in such a way that they cannot be seen on regular television sets. They can be seen only on television sets which have been modified with a special "black box" adaptor. Standard captions (or "open" captions) on the other hand can be seen on any television set.

In the current experiment, all captions are produced by PBS in Washington, D.C. The programs are then sent out over the national PBS network for broadcast by the local PBS stations which are participating in the experiment.

There now are only 20 of the special "black box" adaptors in the country, none of them yet in the homes of deaf people.

Representatives from PBS predict that the adaptor boxes could be mass produced for about $100 per adaptor. However, the project is still in an experimental stage and no decisions have been made about mass producing the adaptors.

D. Conclusions: What Can You Do?

The most important thing that you can do is to let your local television stations know that you want special programs for deaf people. One of the most effective methods of getting your point across is by actually meeting with your local television stations' managers. They have probably never talked with a deaf person face to face. Few of them really understand how important visual supplements can be for deaf viewers. It is your job to convince them.

Arrive at the meeting fully prepared. Collect written endorsements in advance from the local deaf clubs and perhaps from statewide organizations as well. Know what kinds of programs local deaf people want. Know the television stations' daily schedules. Are there any programs which could be modified with visual supplements?

Letters can also be very effective. If your local stations already produce special programs for deaf people, then write a letter of congratulations urging that the programs be continued. You may wish to include suggestions about improving the programs. On the other hand, if your stations do not carry special programs, remind them that many other stations around the country already broadcast programs for deaf people.

You should also write to the national television networks whenever you see anything about deafness in a television program. Too often, deafness and deaf people are misrepresented. You can help to correct that by your letters and suggestions.

. . .

To contact your local television stations, check for their addresses in a telephone directory.

The addresses of the three national television networks are given below.

ABC Television Network
1330 Avenue of the Americas
New York, N.Y. 10019

CBS Television Network
51 West 52nd Street
New York, N.Y. 10019

NBC Television Network
30 Rockefeller Plaza
New York, N.Y. 10020

APPENDIX OUTLINE

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Jerome D. Schein, Ph.D.

FCC Guidelines for Cable Television

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PUBLIC NOTICE

Federal Communications Commission ■ 1919 M Street, NW. ■ Washington, D.C. 20554

FCC 70-1328
56051
December 17, 1970 - B

THE USE OF TELECASTS TO INFORM AND ALERT VIEWERS WITH IMPAIRED HEARING

The Commission's attention has been directed to the need of deaf persons, and those with impaired hearing, for information concerning emergency situations which may affect safety of life or property, as well as their desire to benefit from news, information and entertainment programs. 1/ Estimates of the number of citizens who have impaired hearing and therefore have need for the receipt of news and entertainment material through appropriate television programming range from 8.5 million to 20 million. Many of these persons, it appears, live alone and oftentimes do not receive important news information unless advised by neighbors or friends.

As AM and FM radio are ideally suited to bring news, informational material and entertainment to the blind, so the video segment of telecasts are ideally suited to alert, assist and entertain persons with impaired hearing. Therefore, the capability of television to present visual material should be used to its fullest extent, i.e., while oral annoucements of news bulletins, sports scores, weather conditions, etc. are being made on a telecast that the same material be presented, when feasible, visually.

The material which persons with impaired hearing need and desire to receive via telecasts falls basically into two categories--first, rapid receipt of emergency information which concerns the safety of life or property, and second, the receipt of news, information and entertainment. In respect to the need of all citizens including the deaf and hard of hearing for information concerning emergency situations, we are convinced there can be little argument. We suggest to TV broadcasters that they make use of visual announcements along with oral announcements when presenting bulletins of an emergency nature, such as approaching tornadoes, windstorms, hazardous driving conditions, escaped convicts, industrial accidents, health hazards and other community dangers. These visual announcements would not only provide an alert to persons with impaired hearing, but would also emphasize the importance of the announcement to all viewers.

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1 The petition raising this subject mentioned particularly emergency material. To the extent that the petition concerns the transmission of written information relating to an Emergency Action Notification during conditions of a grave national crisis or war, or the use of EBS facilities, interconnecting systems and procedures including the use of the Attention Signal for day-to-day emergencies posing a threat to the safety of life and property, this matter is under active consideration by the National Industry Advisory Committee and action in this area will be considered at the conclusion of their studies.

(over)

The second category of telecasts (news, information and entertainment) with which the deaf and hard of hearing are concerned, also is significant and worthy, in our view, of broadcasters' attention. Leaders of the deaf and hard of hearing have made the following suggestions: In respect to news programs--that visual bulletins of the matter under discussion be presented, that weather maps have descriptive phrases placed on them and that some segment of the screen be, as far as possible, continually reserved for the presentation of the face of the announcer so as to permit lip-reading. In respect to informational programs--that such programs be presented concerning the problems of the deaf and hard of hearing. At this time we note that various educational television stations have been and are presenting courses in lip-reading. In respect to entertainment--that during sports programs the scoreboard be frequently flashed on the screen, that names of players or persons being pictured be presented in written form and that broadcasts of movies be made with subtitles when films are available with subtitles. We understand that some sub-captioned Hollywood films are available from the Division of Media Services and Captioned Films of the U.S. Office of Education.

We wish to emphasize that it is the responsibility of each licensee to determine how it can most effectively meet the needs of its viewers. We have not adopted and do not propose definite rules on this subject, and this Public Notice is advisory in nature. The above are suggestions of program presentation techniques which could assist a segment of our population, suffering from a significant handicap, and make the tremendously powerful television medium more useful to them. We believe that these techniques can be applied, to a significant degree, without interfering with the station's service to its general audience, and urge broadcasters to explore them and apply them to the extent feasible.

One approach to this subject which we believe warrants exploration is the possibility of stations presenting material in a form especially useful to the deaf on a rotating basis. If this were done, for example, by each of the various stations in a large city for a month, it might be possible for them to do more in the way of visual presentation of value to the deaf than each station would be able to do (or justified in doing) continuously. We suggest that licensees in multi-station markets explore this possibility. The Commission does not believe that discussions and joint efforts among licensees concerning programming for the deaf, without extending into other areas of programming or commercial practices, would be subject to question under the antitrust laws.

We hope that this Public Notice will alert licensees to the importance of making television a truly valuable medium for the hard of hearing, and of our concern about the matter. We will observe developments in this area in the near future, and if the situation does not develop satisfactorily it may be necessary to begin rule making looking toward the adoption of minimum requirements.

Action by the Commission December 16, 1970. Commissioners Burch (Chairman), Robert E. Lee, and H. Rex Lee, with Commissioner Bartley dissenting, and Commissioner Wells concurring in the result.

Distribution: To all television licensees.

- FCC -

teleVISION
Television for Deaf People

(Inside portion of brochure on television for deaf people. June 1973)

Deafness Is a Communications Handicap —

an invisible barrier that cuts deaf people off from the flow of information, entertainment and human communication that hearing people take for granted.

Anyone can become deaf. Deafness can be inherited. It can develop from diseases like measles, or from physical injury.

Over thirteen and one-half million people in the United States have impaired hearing. Over two and one-half million of them are profoundly deaf. This handicap affects all communications which rely on sound, including radio, television, the telephone, and even ordinary conversation. But television can become more **visual**—so that it can communicate to deaf audiences even without sound.

Hearing people communicate simply by talking. Contrary to common belief, deaf people cannot easily understand speech by lipreading. Only 25% of spoken English can be distinguished on the lips. This leaves the other 75% to be guessed from context. And this leaves most deaf people isolated and unable to fully interact with the hearing world.

TELEVISION NEEDS MORE VISION

Television may appear to be the ideal visual communications system for deaf people. But watch your television sometime with the sound off. Chances are you'll be frustrated or bored. Television programming has not yet reached the full visual potential inherent in the medium.

Voiceovers and off-camera narration, because they are strictly audio clues, are incomprehensible to deaf people.

A shortage of full-face shots makes lipreading difficult. Cut-aways, reaction shots, actors facing away from the camera, and even wide-angle shots, are all hard for deaf people to follow.

Even when a speaker is shown full-face, the *small image of the speaker's face* on the screen combined with inadequate lighting make lipreading very difficult.

There are *too few captions* on television. Just as hearing audiences appreciate batting-average captions during televised baseball games, so deaf audiences would appreciate captions on programs such as the news, the weather, or a favorite late night television movie.

REACHING TELEVISION'S POTENTIAL

Captioning — Television could better serve the deaf population — and much of the hearing population too — if *news and special bulletins* were supplemented with more captions. Although it is not currently feasible to caption all *regular programming,* even partial captioning would give deaf people a better idea of what is going on.

Sign Language — Several television stations in the U.S. include very helpful sign language inserts with special bulletins and and news programs.

Original programming for the deaf — Several successful television programs communicate their messages entirely visually. And in the past year, several deaf groups around the country have become involved in producing their own programs.

Television offers an important social context of information and entertainment which the hearing impaired person cannot fully obtain from any other medium. By making news, sports and entertainment programs available to deaf viewers, television can help break down the barriers that cut deaf people off from the world they live in.

Deafness Research & Training Center
New York University
80 Washington Square East, Room 51
New York, N.Y. 10003
(212) 598-2305

CABLE TELEVISION
Programming for Deaf People

(Inside portion of brochure on cable television and deaf people. June 1973)

For deaf people, cable can make television truly teleVISION.

The extra channel space and low production costs that make cable exciting for all specialized audiences, make cable particularly important for deaf people. Other interest groups can rely on auditory forms of communication. Deaf people can only use visual media.

13.6 million Americans have significant hearing impairments, including 2.5 million who are deaf. The deaf community is not large enough to command much broadcast attention, but it could be an enthusiastic audience for the visual information and entertainment that cable can provide.

What can the individual cable operator do?

Cooperate with the deaf people in your community. Find out what they want for news, information and entertainment. And work with them to get it.

Obtain outside materials. Programs with captions and sign language for deaf audiences are available from a variety of sources. Deafness Research and Training Center is sponsoring a program cooperative which will provide cable systems with materials specifically produced for deaf viewers -- at little or no cost.

Produce local programming. Your production crew can videotape programs specifically for deaf audiences -- or programs about deafness for the general audience. And all local origination programs can be designed with proper lighting, camera angles, etc., to further assist the deaf viewer.

Reruns of local origination programs -- such as the city council and school board meetings -- can be adapted with sign language inserts or captions for deaf audiences. National or local associations of the deaf can help you get in touch with sign language interpreters.

Captioned or sign language versions of the news, weather, community events and sports, not to mention movies and regular programming fare, can make television more understandable to deaf viewers. While sophisticated captioning equipment is expensive, other methods such as slide projection can be used. In many cases, only a few words will convey the major ideas and relieve a lot of frustration.

Encourage public access. Deaf people in several communities are already making programs for public access showing. For the first time, deaf people can really "talk" to each other at long distance. And the programs can be bicycled to other systems for increased exposure.

If you have public access equipment and open channel time, make this known to deaf people in your area. Teach them to operate the equipment and encourage them to use it.

Adapt emergency bulletins. Deaf people are often confronted with a television screen showing "bulletin" or "emergency" while a voice they cannot hear gives the storm warning or news flash. A simple change to a short typed message would make this information available to deaf people.

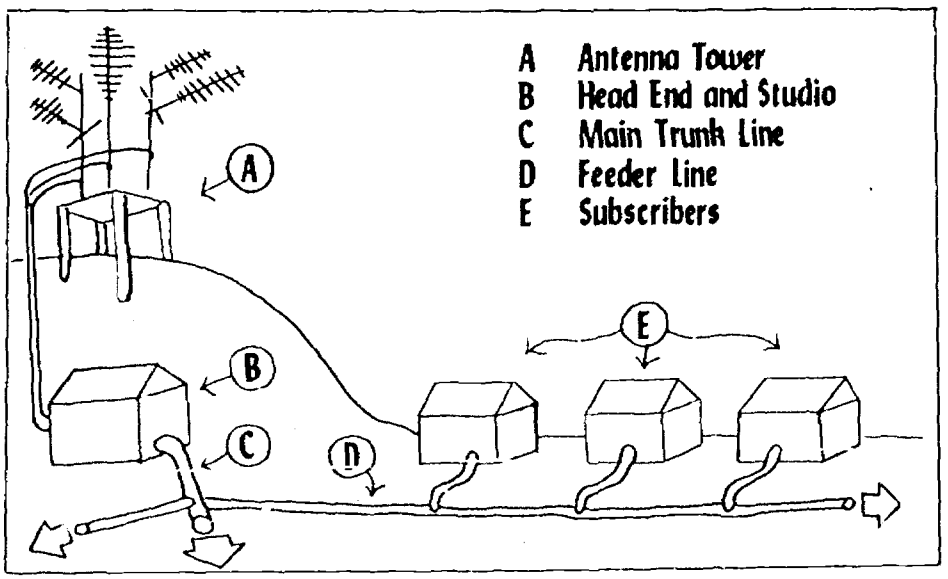
To help you reach deaf audiences, we can:

- Provide a catalogue of programs from a variety of sources.
- Tell you more about deafness.
- Offer general programming and technical advice.
- Provide updates on current activities in the field.

Deafness Research & Training Center
New York University
80 Washington Square East, Room 51
New York, N.Y. 10003
(212) 598-2305

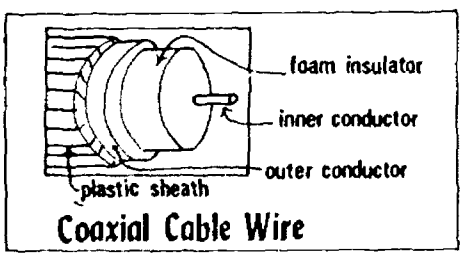
The Promise of Cable

by Thomas Freebairn



CABLE TELEVISION SYSTEM

A cable television systems consists of (A) an antenna tower which picks up distant television signals, (B) a head end facility which amplifies these signals and adjusts them to appropriate frequencies, (C) and (D) the network of cables which carry the signals, and (E) the individual subscribers. Additional programs may also be inserted at (B) the head end.



Coaxial Cable Wire

Tom Freebairn's background is in Cable Television; he is currently on the staff of the Deafness Research and Training Center of the New York University School of Education working in the area of television and deafness.

Cable television is a very special television hybrid which has gained national attention only within the past few years. In spite of its relative obscurity, however, it has been evolving gradually, side by side with broadcast television since the late 1940's. Cable now reaches approximately 10 per cent of the homes in the country and continues to grow with a compounded annual rate of approximately 22 per cent. Cable television was first known as Community Antenna Television, or by its acronym CATV, when it began in the small mountain valley towns of Pennsylvania and Oregon. Enterprising merchants in these towns, blocked by the surrounding mountains from receiving broadcast television signals, built large antennas on the nearby peaks and extended connecting cable down to any townspeople who were willing to share the cost of the antennas and the connecting cables. As a result, television signals were available to the townspeople for the first time. The heart of the cable television system, then as well as now, has been this combination of antennas and connecting cables which bring the extra television programs to individual homes.

A primary advantage of cable television over normal broadcast television is its phenomenal capacity for carrying information. A single modern cable system for instance can carry 20, 30, 40, or more simultaneous television channels to each home. In addition to carrying television signals which have been picked off the air by his antennas, the cable operator may also choose to rent materials from non-broadcast sources or even to produce his own programs.

The ability of a cable operator to produce his own programs turns out to be his second major advantage over broadcasters because production for cable is only a small fraction of the cost of corresponding broadcast production. This results from a broadcaster's need to transmit a clear picture for 50-100 miles through the air, whereas a cable system rarely transmits a signal for more than five - 10 miles and is able to use booster amplifiers and shielded coaxial cable all along the way.

A CABLE TELEVISION COOPERATIVE

During the past year, the Deafness Research & Training Center has worked to demonstrate the concept of a Cable Television Cooperative for the production and distribution of television programs especially for deaf people. Initial funding was supplied by the Social and Rehabilitation Service, Department of Health, Education, and Welfare. The project has included the production of wholly original programs and also the post-production modification of existing programs with captions or sign language.

The theory to be tested was that production and distribution of special television materials would be encouraged if several cable systems agreed to share their programs through a central Cooperative. Though the Cooperative has not reached the stage of self-sufficiency, the central concept remains the same. For example, if there were 20 agencies in the Cooperative, each producing just one program, then each member could share in the use of the entire series of 20 programs—for an exchange rate of 20 programs for one program.

In response to a preliminary questionnaire from Deafness Research & Training Center requesting assistance, the overwhelming majority of all cable operators in five target states (Pennsylvania, California, New York, Ohio, Florida) promised support for the concept and virtually all systems agreed to telecast any materials which could be made available. In addition, the two largest multiple system cable television operators, TelePrompTer and Warner Communications, have agreed to syndicate to selected systems the weekly program series, *Christopher Close-Up*, which has been specially modified to include a sign language insert. (A related benefit to this activity is that the supplemented version of the program is now broadcast by more than 220 broadcast stations in the country as well, for a larger syndication than any of the three commercial broadcast networks.)

Establishing distribution outlets, therefore, has been rather straightforward. The more difficult task has been to secure commitments for actual production. Nevertheless, several preliminary activities have begun, such as the daily 15 minute program, *Deaf Dialogue* produced by TV Cable 12, Cumberland County, North Carolina.

Other outside producers have included schools for the deaf and a Public Broadcasting Service station. Coverage of the AAAD National Basketball Tournament for instance was handled by the Lexington School for the Deaf, which videotaped the regional finals in New York City and by the Texas School for the Deaf, which videotaped the national championships in Dallas, Texas. Station WEDH-TV, Hartford, Connecticut, supplied a monthly 30 minute program, "The Deaf Citizen."

PRODUCTIONS BY DEAF PEOPLE

A continuing flow of programs is also being produced by deaf people themselves in Reading, Pennsylvania, and in Orlando, Florida, as the result of special television training workshops. The workshops were established at the local cable television systems by the Deafness Center in cooperation with the Alternate Media Center, a non-profit group of videotape producers. Production is facilitated by easy-to-use, portable ½-inch videotape equipment which produces programs of sufficient technical quality to be telecast directly over the cable system.

We hope that the independent growth of the Reading project will be a model for future workshops around the country. The pool of interested people now includes cable operators and deaf people in several nearby communities, and has the potential of including many more.

Over 10 programs were made last summer by the workshop despite unavoidable start-up difficulties. Tapes were originally cablecast three times a week over the Reading system, but have now settled to a more comfortable rate of one tape a week. Tapes have included an interview with a deaf person at work, a panel of deaf people and the law, and coverage of local and national meetings of organizations of the deaf. Such tapes provide role models for deaf people and their relatives, increase knowledge about problems and issues important to deaf people, and foster broader community perspectives. The system has also borrowed several videotapes from Gallaudet College to supplement these locally produced programs.

OUTLOOK FOR THE FUTURE

The tremendous variety of available production equipment, which has been so beneficial to individual cable operators, ironically, has been a major problem for the Cooperative. Because effective, industry-wide standards for videotape formats have not yet been established, programs produced by one cable operator cannot always be used by another cable operator. As a result of this incompatibility, we have found it necessary to encourage smaller groups of cable operators who have common formats to circulate programs among themselves rather than to try to transfer their videotapes to other formats.

The cable television industry is very much aware of these incompatibilities, however, and is working very hard toward national standardization. Several of the large national, multiple system operators for instance are equipping all of their systems with similar equipment and state and regional industry associations are completing similar agreements for standardization.

A continuing task of the Cable Television Cooperative will be informing cable television operators about the special programming needs of deaf people and informing deaf people about the potentials of cable.

We believe that the concept of the Cable Television Cooperative is a strong one. It draws on two of the major strengths of cable—large channel capacity and low-cost production—and it permits direct participation in program selection or production by the deaf audiences which it serves.

October 1972. Volume 9, Number 10.

TV Communications
The Professional Journal of Cable Television

The Deaf Are Often Forgotten. Cable TV Can Remember Them.

Telecommunications have never meant much to the World's deaf. Radio was a disaster for them, and television has forgotten its vision. Cable television, however, can be adapted to their particular needs. And it should be.

By Jerome D. Schein, Ph.D.
Deafness Research & Training Center
New York University

Progress in media development has seldom been beneficial for deaf people. The telephone put them at a great disadvantage, rather than, as Alexander Graham Bell intended, "aiding the development of speech for the deaf."

Motion pictures were different. They were ideal for deaf audiences — until they changed from silents to talkies.

Of course, radio was a communications disaster for deaf persons. Then came television.

That Screen Is Only a Speaker

Television opened mass communication again to the deaf community. But television did not remain tele*VISION* very long. As it is presently used, it is little more than radio with a few pictures.

For each of the media, except radio, deaf people recently have succeeded in promoting adjuncts which permit their use without the audio dependence. The Phonetype connected to the teletypewriter makes the telephone available to deaf users by generating a high-frequency sound which activates another teletypewriter on the other end of the line. Captioned Films for the Deaf has restored motion pictures to deaf viewers by projecting a printed version of the dialogue on the screen along with the picture.

Now a similar possibility is opening in television.

CATV holds the most exciting prospects for deaf persons of any of the media for distant communications. This potential has been present since the earliest development of CATV, but only recently has it been recognized. Two developments — one technical and the other politico-economic — have prepared the way for a great improvement in the lives of deaf citizens of the United States.

Expanding the TV Potential

In any given area today it is possible to have at most 12 over-the-air TV stations, both UHF and VHF. The nature of the TV signal prevents more from being satisfactorily broadcast. However, when the television receiver is wired into CATV, the number of channels is doubled. A precious resource available only to huge audiences becomes a relatively common one, available to small groups.

The deaf community is small relative to the general population. With only about two members per thousand population, deaf people cannot make a strong case for their needs to be served by the limited over-the-air television capacity. But when an area is wired into CATV, it becomes reasonable to request that some cabletime be set aside for the deaf community.

The New York City Franchises

That the exciting technical possibilities of CATV can be converted into a practical reality is already demonstrable in New York City. Under the terms of

their franchises, the two CATV licensees on Manhattan are required to provide three public-access channels. Two channels are scheduled at the discretion of the city government.

The third must be made available to any special-interest group in the city. And that is where deaf people enter.

The Deaf Community Hour

At the urging of the Center for the Analysis of Public Issues (Princeton, N.J.) the Deafness Research & Training Center requested two hours per week of prime time on the Manhattan public-access channel. We were granted Tuesday and Thursday, 8:00 to 9:00 p.m., beginning August 31, 1971. The production costs have been paid by the Center for the Analysis of Public Issues, because they feel that experience gained will be valuable to other special interest groups. Additional support has come from the Social and Rehabilitation Service, U.S. Department of Health, Education and Welfare.

Something Is Being Done

During the past 13 months, a variety of programming has been broadcast. Interviews with noted professionals in the field of deafness, performances of the National Theatre of the Deaf, panel discussions of issues of particular interest to deaf people, and instructional programs ranging from hobbies to vocational skills have been aired. Programs focusing on vocational rehabilitation have been a major feature of the series. These have included information on job application and interview procedures, and job opportunities for the deaf worker.

The programs in the series use video-only techniques. The two most common are captioning the audio portion of the program and presenting the program in the American sign language. Original productions by the Deafness Center have used only manual communication because we lack the capability for generating captions.

The Programming Challenge

At present no one has any substantial experience in programming for a deaf audience. How should the program be designed? The technical questions are numerous. What are the requirements and preferences of the deaf audience? Format aside, what kinds of information do most deaf people want and need? These are all fertile topics for research.

During the month of July, 1972, the Deafness Center conducted an evaluation of the series' effectiveness. Members of the deaf community expressed their preferences for program content and format, and their attitudes about television in general. In addition to studying content and alternative visual formats for comparative effectiveness, these evaluations included histories of the viewers themselves.

What are the viewers' current sources of information and entertainment?

Is a television already in their home — perhaps watched by a hearing member of the family?

How might regular television viewing patterns change their other schedules; such as, attending social functions or adult education programs?

Advantages to Deaf People

Television can provide the ready access to information now denied deaf people. From simple things — transportation delays, weather warnings, news bulletins — to complex matters — the wage price freeze, the Vietnam situation, local and state election issues — the deaf citizen must depend on newspapers or person-to-person reports. Participation in the general community is thus curtailed, depriving both the deaf person and society.

Knowledge of the labor market is important to effective economic functioning. On the job, information about current and forthcoming events can make a difference in holding or improving one's job. Conceivably, the lack of television's availability hinders the vocational rehabilitation of deaf persons. This hypothesis should be tested.

Speechreading, another rehabilitation-related aspect in communication skill development, depends in some measure on guessing. The more aware a person is of the context in which an utterance is made, the more easily he can speechread it. Furthermore, speechreading improves as familiarity with spoken language increases. The result of the increased language familiarity gained through televiewing can mean much to the deaf person's vocational rehabilitation.

There Are Also Minor Benefits

There are also minor ways in which television for deaf audiences can add up to improved job performance. For example, a deaf person can avoid being late to work, if he knows that his usual route is blocked. Most people get such information from radio broadcasts, a medium of communication denied to those who are deaf. Announcements of shift changes in large industrial plants and other such information usually broadcast on radio could reach the deaf community on special programs over CATV.

One expert, Ralph Lee Smith, has predicted that by 1980 more than 85 percent of all television reception will be by cable. In conversation with a network vice president a few weeks ago, this assertion was repeated. His off-the-record rejoinder was that the source was badly underestimating the situation: he predicted 90 percent of television will be received via cable in five years! But that seems overly optimistic.

No matter which prediction proves correct, the time for positive action to secure the benefits of CATV by and for the deaf community is now.

Guidelines for

access

(Excerpts from a pamphlet prepared by the National Cable Television Association.)

Application of rules

The FCC's access requirements apply to cable television operators as follows:

All systems located wholly or partially within a top-100 television market which began or begin operations on or after March 31, 1972.

Systems already operating in the top-100 markets have until March 31, 1977 to comply. However, such systems providing any of the access services prior to that time must comply with FCC requirements (1) barring operator control over program content (2) assessment of costs and (3) the operating rules. Systems receiving certificates of compliance to add television signals to their operations prior to the March 31, 1977 date must comply with the access requirements, by adding one specific access channel for each broadcast added. Priority for adding channels is public access, first; educational, second; government, third; leased, fourth.

Systems located wholly outside major television markets cannot be required by a local entity to exceed the FCC's access requirements. However, if such a system does provide any access service, it must comply with the requirements.

The FCC is aware that the requirements may impose undue burdens on some cable operators. In such cases, the operator may request a waiver. Cable systems operating in small communities within a major market, to whom the access requirements present a burden, are free to meet their obligations through joint building and related programs with other cable operators in the larger core areas.

DEAFNESS RESEARCH & TRAINING CENTER

Excerpts from Original Press Release December 14, 1972

Deafness Research & Training Center
Announces Plans for a
National Cable Television Production Cooperative

A national Cable Television Production Cooperative designed to produce television programs especially for deaf audiences, will be initiated in late January 1973 by the New York University Deafness Research & Training Center, a non-profit institute devoted to improving the delivery of services to deaf people.

The concept of the Cooperative is simple. Programs will be produced by the individual Cooperative members and then distributed to all participants. For instance, if the Cooperative initially were to include twenty members, and each were to produce just four programs, then the Cooperative's central pool would include eighty programs. In return for producing his few programs, any member would have access to all materials in the Cooperative's central pool, in this example eighty programs. The number of programs to be produced will be decided by mutual consent of the Cooperative members.

Two different distribution models will be explored for the Cooperative. The first model will consist of several independent regional organizations, each circulating programming among nearby cable systems. These regional organizations can later be consolidated into a true National Cable Television Production Cooperative. In the second model, Deafness Research & Training Center will assist the large Multiple System Operators (MSO's) to produce and to circulate programs for deaf people among the many local systems which they control. Once videotape incompatibility problems are reduced, both models will provide cable operators with a convenient and economical method for syndicating other public service programs as well.

To facilitate the recruitment of volunteers for production roles and the building of local audiences, the Deafness Research & Training Center will arrange introductions between cable operators and local organizations of deaf people and assist in the development of initial programs. Also, the Deafness Center hopes to begin groundwork for a special national network to compile and edit news especially for deaf people.

A conference of cable operators, federal officials, and deaf people will be held in the spring of 1973. The conference will offer special production workshops for the cable operators and will expand the organizational arrangements of the Cooperative.

The Deafness Center plans to distribute a regular newsletter to members of the Cooperative. Sample programs from the Cooperative will be screened periodically by a panel of deaf viewers to determine the appeal of program content and format.

The Cooperative is supported in part by a grant from the Social and Rehabilitation Service in the Department of Health, Education and Welfare.

New York University School of Education 80 Washington Square East, New York, N.Y. 10003 (212) 598-2305 TTY (212) 598-2307

ncta bulletin

Dec. 19, 1972

Vol. II No. 39

Referendums on municipal ownership

Board meeting actions

Cable co-op for deaf

The New York University Deafness Research and Training Center, a non-profit institute devoted to improving the delivery of services to deaf people, has proposed that a National Cable Television Production Cooperative be formed. The Cooperative is supported in part by the Social and Rehabilitation Service, U. S. Department of HEW.

A conference of cable operators, federal officials and deaf people is being planned for late January or early February in Boston. Special production workshops for the cable operators are scheduled, and final organizational arrangements for beginning the Cooperative will be made at that time.

Initially, the Cooperative will be developed as several independent state and regional organizations, to be consolidated into a National Cable Television Production Cooperative later. The Deafness Center plans to help the large MSOs establish methods for syndicating programs for the deaf. Someday it even may provide cable operators with a convenient and economical method for syndicating other public service programs as well.

The concept of the Cooperative is simple. Programs will be produced by the individual members and then collected for later distribution to all participants. For example, if the Cooperative initially includes 20 members and each of them produces just four programs, then the central pool of programming will include 80 programs. In return for producing four programs, any member would have access to all 80 programs.

The Deafness Center will make arrangements between local organizations of deaf people and cable operators to facilitate recruiting volunteers for production roles and to build local audiences for the programs of the Cooperative. They also hope to begin groundwork for a national network to compile and edit news especially for deaf people.

The Deafness Center will distribute a full conference report and a regular newsletter to members of the Cooperative. A panel of deaf viewers will screen sample programs from the Cooperative periodically to determine the appeal of program content and format.

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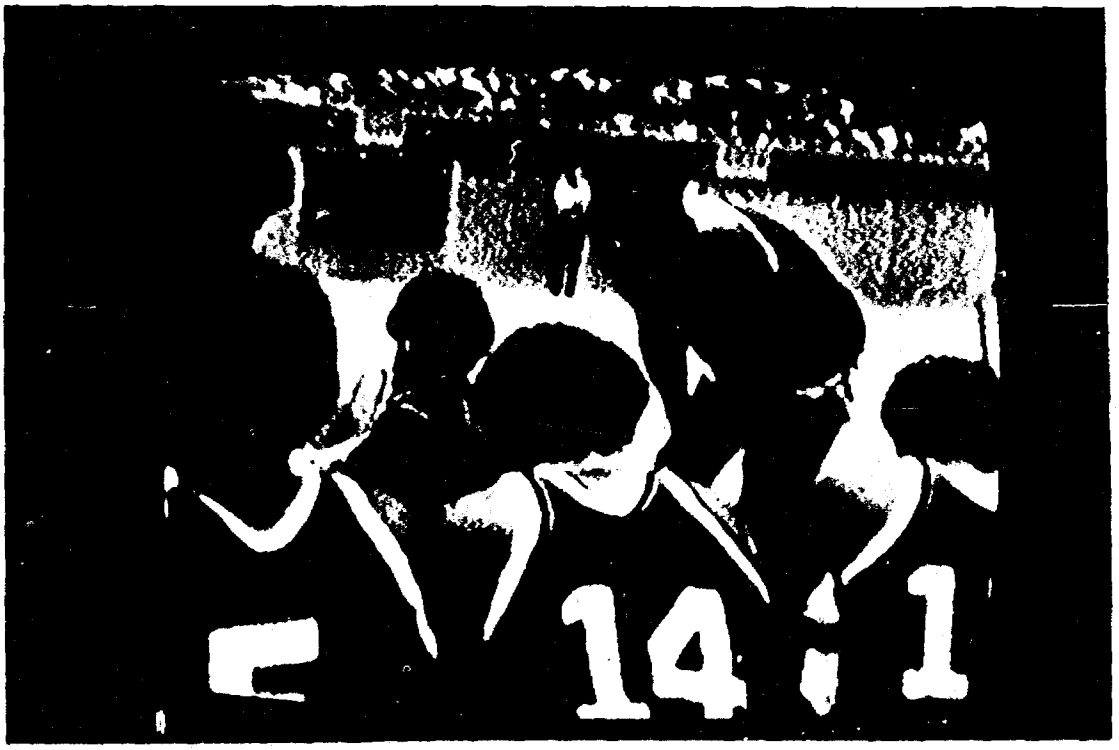


The New York City Pelicans win 6th place in the American Athletic Association of the Deaf National Basketball Championship Tournament, April 4-8, 1973. The Tournament was recorded on ½-inch videotape by the Deafness Research & Training Center and by the Texas School for the Deaf.

DEAFNESS RESEARCH & TRAINING CENTER

For Immediate Release

March 10, 1973

For further information contact:

Mr. Samuel D. Schultz
257 Tyler Run Road
York, Pa. 17403
TTY: 854-2947

Ms. Nancy Othmer
Deafness Research & Training Center
Phone: (212) 598-2305
TTY : (212) 598-2307

CABLE TV WORKSHOP FOR DEAF HELD IN YORK, PENNSYLVANIA

A cable television workshop for the deaf citizens of Harrisburg, Lancaster, Reading and York was held today at York College. Co-sponsored by the Pennsylvania Society for the Advancement of the Deaf and New York University's Deafness Research & Training Center (DR&TC), the workshop's purpose according to PSAD President, Charles Boyd, was to "introduce deaf people to the possibilities of programming for public access as well as acquainting them with portable television equipment for program production."

Deaf Pennsylvanians from the area received instruction in the techniques of producing their own videotape programming as well as information on how to establish permanent video workshops in their cities. The participants worked in small groups, each of which had, as its goal for the day, the mission of producing a video tape program. Using portable, easy-to-use ½-inch video equipment, workshop members, most of whom had never seen a television camera before, produced programs to be shown on their local cable systems.

Such programming for special interest groups is possible because of low production costs and the additional channels that cable can provide. The workshop is a part of a larger movement to take advantage of channel time mandated by the Federal Communications Commission for use by the public.

Representatives from the Harrisburg, Lancaster, Reading, and York cable television systems attended the workshop and all expressed their willingness to aid in the project.

A video workshop for the deaf, initiated by the Deafness Research & Training Center in cooperation with the Alternate Media Center of NYU and Berks TV Cable Company, is already functioning in Reading, Pennsylvania. The Reading Group is currently at work producing programs by and for deaf people which will soon be telecast over the Reading cable system.

(more)

New York University School of Education 80 Washington Square East, New York, N.Y. 10003 (212) 598-2305 TTY (212) 598-2307

Deafness Research & Training Center
New York University School of Education
80 Washington Square East, Room 59
New York, New York 10003

Samuel D. Schultz stressed the role of CATV in decreasing the isolation of deaf people and in generally enriching their lives. "CATV offers real hope to America's 13 million severely hearing impaired people. Other major forms of electronic communication--the radio and record player, for example, are useless to deaf people. Even the telephone is ineffective without expensive or awkward attachments." Mr. Schultz, who is deaf, is a resident of York, Pennsylvania. He went on to add that current television programs rely so heavily on audio information that they are usually unintelligible to deaf audiences. Frequent off-camera voices and views of announcers or performers facing away from the camera make lipreading all but impossible. Even the standard news format is exasperatingly difficult to understand without sound.

Mike Kemp, deaf leader of the Reading workshop is convinced that, "Captions and sign language, coupled with CATV's ability to reach special audiences, can make television accessible to deaf people for the first time." The Pennsylvania workshops will serve as the model for additional cable workshops of the deaf in California, Florida, Ohio, and New York.

Bronze
Category III
Public Relations, Continuing Program
Class I

System Name: Berks T.V. Cable Company

Manager: Earl W. Haydt

Address: 1112 Muhlenberg Street, Reading Pa. 19602

No. Subscribers: 28,937

No. Homes Passed: 58,000

System Age: 10 Years

A Story About People Part II

Video Workshop for the Deaf

A national Cable Television Production Cooperative, designed to produce television programs for deaf audiences, was initiated in late January 1973 by the Deafness Research and Training Center at New York University. The concept of the cooperative is simple: programs will be produced by each individual cooperative and then distributed to all participants. To this end a pilot project was set up in Reading, training deaf groups in the use of portable videotape equipment so that they themselves could develop a model for producing programs by and for the deaf using public access to cable as a means of presenting the programs.

Reading, Pennslyvania was chosen as the site for this pilot project because an ongoing public access project was already in existence there. The Alternate Media Center in cooperation with American Television and Communications Corp., (Berks T.V. Cable Company's parent organization), had set up the original public access project in Reading in late 1971. Out of this grew the Community Video Workshop, funded and housed by Berks T.V. Cable Company.

The Alternate Media Center acts as consultant to the Deafness Research & Training Center and these groups in turn advise the local deaf organizations and the Community Video Workshop.

Training sessions began on February 10, 1973 and from this and subsequent meetings there emerged a video workshop for the deaf. A tape was made by the workshop directed to the deaf explaining the project and enlisting their support. This tape was cablecast on February 26th and again on March 3rd. Further use of the portable equipment resulted in videotapes about a local deaf club, a documentary on a local school for the deaf and tapes of a conference held in Virginia. Plans for a videotape series on sign language are in progress. The local deaf workshop has decided to develop a backlog of four programs before beginning regular weekly cablecasts.

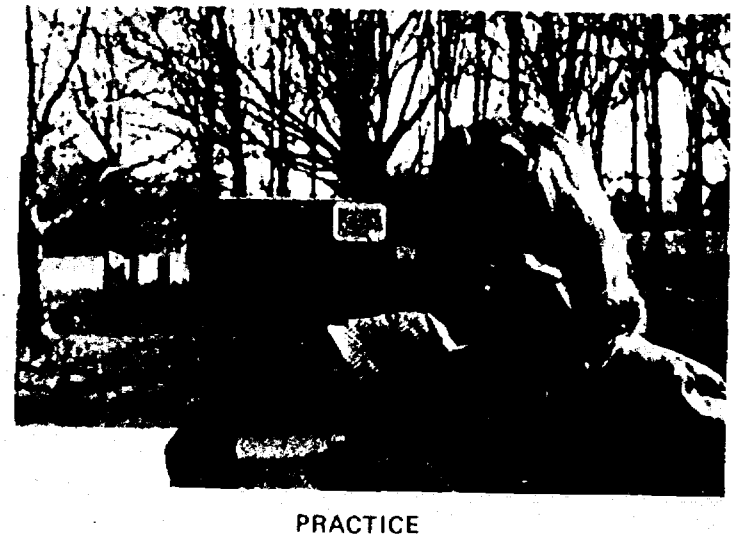
It is anticipated that similar projects in other parts of the country will soon help to fulfill the goals of the national Cable Cooperative.

1st Video Workshop for the Deaf

WORKSHOP TRAINING

INSTRUCTION – TRANSLATION

PRACTICE



PRACTICE

A COOPERATIVE EFFORT OF

DEAFNESS RESEARCH AND TRAINING CENTER
THE ALTERNATE MEDIA CENTER
THE COMMUNITY VIDEO WORKSHOP
BERKS T.V. CABLE CO.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION
WASHINGTON, D.C. 20202

Dear

Media Services and Captioned Films is assisting in the development of a special Cooperative of Cable Television Operators for the production and/or distribution of materials especially suited to deaf audiences. It is hoped that the Cooperative, which is formally sponsored by the Deafness Research and Training Center, will soon become self-sustaining. The Deafness Center is a non-profit organization and a part of New York University.

In order to establish the necessary administrative relationships within the Cooperative, a stockpile of captioned films must be available from the start. Media Services and Captioned Films has the authority and will provide the Cooperative with a variety of government-sponsored films and tapes.

We are also seeking the assistance of several commercial distributors which have already supplied commercially-produced films to Media Services and Captioned Films for captioning and distribution. At the request of Deafness Research and Training Center, we are pursuing the possibility of a trial period for showing some of these materials on systems owned by members of the Cooperative.

Several strict conditions would apply to the experiment:

1. A fixed time period, such as one year, would be agreed upon prior to the experiment.

2. Appropriate materials would be chosen by mutual agreement between the film distributor, Media Services and Captioned Films, and the Deafness Research and Training Center, prior to the experiment.

3. Copies of the selected materials would be supplied by Media Services and Captioned Films from its existing library of films.

4. The films would be distributed only following a specific request from the local deaf community.

5. Only those cable television systems which are legitimate members of the Cooperative would be eligible to telecast the materials.

6. Publicity of the telecasts would be restricted to the local deaf community.

In addition, audience and cable system operator reactions would be surveyed before, during, and after the experiment in order to determine the value of this new service for deaf people.

We anticipate a variety of possible arrangements and are prepared to be flexible in formulating them.

Thank you for your prompt consideration.

Sincerely yours,

Malcolm J. Norwood, Chief
Media Services and Captioned Films
Bureau of Education for the Handicapped

Thomas Freebairn
Television Projects Coordinator
Deafness Research and Training Center

FOR IMMEDIATE RELEASE

DEAFNESS RESEARCH & TRAINING CENTER

CONTACT:
Mr. Tom Freebairn
Mr. Frank Bove
(212) 598-2305

"A SIGN OF CHRISTMAS"

A Short Feature about Deafness on The 51st State, Channel 13
Friday, December 21, 1973 at 10 p.m.

The Deafness Research & Training Center recently assisted WNET-TV Channel 13 to produce a short, informal feature about deafness for the station's program The 51st State.

The feature, "A Sign of Christmas," will include films of deaf children performing Christmas plays, deaf adults signing poems, college students learning signs, a deaf priest delivering a Christmas sermon, and a church Christmas party.

"A Sign of Christmas" is special for deaf people because it is one of the very few television offerings they can understand. Over 30,000 deaf people reside within New York City's five boroughs--the deaf population for WNET's total coverage area is nearly 200,000.

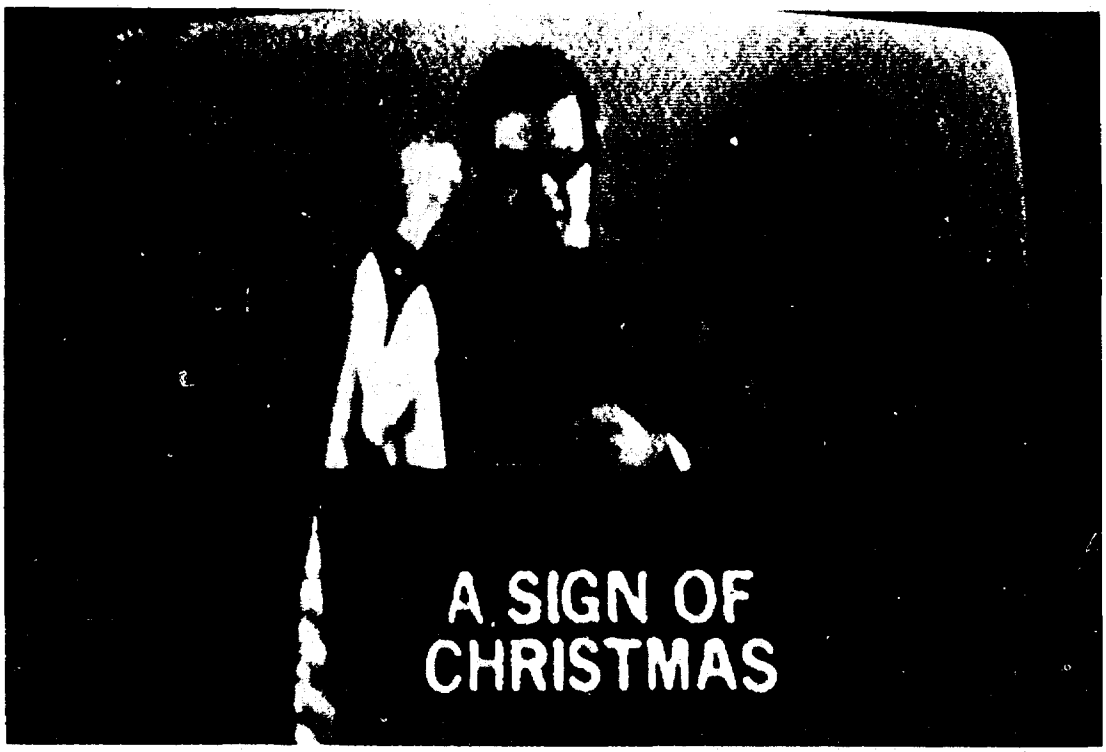
Milton Hoffman, who produced the feature, has long been interested in deaf people and their problems with television.

Deafness affects all communications which rely on sound, including radio, television, the telephone and even ordinary conversation. Television, however, also has the potential for fully visual communication, especially through the careful use of captions, sign language and the naturally expressive faces of deaf people.

The Deafness Center is involved in several activities to develop the remarkable potential of television for deaf people, from basic research on visual displays, to actual production, to audience evaluation of the final television programs.

ERIC

51ST STATE, "A SIGN OF CHRISTMAS"



Rev. Jay Croft, formerly of St. Ann's Church for the Deaf in New York City, is signing the Lord's Prayer as an introduction to the feature, "A Sign of Christmas", on the 51st State, a WNET-TV news feature program.

A SURVEY OF DEAF COMMUNITY RESPONSE TO THE TELEVISION SEGMENT "A SIGN OF CHRISTMAS"
December, 1973

A special 15-minute feature on deaf people and Christmas was presented Friday evening, December 21, 1973, by station WNET-TV, Channel 13 as part of its news program series, The 51st State. The segment, "A Sign of Christmas", was produced by Milton Hoffman of the 51st State staff, who received assistance from staff members of the New York University Deafness Research & Training Center. (The attached press release includes a brief description of the program segment.)

Because "A Sign of Christmas" represented the first presentation of its kind by WNET-TV, we at the Deafness Center were interested in surveying the response to the program by the large deaf community in the New York City metropolitan area.

Procedures. The scheduling of the segment was not determined until less than a week prior to its broadcast, leaving us very little time to publicize the event and to prepare for surveying audience reactions. Nevertheless, we were able to contact by mail approximately 250 people whose addresses were available to us, alerting them to the broadcast and requesting their assistance in a program evaluation survey. A brief questionnaire solicited their impressions of "A Sign of Christmas" as well as their views about television programming in general.

The approximately 250 deaf people (and their families) who received our questionnaires all live within the broadcast area of WNET-TV and all owned television receivers. The names were drawn from a list of people in New York and New Jersey who own teletypewriters and therefore may represent a more affluent and more socially and professionally active group than would a truly random sample of deaf people. We expect that the group is primarily white and middle class. The average age of the respondents was 44, including 30 who were over 55 years old. 66 were male and 71 were female.

Results. Of the 250 questionnaires mailed, 138 (55%) have been returned at the time of writing.* This unusually high percentage of returns appears to reflect the substantial interest of the deaf community in television for or about deaf people. Eighty-five (62%) of those responding actually watched "A Sign of Christmas". Sixty of these people indicated that they enjoyed it, 4 reported mixed reactions and 14 replied that they did not enjoy it. Among those who replied that they did not watch the program, most (75%) indicated that they did not learn about the program until after it was broadcast or that they had already made other plans for the evening. (The program was scheduled for the Friday evening before Christmas.)

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*Of the respondents, 13 were hard of hearing rather than deaf and 10 had normal hearing. These responses have not been included in the final tabulations, which are intended to convey the views of deaf people.

Knowing the degree to which deaf people understood "A Sign of Christmas" was particularly important to us. Responses included 54 people who understood all of the few captions on the segment. Not surprisingly, it did not include anyone who 'always' understood the off-screen narration--which provided the bulk of the explanation during the segment. Twenty-four respondents indicated that they 'always' understood the sign language and that 37 'sometimes' understood it. (It is unclear how many people considered that the 'cued speech' shown in the scenes filmed at the White Plains School for the Deaf should be included as sign language. Cued speech is virtually unintelligible to the general adult deaf population.)

Comprehension of Programming Elements

	Always	Sometimes	Not at All
Captions	54	10	0
Signs	24	37	3
Off-screen Narration	0	9*	53

*It is possible that some respondents meant that they understood some speech on-screen by lipreading.

Finally, we were interested in the preferences of the respondents concerning other possible television programming. We asked the question: "Would you prefer future programs to be captioned or signed?" Respondents had a choice of "a. captioned (only)", "b. signed (only)", or "c. both captioned and signed".

62 respondents (53%) preferred "c. both captioned and signed".
51 respondents (44%) preferred "a. captioned".
3 respondents (3%) preferred "b. signed".

If programs were produced or modified by WNET-TV to make them visually comprehensible, would deaf people watch these programs. We asked our respondents--and they replied with an overwhelmingly affirmative "Yes".

Discussion. Within the limits imposed by the select nature of our sample, several conclusions may be drawn from this survey. Concerning the segment "A Sign of Christmas", it appears that although most respondents reported enjoying the feature, few of them actually understood very much of it. (This lack of understanding was later confirmed at a series of informal presentations of the videotaped material to deaf people.) Appreciation would have been enhanced considerably had the program been more designed for as well about deaf people. Judging from survey responses, captions would seem to be an especially effective mode of increasing understanding and enjoyment of the segment by deaf viewers. This finding is consistent with results from other viewer preference studies that we and others have conducted. Television programs, even those about deafness, rarely are designed so that they can be understood by deaf people.

Deaf people responding to our questionnaire appear to have a high level of interest in efforts to improve their comprehension of television programming. This interest is shown both by the 55% response rate (survey researchers customarily consider a 10% return rate to be average) and by the responses to questions concerning alternative modes of adding visual supplements to television programs.

The large, potential viewing audience of deaf people is currently excluded from nearly all television programming because of television's severe shortage of visual cues and supplements. Voice-over narration, actors facing away from the camera, and faces too small for lipreading all conspire against a deaf person. Deaf people want to be able to understand and enjoy television--and they deserve consideration for their requests.

EASTERN EDUCATIONAL TELEVISION NETWORK

May 2, 1973

Mr. Tom Freebairn, Coordinator
Television Projects
Deafness Research and Training
Center
New York University
School of Education
80 Washington Square, East
New York, New York 10003

Dear Tom:

I am sorry that this has been delayed, but for many reasons time has just been flitting away. At any rate, to reconfirm our last conversation, we are going to have our Program Managers Meeting on June 19th and 20th. The meeting will take place at a hotel just outside of Washington or at our station, WNVT, in Annandale, Virginia. This will be settled shortly. On Tuesday, June 20th, we will hold a workshop-seminar on programming for the hearing-impaired. Without going into heavy detail here, the seminar will include information on the problems of the hearing-impaired; the potential of TV in reaching and working with them; specific production techniques; and information on the hearing-impaired population, their agencies and associations and future research.

Obviously Tom, it is in the last area that we would like D.R.T.C. to play a vital role. As I see it, I would like you to make available census information on the hearing-impaired population and how it can best be interpreted. I would like you to have a list of contact persons at these organizations. Since this entire seminar is geared to interest and stimulate our local stations to involve themselves in local production for this audience it is important that all of the above information be broken down so that each of our stations know precisely who they can work with locally and how many people they will reach with their programming. For this purpose I have enclosed a list of our stations and their coverage areas.

Of equal importance will be the explanation of your role as a research and evaluation center. It is my hope that D.R.T.C.

[illegible] Street, Newton Upper Falls, Massachusetts 02164 Tel. 617-969-0660

will continually be available to provide:

a. A survey of TV activity for the hearing-impaired.

b. A catalogue of materials available for broadcast.

c. Audience research

d. Research on captioning, signing and total communications.

e. Evaluation of programming

f. Consultation to stations and producers on a "as requested" basis.

g. Possible supplier of information on potential funding sources for programming.

There may be other areas that D.R.T.C. can be helpful to us in but those that I have outlined are what I would like as your concentrated presentation at our meeting.

As soon as I get out from under several other projects, I will want to talk with you more about your presentation and the set up of the entire seminar.

Again, Tom, thanks to you, Frank and David for your energy and help.

Best regards,

Steve

Stephen L. Rabin
Director of Programming

SLR/mah

cc: Phil Collyer

(Air Special Delivery)

CHRISTOPHER CLOSEUP

MEET CAROL TIPTON

"Christopher Close-Up Television Brochure 1973"

Carol Tipton, a teacher and research scientist with The Deafness Research and Training Center at New York University, is using sign language so that people with hearing handicaps may have a better chance of sharing in the ideas and opinions of the guests who appear on the weekly public affairs program, "Christopher Closeup."

"Christopher Closeup" is one of the first nationally syndicated programs to include sign language on a regular basis. "We do a lot of television programs discussing the needs of the handicapped and what can be done to help them," explains Father Richard Armstrong, director of the Christophers and the show's executive producer. "Putting Carol Tipton on the screen each week is one concrete way that The Christophers can implement our own motto—It's better to light one candle than to curse the darkness."

Among the guests for whom Ms. Tipton is translating are Nanette Fabray whose program opened the series, correspondent Charles Kuralt, Harrison E. Salisbury of the New York Times, author Mary Rodgers and many more individuals who are making an outstanding contribution in a variety of fields.

With subject matter ranging from child care (Dr. Haim Ginott) to global conflict (Roger Fisher of Harvard's Law School), Ms. Tipton gives a simultaneous "on camera" translation of the conversation between guests and co-hosts Richard Armstrong and Jeanne Glynn. Experts who hove watched her are amozed at her timing and accuracy.

At Houghton College in western New York, Ms. Tipton met three or four other students who knew sign language and who were interested in working with deaf people. "Throughout the four years of college, our interest grew. We visited St. Mary's School for the Deaf in Buffalo and the National Technical Institute for the Deaf in Rochester. After college I found out about the graduate program at New York University, went there and was offered a job while getting my Masters Degree."

Carol Tipton's interest in deaf people has brought her more than a career. She met her husband, Bill, an accountant with the Food and Drug Administration, "way back in high school. He's deaf and he was one of the first Gallaudet students that I met at our church." Seven years later they were married.

What's the best part of her work as an interpreter for deaf people? "I guess it's being involved in something where you see positive changes for good as a result of what you're doing. It's rewarding. It's exciting!"

Here are some of the many reactions to her appearance on Christopher Closeup:

Michigan: "We are very happy that the current Christopher Closeup series is being shown locally for our Deaf Community. It is our great hope that much more will be made available in Sign Language on TV programs. Congratulations again for your consideration of us."

Maryland: "My husband and I h a v e been watching Christopher Closeup for some time on Sunday mornings on Channel 5 in Washington and have always enjoyed it very much . . . Both my husband and I are hearing people but we were very pleased these past weeks to see the program interpreted in sign language so that it can also be enjoyed by deaf viewers . . . The program is great . . . Keep up the good work!"

Indiana: ". . . We wish to congratulate you on this program and wish that more people w o u l d follow your fine example . . ."

New York: "The first program in the Christopher Closeup series was so well done that I have postponed writing until after viewing the second. The quality is no chance event . . . I can now look forward to many more delightful hours of inspiring and informative television. Thank you for including deaf people in your grand efforts."

"Christopher Close-Up Television Brochure 1973"

CHRISTOPHER CLOSE-UP

Carol Tipton (oval insert) interprets Christopher Close-Up. Jeanne Glynn (right), producer and co-host of Christopher Close-Up, is interviewing Joan Ganz Cooney (left), the founder of Children's Television Workshop.

THE TODAY SHOW

Carol Tipton (round insert) interprets a segment of the Today Show, featuring Dr. William House and Dr. Howard House in a discussion about inner ear implants. Dr. Howard House is shown demonstrating the external transmitter which sends signals to a tiny stimulator device implanted in the cochlea.

WCBS-TV, CHANNEL 2 NEWS

WCBS-TV in New York City featured a 5 minute segment about the Deafness Center's interpreter training program on their evening news program, Channel 2 News. The segment was later offered for syndication to all local CBS affiliates over the national CBS network interconnection.

Carol Tipton (round insert) interprets the segment for deaf viewers in the audience. A deaf-blind girl, Michelle Craig (right), is "reading" the signs of her interpreter, Janice Acevedo (left) of the Deafness Center.

NBC Television Stations
Press Department / National Broadcasting Company / 30 Rockefeller Plaza / New York, N.Y. 10020

NEW YORK UNIVERSITY DEAFNESS RESEARCH AND TRAINING CENTER TO PROVIDE TUTORIAL ASSISTANCE ON NBC-TV'S "WATCH YOUR CHILD/THE ME TOO SHOW"

The tutorial assistance of the New York University Deafness Research and Training Center has been obtained for NBC Television Network's Monday-through-Friday program service, "Watch Your Child/The Me Too Show," it was announced by producer June Reig.

Maureen Collins, a 16-year-old deaf girl, translates the programs' content into sign language for deaf children and parents watching. During taping of the programs, Carol Tipton, a staff member of the N.Y.U. Center, will be at Maureen's side to help her keep up with the teachers and story readers.

Letters from deaf viewers, organizations and teachers of the deaf have praised NBC for supplying a "signing" translator. The principal of the William S. Baer Elementary and Junior High School in Baltimore wrote:

"All of the eighteen classes in the Hearing Impaired Department have watched your program. We want you to know that this has been a meaningful and beneficial program because we are now using total communication as our media of instruction for 154 students."

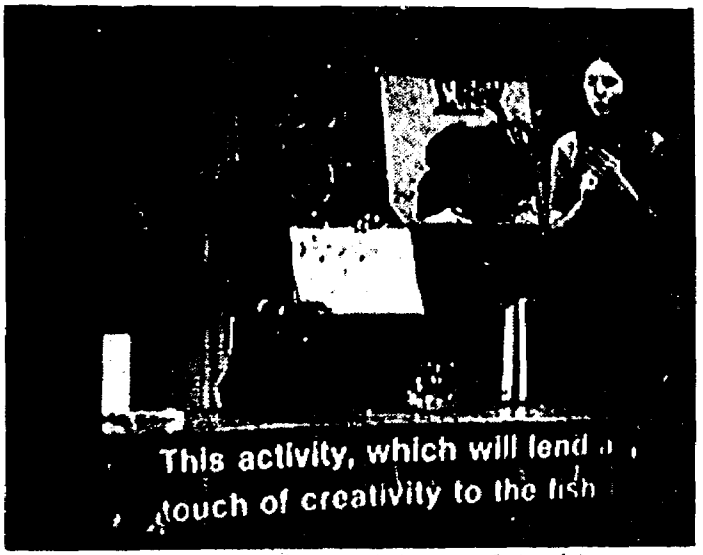
A lay reader of St. Ann's Church for the Deaf, N.Y.C., who is a member of the Registry of Interpreters for the Deaf writes:

"The interpreter is quite clever in her use of signs. I particularly enjoyed her use of several "slang" signs rather than sticking to ones which a youngster might not be familiar with. Of course the signs serve not only for the deaf child but also for the deaf parent with a hearing child. It is wonderful that you are giving the latter an opportunity to enter into a so-called normal situation often denied her."

NBC-New York, 3/16/72

The Deaf Spectrum, May-June, 1972

SIGN LANGUAGE ON NETWORK TELEVISION



Actual broadcast of NBC's "Watch Your Child/The Me Too Show." Interpreter Maureen Collins appears in the right hand corner of the TV screen throughout the program. Captions are broadcast at the beginning of each new activity.

At last, the language of signs is being used regularly on national television program.

"Watch Your Child/The Me Too Show" is an NBC-TV Network rogram presently being shown in 27 major markets across the nited States. The series is aimed at preschool children nd their parents. It features seven teachers, a different ne every day. Stars such as Raymond Burr, John Chancellor, earl Bailey and Lorne Green read stories the children will njoy.

Sixteen-year-old Maureen Collins interprets the program in o sign language for the benefit of deaf children and parnts. Maureen is a student at the St. Frances de Sales chool for the Deaf, in Brooklyn, New York. Her television areer began last November when she appeared as a contestant n "Take a Giant Step." Mrs. June Reig, producer of "Watch our Child," saw Maureen on that program and invited her to ecome a regular member of the cast.

Maureen enjoys her role in the program and feels that it s a big help to deaf people. The first few weeks of the how, she was on her own, and naturally quite nervous. She ad no assistance other than a staff member pointing out the ords in the script. As a result, she appeared to squint.

Anxious to improve the quality of its series, NBC asked he Deafness Research & Training Center (New York University) or technical assistance with the use of signs. Maureen, ike most deaf children, had never received instruction in ign language. Mrs. Carol Tipton, staff interpreter at the eafness Center, now tutors Maureen in sign language twice a eek. As often as possible, Mrs. Tipton also helps Maureen ith her signs during the taping of the programs. She t[illegible] camera in Maureen's view and signs the program c[illegible] Maureen can be sure she is keeping pace with the dialogue. Viewers have already noticed a great improvement in Maureen's interpreting. And, she no longer squints. In appreciation for Mrs. Tipton's help, NBC has appointed the Deafness Center Manual Communication Consultant to the Nation Broadcasting Company.

This is an important breakthrough in television programming for deaf people---the first regularly scheduled, nationwide program to use sign language. If you would like to see more programs like this, or if you would like to express your views of the show, write to:

Mr. George Heinemann
Vice President, Children's Programming
National Broadcasting Company
30 Rockefeller Plaza, New York, New York 10020

Below are the stations which presently carry "Wach Your Child." If it is not presently scheduled for your area, write to the program manager of your local NBC-TV station and suggest that he broadcast it.

WBAL--Baltimore, Md.	9 am	WLEX--Lexington, Ky.	4:30 pm
WBZ---Boston, Mass.	1 pm	WPTU--Palm Beach, Fla.	6:30am
WKYC--Cleveland, Ohio	1 pm	WPAT-Parkersburg, W.Va	1 pm
WHIB--Hartford, Conn.	9:30am	WAPI--Birmingham, Ala.	3 pm
WNBC--New York, N.Y.	1 pm	WHIZ--Zanesville, Ohio	4:30pm
WKYW-Philadelphia, Pa.	10 am	WMAQ--Chicago, Ill.	3:30pm
WIIC--Pittsburgh, Pa.	9:30am	WLTD--Jackson, Miss.	12:30pm
WJAR--Providence, R.I.	1 pm	KNOP--N. Platte, Neb.	3:30pm
WRDU--Raleigh, N.C.	1 pm	WPSZ--Paducah, Ky.	12:00pm
WRC--Washington, D.C.	1 pm	WAEO--Rhinelander, Wis.	5 pm
WTRF--Wheeling, W.Pa.	1 pm	KUTV-Salt Lake City, U.	11 am
WBOY-Clarksburg, W.Va.	1 pm	KUOA--Tucson, Arizona	11 am
WICU--Erie, Pa.	9:30am	KNBC--Los Angeles, Cal.	3 pm
WSPD--Toledo, Ohio	9 am		

DEAFNESS RESEARCH & TRAINING CENTER

For Immediate Release
May 1972

NEW YORK UNIVERSITY'S DEAFNESS RESEARCH & TRAINING CENTER TO PROVIDE MANUAL TRANSLATION FOR DEAF VIEWERS ON WPIX'S "EQUAL TIME"

Deaf viewers of WPIX's "Equal Time" will be able to see what is being said thanks to the introduction of a sign-language interpreter, announced the producer Janet Luhrs.

Beginning Saturday, May 6, New York University's Deafness Research & Training Center will lend the services of its staff interpreter, Mrs. Carol Tipton, for four programs. Mrs. Tipton is skilled at instantly translating speech into sign language, so that those who cannot hear can follow the dialogue even when the speaker's face does not appear on the screen.

Produced by the WPIX Community Affairs Department, "Equal Time" is broadcast on Channel 11, Saturdays at 10:30 p.m. and rebroadcast the following Wednesdays at 11:00 a.m. Marc Howard is the program's host.

WPIX is responding to numerous requests from deaf individuals and organizations for more visual communication. Through a manual interpeter, like Mrs. Tipton, deaf viewers can gain the same understanding of what is taking place as do the hearing viewers. In fact, "Equal Time" will be the first over-the-air TV show in the New York City area to attempt to meet the needs of the nearly 25,000 early deafened persons. All told, there are more than 300,000 hearing impaired persons among the 11 million residents of greater New York.

The Deafness Research & Training Center is supported, in part, by the Social and Rehabilitation Service of the Department of Health, Education and Welfare. It is the only federally funded research and training center which focuses exclusively on the problems of deafness. "In the past 24 months, we have witnessed a rapidly growing desire on the part of the television industry to serve deaf and hearing impaired audiences," noted Dr. Jerome D. Schein, Director of the Deafness Research & Training Center. "WPIX is to be congratulated for its pioneering efforts to bring television to New York's deaf viewers."

For additional information call or write the Television Coordinator, Deafness Research & Training Center, New York University, 80 Washington Square East, New York, New York 10003, (212) 598-2305 (voice), (212) 598-2307 (TTY). Mr. Bert Sund, Television Coordinator.

New York University School of Education 80 Washington Square East, New York, N.Y. 10003 (212) 598-2305 TTY (212) 598-2307

DEAFNESS RESEARCH & TRAINING CENTER

Excerpts from Original Press Release January 18, 1973

For further information contact:

Mr. Tom Freebairn	Mr. Philip Collyer	Mr. Sam Holt
Deafness Research & Training Center	WGBH-TV	PBS
(212) 598-2305	(617) 868-3800	(202) 488-5031

PRESIDENTIAL INAUGURAL TO BE CAPTIONED FOR DEAF PEOPLE

Mr. Samuel Holt, Director of Programming for the Public Broadcasting Service (PBS), announced Thursday morning that the PBS television network will carry a delayed, captioned version of President Nixon's Inaugural Address and Oath of Office. The captiones will benefit the approximately 11 million deaf and significantly hearing impaired citizens in the United States who might otherwise be unable to receive and understand the program.

As a public service, the three commercial television networks, ABC, CBS, and NBC will provide a direct video feed of the President's Inaugural Speech for captioning to station WGBH-TV, Boston.

PBS will then carry the captioned program to nearly 200 PBS affiliate stations for optional local telecast, suggested for Sunday evening from 6-7 Eastern Standard Time. Late television listings should be checked for local adjustments.

The captioned Inauguration program was planned with the financial and staff support of the Eastern Education Network (EEN) and the New York University Deafness Research & Training Center, which is supported in part by the Social and Rehabilitation Service in the Department of Health, Education, and Welfare.

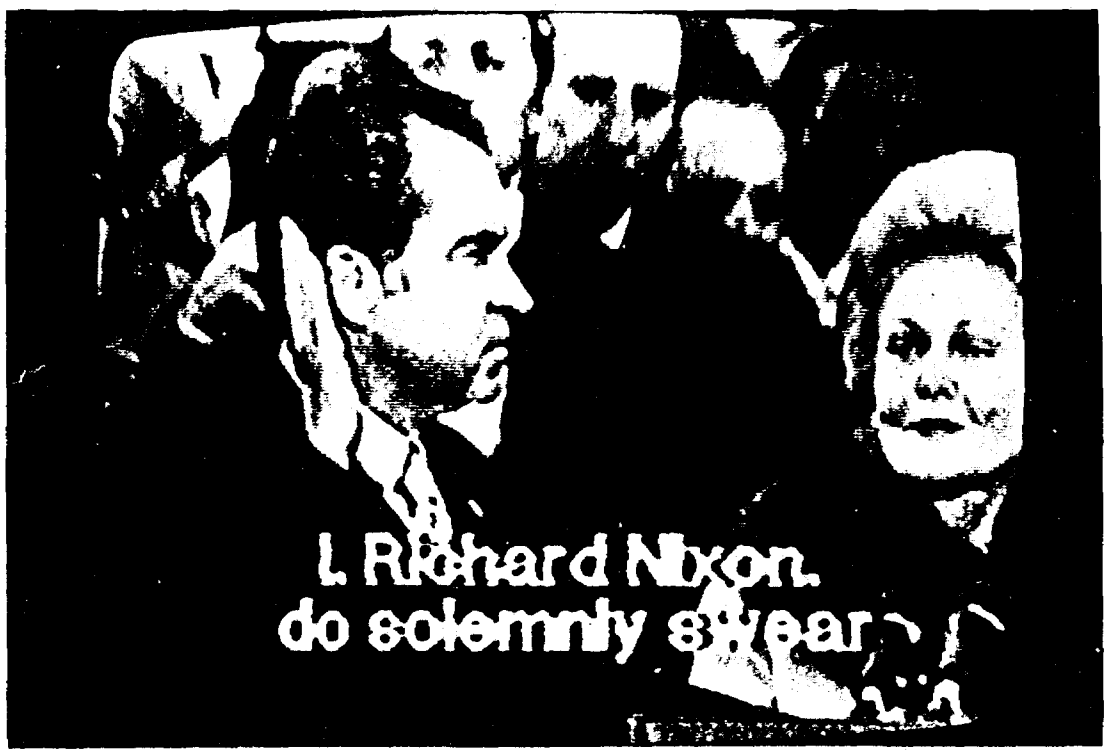
The National Council of Organizations Serving the Deaf and the National Association of the Deaf provided liaison with deaf organizations around the country.

Station WGBH is currently developing television captioning techniques under a project initiated by Mr. Malcolm Norwood, Chief, Media Services and Captioned Films, Bureau of Education for the Handicapped, Office of Education, HEW.

Several member stations of the Eastern Education Television Network (EEN) plan to carry the captioned Inauguration Saturday evening at 7 PM Eastern Standard Time. The EEN includes stations in New York City, Boston, Washington, D.C., Philadelphia, Pittsburgh and Baltimore.

ERIC

CAPTIONED VERSION OF THE PRESIDENT'S INAUGURATION AND OATH OF OFFICE



The captioned version of the President's Inauguration and Oath of Office. This program was produced by station WGBH-TV, Boston, with the assistance of the Deafness Center. The Deafness Center provided staff support for the planning and production and paid the expenses for connecting WGBH to a direct video feed from Washington. The program, dubbed in Spanish and captioned, was broadcast later the same night over the EEN network and rebroadcast the following night over the national PBS network. President Nixon is shown taking the Oath of Office.

CAPTIONED TV SURVEY--NIXON'S INAUGURATION

	NYC	DC	ROCHESTER	TOTAL
SEE NIXON	13	64	42	119 *
SEE CAPTIONS	4	45	11	60
LIKE CAPTIONS	4	45	10	59
DISLIKE CAPTIONS	0	0	1	1
KNEW ABOUT CAPTIONS	17	44	36	97
USUALLY WATCH TV	30	51	93	174
DO NOT WATCH TV	4	27	37	58
MALE	25	50	1	76
FEMALE	9	28	0	37
MISSING SEX	0	0	129	129
WHITE	32	76	1	109
BLACK	1	2	0	3
OTHER	1	0	0	1
MISSING RACE	0	0	129	129
TOTAL N	34	78	130	242

* 83 out of those 119 who saw Nixon usually watch TV

36 out of those 119 who saw Nixon do not watch TV

29 out of 83* watch 5 or less hours of TV on weekends
41 " 6 - 10 hours "
9 " 11 - 15 hours "
3 " 16 - 20 hours "
1 " 20 plus hours "

Special thanks to Dr. Ross Stuckless for conducting the portion of the evaluation at the National Technical Institute for the Deaf in Rochester, New York.

February 14, 1973

NATIONAL ASSOCIATION OF THE DEAF
814 Thayer Avenue Silver Spring, Md. 20910
Phone 301-587-1788

February 13, 1973

Dr. Jerome Schein
New York University
Deafness Research and Training Center
80 Washington Square East
New York, New York 10003

Dear Jerry:

On behalf of the members of the NAD and its Executive Board, I would like to express our sincere appreciation of the work of New York University's Deafness Research and Training Center in getting President Nixon's inaugural address on PBS.

I do not have to tell you how exciting it was. But I do know that without the initiative shown by the Center, this would never have taken place. I know that it required the combined efforts of many people and agencies to get this done. However, it was the catalyst that really got the ball rolling.

This is a major contribution to the entire hearing impaired population and I hope it will be recognized as such by others as it is by us.

Sincerely,

Frederick C. Schreiber

Frederick C. Schreiber
Executive Secretary

FCS/nk

cc: Dr. Boyce Williams
Mr. J. Fenton
Mr. Craig Mills

NATIONAL ASSOCIATION OF THE DEAF
814 Thayer Avenue Silver Spring, Md. 20910
Phone 301-587-1788

February 13, 1974

Mr. Samuel Holt
Program Director
Public Broadcasting Service
485 L'Enfant Plaza West, S.W.
Washington, D.C. 20004

Dear Sir:

On behalf of all the thousands of members of our association might I express my sincere appreciation for the magnificent opportunity the Public Broadcasting Service gave us all to view and understand via captioning, President Nixon's inaugural address on January 20th.

For the first time in my life and this is true for all of us, I was able to view and understand what was going on on this important occasion. We are deeply appreciative of the efforts made on our behalf of PBS and the networks, ABC, NBC and CBS in making this program available.

We sincerely hope that this will not be the only time such a captioned program will be shown and we would also like to offer our assistance in making known to the deaf community any future programs that PBS will caption. While we made an intensive effort to alert the nation to this wonderful opportunity to see the inaugural address, time was short and we know that thousands of people who would have also watched probably did not because they did not know it was on.

We are, of course, aware of the difficulties involved in getting the program on the air. Thus the foregoing is just to express why we would like to help with future programs.

Being deaf, I do not know if there was sound with the program. However, if there was not, might I urge that this be included in the future if at all possible? The main reason is that deaf persons are already too isolated from their families and this could be a wonderful opportunity for togetherness. Deaf people, more often than not, have children with normal hearing. And deaf children usually have parents who hear but neither can share with the other.

At any rate, I still wish to reiterate that this was a wonderful thing and we truly appreciate your efforts on our behalf.

Sincerely,

Frederick C. Schreiber
Executive Secretary

FCS/nk

NATIONAL ASSOCIATION OF BROADCASTERS
1771 N STREET, N.W., WASHINGTON, D.C. 20036 293-3500

ELBERT SAMPSON
COORDINATOR OF PUBLIC AFFAIRS

January 14, 1974

Mr. Thomas Freebairn
Coordinator, Television Projects
Deafness Research & Training Center
New York University School of Education
80 Washington Square East
New York, New York 10003

Dear Tom:

Attached is a brief questionnaire seeking information on what your station is now programming or contemplates programming for your hearing-impaired viewers. There are 13.5 million Americans who suffer from significant hearing loss. Television, as today's most important medium has an enormous potential for enriching the lives of these people. Many broadcasters have taken leadership roles in reaching and aiding this large audience by programming to their needs. Others, while wishing to take steps in this area are often uncertain about how to begin. The results of this questionnaire will, hopefully, provide that beginning.

The questionnaire was designed jointly by the NAB and the Deafness Research and Training Center, a division of New York University's School of Education. All stations who complete the questionnaire will receive a compilation of the results which will represent the first comprehensive catalogue ever assembled on the subject. This catalogue, which we plan to update periodically, will at least alert you to what is being done by fellow broadcasters for the hearing-impaired. This knowledge is, of course, a critical first step in initiating or modifying your own efforts. In addition, should you have specific questions, the Deafness Center has the resources either to answer them or to direct you to the appropriate organizations and agencies to obtain those answers.

In completing this questionnaire you will have helped to develop a most important reference for broadcasters and for all of those interested in television programming for the hearing-impaired.

Thank you in advance for your help.

Sincerely,

Elbert Sampson

Elbert Sampson

ES:lp

Enclosure

SURVEY OF TELEVISION PROGRAMMING FOR THE HEARING IMPAIRED (PART ONE)

National Association of Broadcasters
and
Deafness Research & Training Center

1. (a) Station Call Letters _____ (b) Contact person at station _____

2. (a) Have you ever broadcast any programs especially suited for hearing impaired audiences? . . . . . ☐ Yes ☐ No
(b) If yes, please list the names of the programs and their lengths.

Name	Length
_____	_____
_____	_____
_____	_____
_____	_____

NOTE: For EACH program, please complete one of the attached "Part Two" question

3. (a) Do you provide special visual supplements for your emergency bulletins so they can be understood by hearing impaired audiences?
☐ Always ☐ Usually ☐ Sometimes ☐ Never
(b) If yes, how do you produce these supplements?
☐ announcement card with supplementary information
☐ a caption "crawl" across the screen
☐ a caption "roll" up the screen
☐ other, please specify _____

4. (a) Do you own electronic captioning equipment? . . . . ☐ Yes ☐ No
(b) If yes, what kind do you own?

_____ (manufacturer) _____ (model number or year)

(c) If yes, how much captioning information can the equipment store?
☐ one line
☐ one full screen
☐ 10 minute program, fully captioned
☐ 30 minute program, fully captioned
☐ other _____ (specify)

5. What prompted you to begin programming for hearing impaired audiences? Please describe briefly the factors influencing the development of your program(s).

_____

_____

_____

(Please use reverse side of questionnaire if necessary.)

6. Do you wish (additional) information or assistance in programming or in adapting programs for hearing impaired audiences?
   - ☐ a. Yes, (additional) information
   - ☐ b. Yes, (additional) assistance
   - ☐ c. Yes, both
   - ☐ d. No, neither

7. Do you have any advice or information for fellow broadcasters who wish to air programming for hearing impaired audiences?

_ _

_ _

_ _

(Please use reverse side of questionnaire if necessary.)

NOTE: For INDIVIDUAL PROGRAM DESCRIPTIONS, continue to PART TWO of the survey.

THANK YOU VERY MUCH FOR COMPLETING THIS QUESTIONNAIRE.

SURVEY OF TELEVISION PROGRAMMING FOR THE HEARING IMPAIRED (PART TWO)

DESCRIPTIONS of INDIVIDUAL PROGRAMS

Describe only ONE program or program series per questionnaire.

1. Station Call Letters _____

2. Name of Program (or Program Series) _____

3. (a) Is the program currently running? . . . . . ☐ Yes ☐ No
   (b) What are/were the broadcast dates: from _____ (month/year) to _____ (month/year)
   (c) When exactly is/was the program broadcast?
   (i) time of day _____ (ii) day of week _____
   (d) How frequently is/was the program broadcast?
   ☐ one time only ☐ more than once a week
   ☐ once a day ☐ once a month
   ☐ more than once a day ☐ other (specify)_____
   ☐ once a week

4. What is the content of the program (e.g., news, sports, variety, public affairs, etc.)?

_____

5. What is the format of the program (e.g., news, panel discussion, documentary, etc.)?

_____

6. In what manner was the program adapted for hearing impaired viewers?
   ☐ a. sign language
   ☐ b. captions
   ☐ c. other (please describe) _____

7. What is/was the program source?
   ☐ a. produced by your station
   ☐ b. rental
   ☐ c. purchase
   ☐ d. donated

8. Name and address of supplier:

_____

_____

_____

9. (a) If you produced the program yourself, would you be willing to make this program available to other broadcasters? . . . . . ☐ Yes ☐ No
   (b) If yes, on what basis?

_____

(PART TWO CONTINUED)

10. (a) How would you characterize your program? ☐ a. public service ☐ b. news ☐ c. standard commercial programming ☐ d. other _____ (specify)	10. (b) Are/were your broadcasts of the program supported by advertising revenues? ☐ a. entirely ☐ b. partially ☐ c. not at all

11. Please describe the audience reaction to the program in terms of calls, letters, ratings, etc.

(a) by hearing impaired audiences _____

_____

(b) by hearing audiences _____

_____

12. Please attach any additional comments, news clippings, or promotional literature about your programs.

THANK YOU VERY MUCH FOR COMPLETING THIS QUESTIONNAIRE.

DEAFNESS RESEARCH & TRAINING CENTER
TELEVISION AUDIENCE SURVEY

The attached questionnaire should be completed AFTER you have watched the program. Information from the questionnaire will be forwarded to WNBC-TV. All information will be kept strictly confidential.

I. "Cochlear Implants"

WNBC-TV Channel 4 March 24, 1974 11:30 a.m.

1. Did you watch the program "Cochlear Implants" on WNBC-TV? ☐ Yes ☐ No
   (a) If no, why didn't you watch "Cochlear Implants"?
   - ☐ I am not interested in the subject.
   - ☐ I did not know about the program in time.
   - ☐ I knew about the program but had made other plans.
   - ☐ Other (please explain) _____

2. If you watched "Cochlear Implants":
   (a) What were your impressions of the program?

   _____

   _____

   (b) Did you enjoy the program? ☐ Yes ☐ No

	Always	Some	Not at all
(c) Did you understand the sign language?	☐	☐	☐
(d) Could you understand by lipreading?	☐	☐	☐

3. How many other people watched the program with you? _____

II. Other Television Programs

4. Do you have a television set in your home? ☐ Yes ☐ No

5. Would you prefer future television programs to be signed or captioned?
   - ☐ Signed
   - ☐ Captioned
   - ☐ Both signed and captioned
   - ☐ It depends on the program

6. What type of television programs would you like to have signed or captioned for deaf people? (CHECK THE TWO TYPES THAT YOU WANT THE MOST.)
   - ☐ News
   - ☐ Sports
   - ☐ Comedy
   - ☐ Variety
   - ☐ Drama
   - ☐ Adventure
   - ☐ Educational
   - ☐ Other (specify) _____

7. Would you watch programs for deaf people if they were offered on WNBC-TV?
   - ☐ Yes, always
   - ☐ Yes, most of the time
   - ☐ Yes, some of the time
   - ☐ No, never

III. Additional Information

8. I am _____ years old.

9. I am ☐ Male ☐ Female

10. Be sure to answer every question <u>either</u> yes or no. Answer the way you hear <u>without a hearing aid</u>.

(a) Can you usually <u>hear and understand</u> what a person says without seeing his face if that person whispers to you from across a quiet room? ☐ Yes ☐ No

(b) Can you usually <u>hear and understand</u> what a person says without seeing his face if that person talks in a normal voice to you from across a quiet room? ☐ Yes ☐ No

(c) Can you usually <u>hear and understand</u> what a person says without seeing his face if that person shouts to you from across a quiet room? ☐ Yes ☐ No

(d) Can you usually <u>hear and understand</u> a person if that person speaks loudly into your better ear? ☐ Yes ☐ No

(e) Can you usually tell the sound of speech from other sounds and noises? ☐ Yes ☐ No

(f) Can you usually tell one kind of noise from another? ☐ Yes ☐ No

(g) Can you hear loud noises? ☐ Yes ☐ No

11. How well do you <u>read and understand</u> sign language?

(a) Can you read some signs? ☐ Yes ☐ No

(b) Can you read everyday signs when they are presented slowly? ☐ Yes ☐ No

(c) Can you read everyday signs rapidly and easily? ☐ Yes ☐ No

THANK YOU VERY MUCH. PLEASE RETURN IN STAMPED SELF-ADDRESSED ENVELOPE.

TELEVISION AUDIENCE SURVEY

All information will be kept strictly confidential.

I. A Sign of Christmas

1. Did you watch "A Sign of Christmas" on Channel 13? (It was shown December 21 at 10 p.m. on The 51st State.) . . . . . ☐ Yes ☐ No

(a) If no, why didn't you watch "A Sign of Christmas"?
- ☐ I did not know about it in time.
- ☐ I knew about it but had made other plans.
- ☐ I don't have a TV set.
- ☐ Other (please explain) _____

2. If you watched "A Sign of Christmas":

(a) What were your impressions of the program?

_____

_____

(b) Did you enjoy the program? . . . . . ☐ Yes ☐ No

	always	some	not at all
(c) Did you understand when captions were used?	☐	☐	☐
(d) Did you understand when signs were used?	☐	☐	☐
(e) Did you understand the spoken narration? . . . . . (that is, can you hear well enough to understand television without captions or signs?)	☐	☐	☐

II. Other Television Programs

3. Would you prefer future programs to be captioned or signed?
- ☐ captioned
- ☐ signed
- ☐ both captioned and signed

4. Would you watch future programs for deaf people if they were offered on Channel 13?
- ☐ Yes, always
- ☐ Yes, most of the time
- ☐ Yes, some of the time
- ☐ No, never

III. Additional Information

5. I am
- ☐ deaf
- ☐ hard of hearing
- ☐ hearing

6. I am _____ years old.

7. I am
- ☐ male
- ☐ female

THANK YOU VERY MUCH. PLEASE RETURN IN ENCLOSED, STAMPED, SELF-ADDRESSED ENVELOPE.

Distribution of Hearing Impaired Population
By Regions of the United States, 1971.

Hearing Impaired Person

- A hearing impaired person is a person with a significant loss of hearing in one or both ears.

Deaf Person

- A deaf person is a person who cannot hear and understand speech through the unaided ear.

Prevocationally Deaf Person

- A prevocationally deaf person is a person who cannot hear and understand speech through the unaided ear, and whose loss of hearing occurred prior to age 19.

United States and Regions	Non-Institutionalized Population (1971)	Hearing Impaired	Deaf	Prevocationally Deaf
United States	202,360,000	13,362,842	1,767,046	410,522
Northeast	48,376,000	2,891,380	337,022	83,909
North Central	56,124,000	3,683,226	541,465	135,653
South	62,880,000	4,280,177	562,756	123,260
West	34,980,000	2,508,059	325,803	67,700

Rate per 100,000 Population

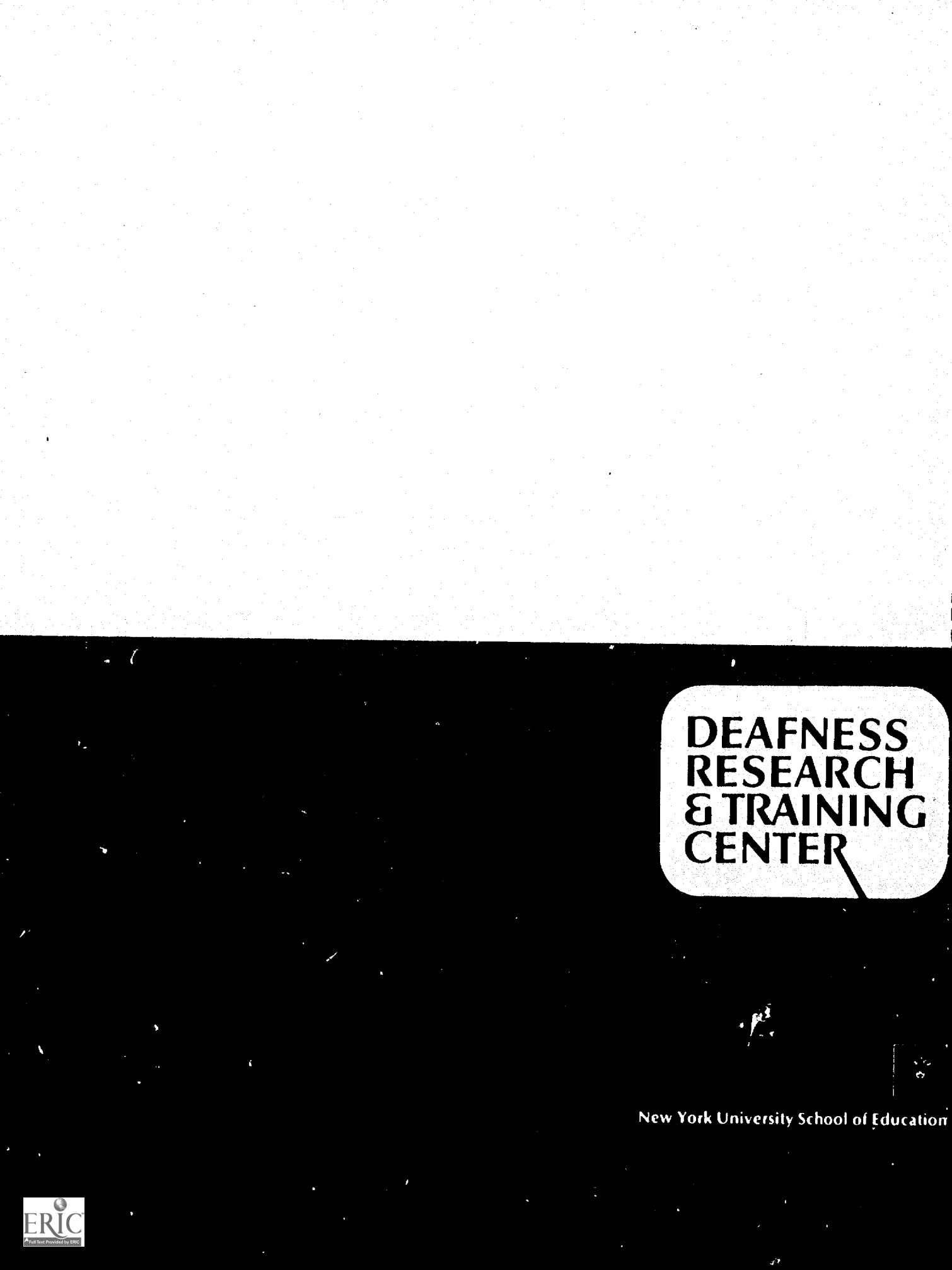
United States	6,603	873	203
Northeast	5,977	697	173
North Central	6,563	965	242
South	6,807	895	196
West	7,170	931	194

Distribution of Hearing Impaired Population
by States of the United States, 1971.

State	Non-Institutionalized Population	Hearing Impaired	Deaf	Prevocationally Deaf
Alabama	3,445,000	234,498	30,832	6,753
Alaska	286,000	20,480	2,664	553
Arizona	1,824,000	130,613	16,986	3,530
Arkansas	1,933,000	131,577	17,299	3,789
California	19,942,000	1,427,928	185,708	38,595
Colorado	2,247,000	160,902	20,926	4,349
Connecticut	3,003,000	179,486	20,921	5,209
Delaware	551,000	37,506	4,931	1,080
District of Columbia	725,000	49,350	6,489	1,421
Florida	6,938,000	472,263	62,093	13,600
Georgia	4,585,000	312,096	41,035	8,988
Hawaii	740,000	52,990	6,891	1,432
Idaho	730,000	52,274	52,274	1,413
Illinois	10,968,000	719,792	105,815	26,510
Indiana	5,181,000	340,011	49,985	12,522
Iowa	2,804,000	184,017	27,052	6,778
Kansas	2,185,000	143,395	21,080	5,281
Kentucky	3,235,000	220,203	28,952	6,342
Louisiana	3,636,000	247,499	32,541	7,128
Maine	971,000	58,036	6,765	1,685
Maryland	3,934,000	267,783	35,208	7,712
Massachusetts	5,612,000	335,423	39,097	9,734

State	Non-Institutionalized Population	Hearing Impaired	Deaf	Prevocationally Deaf
Michigan	8,832,000	579,614	85,208	21,347
Minnesota	3,813,000	250,234	36,786	9,216
Mississippi	2,204,000	150,024	19,725	4,320
Missouri	4,632,000	303,982	44,688	11,196
Montana	705,000	53,706	6,566	1,364
Nebraska	1,475,000	96,799	14,231	3,565
Nevada	499,000	35,732	4,647	966
New Hampshire	743,000	44,408	5,177	1,288
New Jersey	7,091,000	423,821	49,401	12,299
New Mexico	1,016,000	72,753	9,462	1,966
New York	17,982,000	1,074,764	125,275	31,190
North Carolina	5,042,000	343,204	45,124	9,883
North Dakota	602,000	39,507	5,808	1,455
Ohio	10,578,000	694,198	102,053	25,567
Oklahoma	2,574,000	175,209	23,036	5,046
Oregon	2,162,000	154,815	20,174	4,184
Pennsylvania	11,619,000	694,455	80,946	20,153
Rhode Island	906,000	54,151	6,312	1,571
South Carolina	2,548,000	173,440	22,804	4,995
South Dakota	653,000	42,854	6,299	1,579
Tennessee	3,964,000	269,825	35,477	7,770
Texas	11,281,000	767,887	100,961	22,113
Utah	1,098,000	78,626	10,225	2,126
Vermont	449,000	26,836	3,128	780

State	Non-Institutionalized Population	Hearing Impaired	Deaf	Prevocationally Deaf
Virginia	4,535,000	308,692	40,587	8,890
Washington	3,394,000	243,036	31,608	6,568
West Virginia	1,750,000	119,121	15,662	3,430
Wisconsin	4,401,000	288,823	42,460	10,637
Wyoming	338,000	24,204	3,148	654



DEAFNESS
RESEARCH
& TRAINING
CENTER

New York University School of Education

ERIC