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Texas Tech Conference '76

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We have enclosed this form in the hope that it will assist you in formulating your review comments.

*If either of these are checked, use blank pages to explain. Refer to question number, page number, and section of report affected.

	YES*	NO*	COMMENTS
GENERAL CHARACTERISTICS			
1. Does the report present sufficient knowledge about the variety of problems associated with disability?	_____	_____	_____
2. Does the report present sufficient knowledge about human rehabilitation techniques?	_____	_____	_____
3. Is the report objective in its presentation of			
a. data?	_____	_____	_____
b. issues?	_____	_____	_____
c. recommendations?	_____	_____	_____
4. Do you find the report to be promotional in nature?	_____	_____	_____
CONTENT			
5. Is the scope of the report sufficiently defined?	_____	_____	_____
6. Is the report well organized?	_____	_____	_____
7. Is the subject matter well covered?	_____	_____	_____
8. Is supporting information adequately and properly presented	_____	_____	_____
9. Does the report contain unsubstantiated or editorialized comments?	_____	_____	_____
EDITORIAL CHARACTERISTICS			
10. Is the language of the report sufficient for the audience?	_____	_____	_____
11. Should the report be shortened, expanded, or strengthened? How?	_____	_____	_____
12. Would this report be improved by additional illustrations? If yes, please list specific suggestions:	_____	_____	_____

USEFULNESS OF THE REPORT	YES*	NO*	COMMENTS
13. Do you, in fact, after reading the report feel that your competence to analyze, judge, or formulate rehabilitation-selected policy is enhanced?	_____	_____	_____
14. Do you judge the report to be of value to the following?			
a. The average citizen	_____	_____	_____
b. State and local government personnel	_____	_____	_____
c. Federal government personnel	_____	_____	_____
d. Businessmen and corporate executives	_____	_____	_____
e. Industrialists	_____	_____	_____
f. Rehabilitators	_____	_____	_____
g. Teachers and students	_____	_____	_____
h. Disabled persons	_____	_____	_____
15. Do you believe this report to be a worthwhile addition to the present bodies of knowledge about disability, rehabilitation, and policymaking?	_____	_____	_____

Further Recommendations: Would you please indicate within this section the names and complete addresses of those individuals or organizations that you feel should be included within our plan of dissemination for this report.

Texas Tech University

RESEARCH AND TRAINING CENTER IN MENTAL RETARDATION

P.O. Box 4510

Phone (806) 742-5161

Lubbock, Texas 79409

August 30, 1976

Mr. Lex Frieden
New Options Research Director
Texas Institute for Rehabilitation
and Research
P.O. Box 20095
Houston, Texas 77025

Dear Lex,

I hope that I thanked you for reacting to the spinal cord injury report. If not thank you very much. I agree completely with your devastating criticisms (As I said, I was embarrassed to send it to you.). I hope that we do better now that the paper is in Linda Vengroff's hands. I will probably want to send you the draft when we have it done.

Dr. Bensberg forwarded to me the bibliographies on housing from two of your papers. By the way, I saw the reports from the White House Conference and read the summary of your awareness paper on housing. As some of the references will be difficult to obtain, and as I have a high regard for your expertise, would you be agreeable to sending us copies of your papers and any other good papers you have on housing for the handicapped? Cynthia Spanhel and I are jointly working on the housing paper and want to do the best we can. I just know you can help us immensely.

We would happily pay Xeroxing and mailing costs. As always, I appreciate your efforts to help us in this project. God knows we need it.

Sincerely,



Carol K. Sigelman, Ph.D.
Director of Research

CKS/cl

Texas Tech University

RESEARCH AND TRAINING CENTER IN MENTAL RETARDATION

P.O. Box 4510

Phone (806) 742-3131

Lubbock, Texas 79409

September 22, 1976

Mr. Lex Frieden
Texas Institute for Rehabilitation
and Research
1333 Moursund Ave.
Houston, Tx. 77030

Dear Lex,

I have been trying to get you for a couple of weeks and will call Monday the 27th but wanted to write to warn you. I will be attending the R&T Center advisory committee meeting the 30th and 31st, next Thursday and Friday, and thought that it would be fruitful to bring Cynthia Spanhel to gather information which you might have on spinal cord injury and housing for the disabled. I'm assuming that you have a good personal library on housing and that elsewhere at TIRR we might be able to track down difficult to find materials on spinal cord injury. We would have in mind some specific topics or even materials to look for but could also benefit from browsing.

If you feel you have enough to make Cynthia's trip worthwhile and could make materials accessible to her, let me know. I feel we do need more material, particularly the kind that does not show up in the published literature and that you probably have.

I've also been trying to get you so that I can follow up on your recent requests for reports from the technology assessment conference. I am not sure exactly what you want but will try to bring whatever you want with me.

If I don't get through to you, can you try to call me about all of this early next week? Thanks.

Sincerely,



Carol K. Sigelman, Ph.D.
Director of Research

CKS/cl

August 6, 1976

Mr. R. A. Dudek, P.E.
Horn Professor and Chairman
Texas Tech University
P. O. Box 4130
Lubbock, Texas 79409

Dear Dr. Dudek:

Thank you for your letter of July 30, 1976. I really enjoyed the T.A., and learned a great deal from it. I am more than glad to assist further - please call on me anytime.

I have recently sent additional materials to Jim Burns, Carol Sigelman, and Gerald Bensberg. I have also been corresponding with Emory Davis.

Your hospitality in Lubbock was exceptional. I really appreciate the opportunity afforded me by participation in your project. I believe TA is a useful approach to identifying and solving rehabilitation related problems, and I respect you for assuming the responsibility to do it.

Sincerely,

Lex Frieden
New Options Research Director

LF/asm

Texas Tech University

College of Engineering
P.O. Box 4130
Lubbock, Texas 79409

Department of Industrial Engineering

July 30, 1976

Phone (806) ~~742-1271~~ ⁷⁴²⁻³⁵⁴³

Mr. Lex Frieden
9667 Meadowvale
Houston, TX 77042

Drar Mr. Frieden:

We hope that you are fully recovered from having participated in our week-long work session discussion held in conjunction with the Technology Assessment: Human Rehabilitation Techniques. We wish to express our sincere appreciation for the contributions you made.

The group you participated in on Environmental Change produced some very interesting results. We are now beginning to carefully analyze these results, and we intend to use the experience and expertise we gain from the work of your group to examine further consequences within Environmental Change. We would like to call on you from time to time to examine and comment on the work our team is doing in continuing your own work here.

We very much appreciate the further work you have already undertaken with your recorder, Linda Vengroff, to complete the modeling work within your program thrusts. The results of your continued work promise to be most interesting.

You should receive a full report of the work session by late October. This report will reflect your further work on the project and the work of the Texas Tech team in assembling the materials from your group with those from other groups.

Again, thank you for your participation in our week-long session, and thank you for your continued work with us in making our technology assessment as thorough and authoritative as possible.

Sincerely,



R. A. Dudek, Ph.D., P.E.
Horn Professor and Chairman

as

Texas Tech University

RESEARCH AND TRAINING CENTER IN MENTAL RETARDATION

P.O. Box 4510

Phone (806) 742-3131

Lubbock, Texas 79409

July 25, 1976

Mr. Lex Frieden
9667 Meadowvale
Houston, Texas 77042

Dear Lex,

I'm sending you a copy of the second model our group hurriedly put together. Jim Burns would appreciate your assessment of the weight of each variable. Could you place numbers next to each variable and send the completed model to Jim as soon as possible?

A final personal note, thanks for your participation in the meetings. I really enjoyed talking with you and hope we have a chance to work together again.

Sincerely yours,

Linda

Linda Vengroff

*Dr. James Burns
Dept. of Systems*

TA(Technology Assessment): Human Rehabilitation Techniques

Introduction

Technology Assessment is a class of policy study which systematically identifies and explores the full range of social economic, environmental, architectural and other consequences of the introduction of a new technology into our society; or of the extension or modification of an existing technology, more extensively, intensively or in new ways; with special emphasis on those consequences that are unintended, indirect or delayed.

According to Joseph F. Coates of the Office of Technology Assessment there are six basic assumptions which underlie technology assessment [1]. These are: (1) technology assessment is a policy tool, (2) technology assessment is likely to be iterative and part of an interlocking set of studies, (3) new technological knowledge creates new ignorance, (4) a major policy need is the organization of certainty and uncertainty to define effective strategies and tactics for managing any particular technology, (5) more information and analysis rather than less promotes better decisions, and (6) in the long range, indirect and unanticipated effects of a technology are often more significant than the immediate or planned consequence. In addition to making these basic points, Coates suggests that the meaning of technology must be viewed in its broadest sense. It is apparent then, that technology assessment has as its

objective to anticipate and influence the societal effects of technology with greater comprehension and confidence.

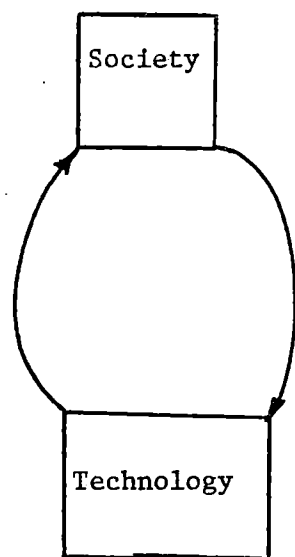
The origin of the concept of technology assessment cannot be traced to any one person or group. It is quite probably a result of a broad change in the national conscienceness which is manifested in the environmental impact policy act of 1969 which specifies that environmental impact statements must be prepared for every action which may "sufficiently effect the quality of the human environment." It is also a result of the change that brought "technology forecasting" to industry and the military. Public discussion of the concept of technology assessment began as early as 1965 with hearings by the House subcommittee on Science Research and Development of the Committee on Sciences and Astronautics. In 1966 the establishment of an Office of Technology Assessment was first proposed in the House of Representatives and in 1972 Congress passed a law establishing the Office. Since then, the Office of Technology Assessment (OTA) has joined the much larger General Accounting Office and the Library of Congress as a Congressional Service Agency. The purpose of OTA is to collect Technology Assessment information for forwarding to both Congress and the public. Parallel with the interest of Congress, the National Science Foundation through its division of Research Applied to National Needs started a program of funding for TA research. First projects dealing with TA methodology and candidates technologies for

assessment were funded. Subsequently specific technology assessment projects were funded. The project discussed here is funded by the NSF through its Office of Exploratory Research and Problem Assessment.

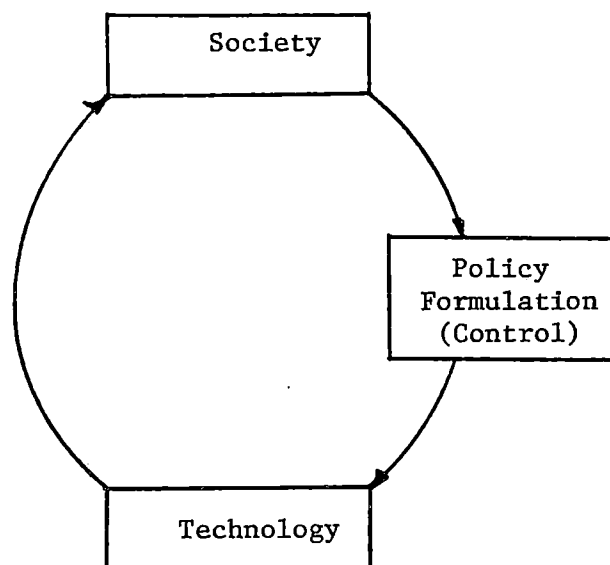
Since it is generally accepted that technological change is necessary for the growth and benefit of society it also behooves society to utilize technology as a means to aid the development and control of Technology. Figure 1 [4] gives a conceptual idea of where technology assessment fits into this scheme of development and control of technology through policy formulation.

According to Dr. Vary T. Coates [2] of George Washington University "Technology Assessment is an attempt to reintergrate fields of analysis on a larger scale in order to address the impacts of technological development--the consequences of technology as it affects systems, institutions and processes which are community wide or even regional, national, societal or global in scope." The consequences are of importance to economics, environment, and societal values and functioning. Technology Assessment is holistic and decision oriented. It is not a discipline or even a combination of disciplines, but it is an approach to analysis for policy formulation. It is more an art form than a science. TA has no specific methodology of its own, but it borrows from every possible source such as economics, operations research and the social sciences in its approach to any problem [2].

Three types of technology assessment are generally recognized. These are project, technology and problem oriented assessments.



(a)



(b)

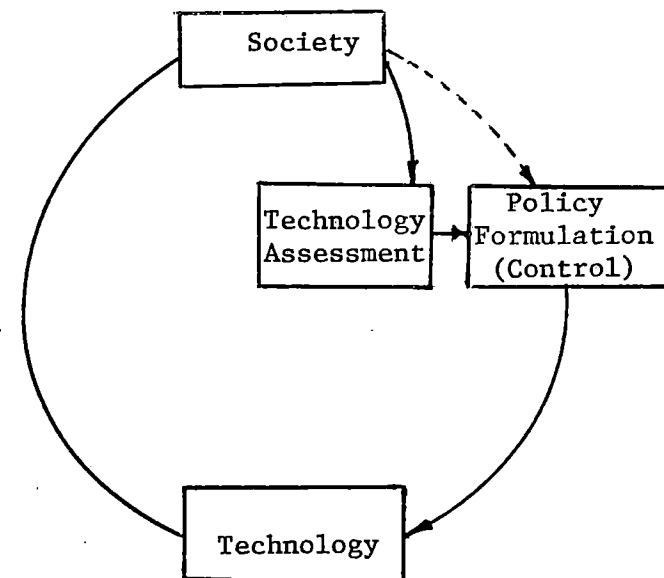


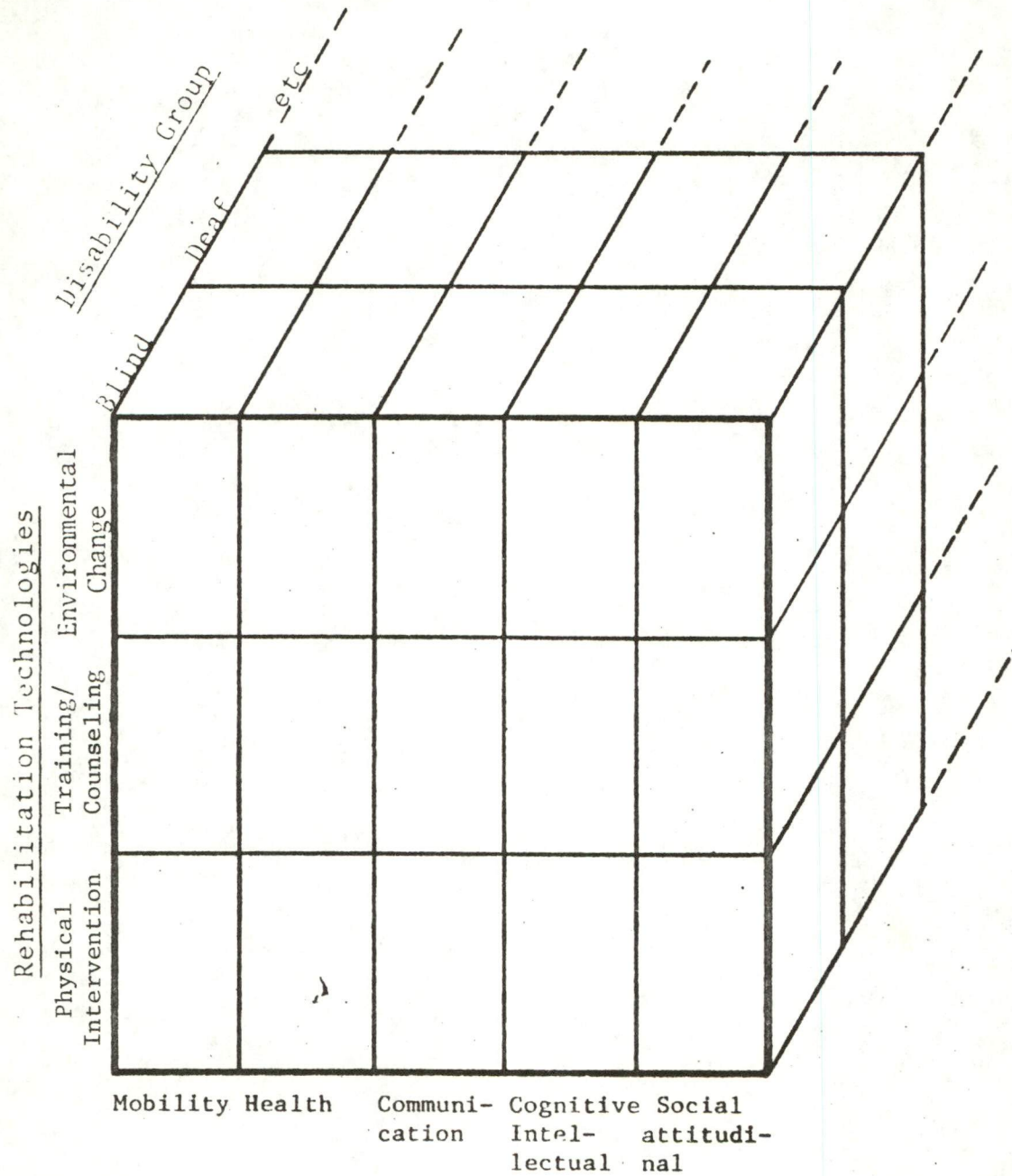
Figure 1. Technology Assessment's Place
In Society - Technology Interaction System

A project driven assessment is one which begins with a specific project plan for a specific purpose and region or area, such as a coal energized power plant on the Colorado River. A technology driven assessment is one which gives consideration to a range of applications of a total technology, such as the automobile. A problem driven assessment is one which considers a major problem area of technological application, such as life extending technologies, and considers a variety of technologies which can serve a variety of purposes in solving the problem at hand. It is generally easiest to get a full analysis accomplished of a project oriented technology assessment while with a problem oriented TA, it is more difficult due to the fact that there are a multitude of technologies that come into play. It is a problem oriented technology assessment that is being discussed in this paper. Seven steps are normally utilized in a technology assessment [3]. They are: (1) define the technology task; (2) describe relevant technologies; (3) develop state of society assumptions; (4) identify impact areas; (5) make a preliminary impact analysis; (6) identify action options and; (7) complete the impact analysis. To achieve comprehensive TA's, several iterations through these steps should be utilized.

Conceptual Framework for TA: Human Rehabilitation Techniques

In order to delineate the scope and nature of rehabilitation problems and analyze the technologies which are or can be brought to bear on these problems, a conceptual framework as shown in Figure 2 is being utilized. This model facilitates three types

Figure 2 Conceptual Model



Life Functions

of analysis: analysis by disability, analysis by life function, and analysis by rehabilitation technology.

In order to achieve rehabilitation goals one must have a clear understanding of the needs of the disabled population and of barriers to the adequate functioning of the disabled as community members and/or workers. A most logical starting point is to analyze each disability group separately on such dimensions as incidence, etiology, major handicap and so on. Nine major headings representing the major types of disability (see Figure 3) provide the basis for selecting specific disability groups for intensive case study and data analysis. Clearly some of the conditions are more disabling than others and emphasis will be placed on those which result in significant impairment in the ability to function as a member of the community and a member of the labor force.

A major task of technology assessment in the field of human rehabilitation is to search out ways in which duplication of services can be reduced or avoided. This can be accomplished best by focusing attention on functional skills regardless of etiological handicapping condition. In analyzing the functional needs of the disabled population, ignoring the handicapping condition, five life functions come to the forefront--mobility functions, health functions, communication functions, cognitive intellectual functions, and social attitudinal functions. This life function paradigm permits a clear identification of the critical functional needs of individuals labelled with one or more handicaps (see Figure 4).

Figure 3

Disability Group Analysis Model

Major Disabling Conditions
(Breakdown from Social Security
Survey of the Disabled: 1966)

Disabilities Selected for
Intensive Case Study in the
Project

Musculo-skeletal disorders

Rheumatoid arthritis

Cardio-vascular disorders

Coronary heart disease

Respiratory disorders

Emphysema

Digestive disorders

Cancer of the colon/rectum

Urogenital disorders

Kidney disease

Endocrine-metabolic disorders

Diabetes mellitus

Mental disorders

Mental retardation

Schizophrenia

Nervous system disorders

Epilepsy

Paralysis or loss of motor
control associated with (1)
cerebral palsy (2) stroke, or
(3) traumatic spinal cord
injury

Sense organ disorders

Hearing impairment-deafness

Visual impairment-blindness

Figure 4

Life Functions: Guide to the Meaning of Categories

1. Mobility functions. Limitation in the area of mobility includes difficulty using manual skills to manipulate objects or devices, difficulty locomoting within a living or working environment, and/or difficulty moving from place to place in the community.

Example of group with major impairment: quadriplegic.

2. Health functions. If impaired in this area, the person is lacking the general sense of physical well-being called good health; must devote a large part of his or her energies to staying alive or coping with pain; or must avoid activities which would risk life or well-being. If a condition is controlled--for example, if medicine can eliminate the risk of an epileptic seizure as long as it is taken, the person is not limited in the health functions area. If, however, needs for continuing treatment interfere with living and working, a limitation exists.

Mental health has been deleted from this category so that it more squarely focuses on physical health.

Example: heart disease patient.

3. Communication functions. If impaired, the person has difficulty sending and/or receiving messages from other persons, either because of impairment in the senses or mechanisms of communication or because the content of communication is deviant (as in the case of the mentally ill).

Example: deaf.

4. Cognitive-intellectual functions. The person has difficulty intellectually manipulating symbols and objects, acquiring new cognitions and behaviors, and/or transferring learning to new situations. The impairment can be congenital or it can be environmentally caused. The mentally ill, and even the alcoholic or drug abuser, may have difficulty learning or transferring learning to new settings. The problem can be slow learning or distorted thought and perception.

Example: the mentally retarded.

5. Social-attitudinal functions. If impaired, the person cannot accept himself and his abilities, has difficulty relating to other people, or is not motivated to improve himself as a member of the community or labor force. Impairments may also include deficiencies in "coping skills" which involve recognizing one's self interest and maximizing them within the constraints set by society. Although impairment in this area may be directly caused by society's intolerance or misconceptions, we are concerned only with the way the disabled person feels about himself and relates to others--whatever the cause. This type of impairment may be especially severe for those who suffer a loss due to injury or disease after childhood.

Example: paranoia (?) prostate cancer (?)

Whatever the disability category, whatever the functional needs of the disabled person, three major types of technology are typically employed in rehabilitation and the third axis of the conceptual framework model differentiates among these technologies; physical intervention, training and counseling, and environmental change technologies. Thus, all technologies, those that change the individual, through physical intervention or training, and those technologies which are utilized to change the environment about him will be considered (see Figure 5). One broad related technology, that which involves changing the structures and functions of service delivery systems, will also receive attention in this technology assessment.

Program thrusts -- which are made up of goal oriented technological programs utilizing groups of individual technologies combined to provide a program of benefit for a specific problem of the disabled -- will be defined and these in turn will be subjected to an interdisciplinary impact analysis.

General Methodology for TA: Human Rehabilitation Techniques

Utilizing the framework discussed above, the general methodology which will be utilized in the TA of human rehabilitation techniques is depicted in Figure 6. The following discussion elaborates the primary steps.

The program thrusts are being developed as tree diagrams, one for each of the three rehabilitation technologies and one for the related technology of service delivery systems. The initial

Figure 5

Rehabilitation Technologies

Technologies are categorized for the purpose of the project into those which change the disabled, through physical intervention, or training/counseling, and those which change the disabled person's milieu through environmental change or through change in the service delivery system. Technologies of service delivery while they belong in a larger class of technologies which alter the environment of the disabled, are also conceived as distinct from the three major rehabilitation technology classes, and, in part, as an alternative to innovation in rehabilitation technology.

Physical Intervention. Technologies which change the person through physical means, including use of physical devices (e.g., prosthetics), introduction of chemical change (e.g., medicines, dietary programs), or surgical techniques (e.g., transplantation, neurosurgery). These technologies can sustain life, restore functions, or augment functions.

Training/Counseling. Technologies which consist of training, education, or therapy designed to sustain, restore, or augment functioning by altering skills, cognitions, or attitudes.

As with physical intervention, the aim is an alteration in functioning, but it is achieved without physically altering the body and its processes.

Training/counseling technologies include the whole range of academic and vocational education, corrective therapies, and psychological counseling and therapy.

Environmental Change. Technologies designed to change the environment and thereby effect a change in the disabled person's functioning. This class includes the broad areas of community design, design of living environments, alterations in vocational environments, and transportation. The concept of community design is broadly conceived to include changes in both the physical and social environment, e.g., adaptive architecture and community attitude change technologies.

Change in Service Delivery. Technologies which result in a change in the delivery of available rehabilitation technologies or which have independent impacts on the welfare of disabled.

The service delivery system and the technologies within it can be analyzed in terms of management concerns, resource requirements, and technology utilization.

Whether or not rehabilitation technology changes, there are many means by which delivery of rehabilitation services can be changed. Examples of change in service delivery include change in eligibility requirements or definitions of a disability, intra-organizational change in structure and/or function, inter-organizational change in structure and/or function, alteration of flows dollar resources, and changes in the specific agents providing rehabilitation service. Issues which might arise in this area include public versus private sponsorship of rehabilitation, centralization versus localization of service, direct subsidy of disabled individuals versus funding of service delivery components, and consolidation of services for disability groups with related needs versus specialization of service components.

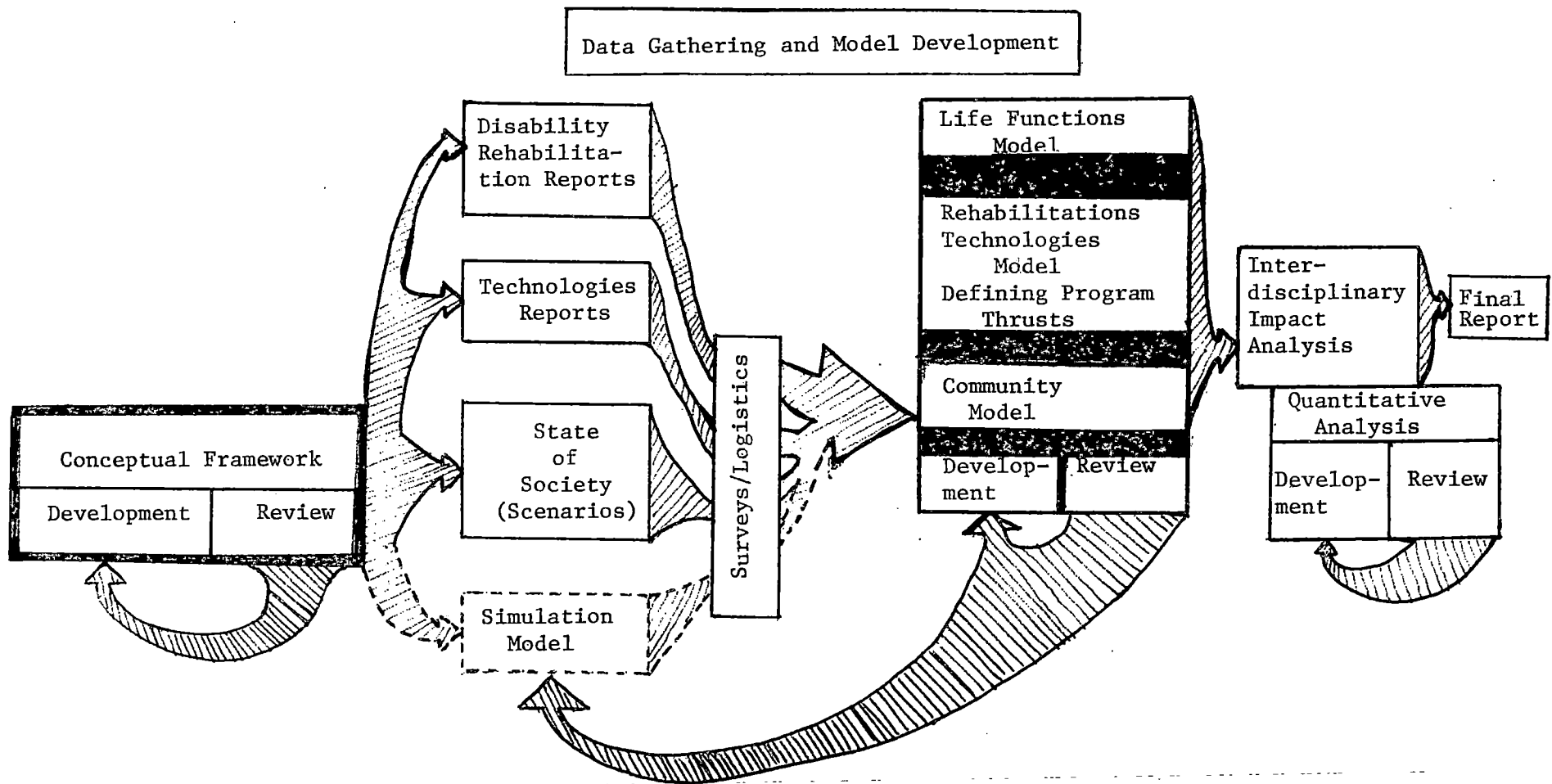


Figure 6. General Methodology

development of the tree diagrams is depicted in Figures 7-10. These diagrams were developed by the research team utilizing brainstorming and a modified delphi procedure. Each branch depicts a series of levels of technology, or more broadly stated, groups of technologies which are utilized and/or have potential for utilization in the rehabilitation of the disabled. As the branch grows from the "trunk" (rehabilitation technology) the group of technologies becomes more specific at each level. If the branch were carried out to its furthest extremity, very specific technologies would be delineated which would make up the total group required to carry on the efforts of rehabilitation indicated in the lower levels. Since a technology assessment of all these specific technologies would require more time than is available for the study and at the same time would not necessarily yield a more accurate assessment, the program thrust which will be subjected to assessment by the work sessions group will be defined at the third to fifth levels of technologies. As depicted in Figure 6 of the general methodology, this initial development of program thrusts will be subjected to review so that a greater number of experts will be utilized in the determination of potential program thrusts. While this review is going on, the tree diagrams and program thrusts developed do form the basis for the data gathering/model development phase.

One of the basic efforts of the project is to bring together the required data relative to disabilities, the rehabilitation

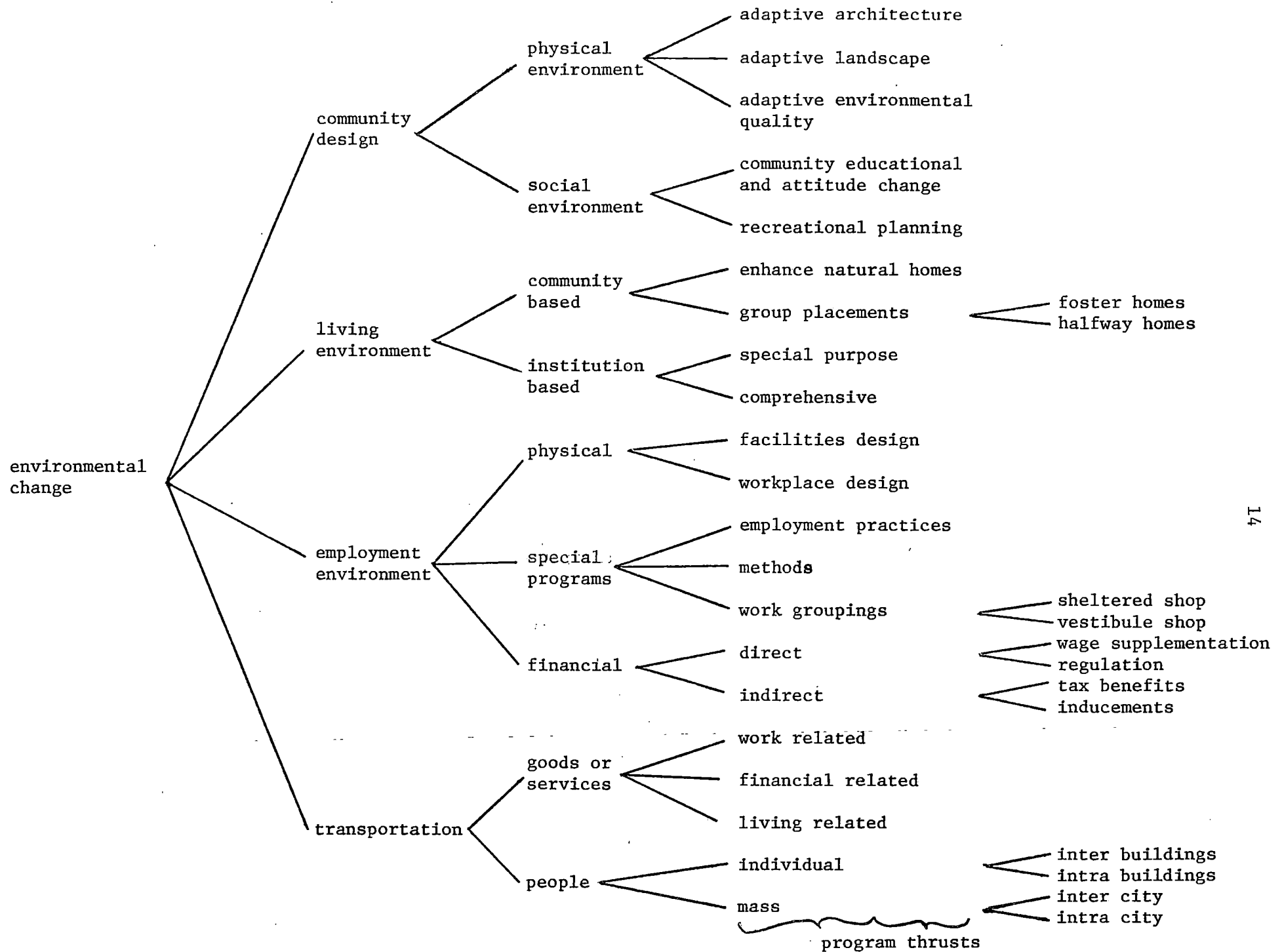


Figure 7. Tree Diagram: Technology Levels for Environmental Change

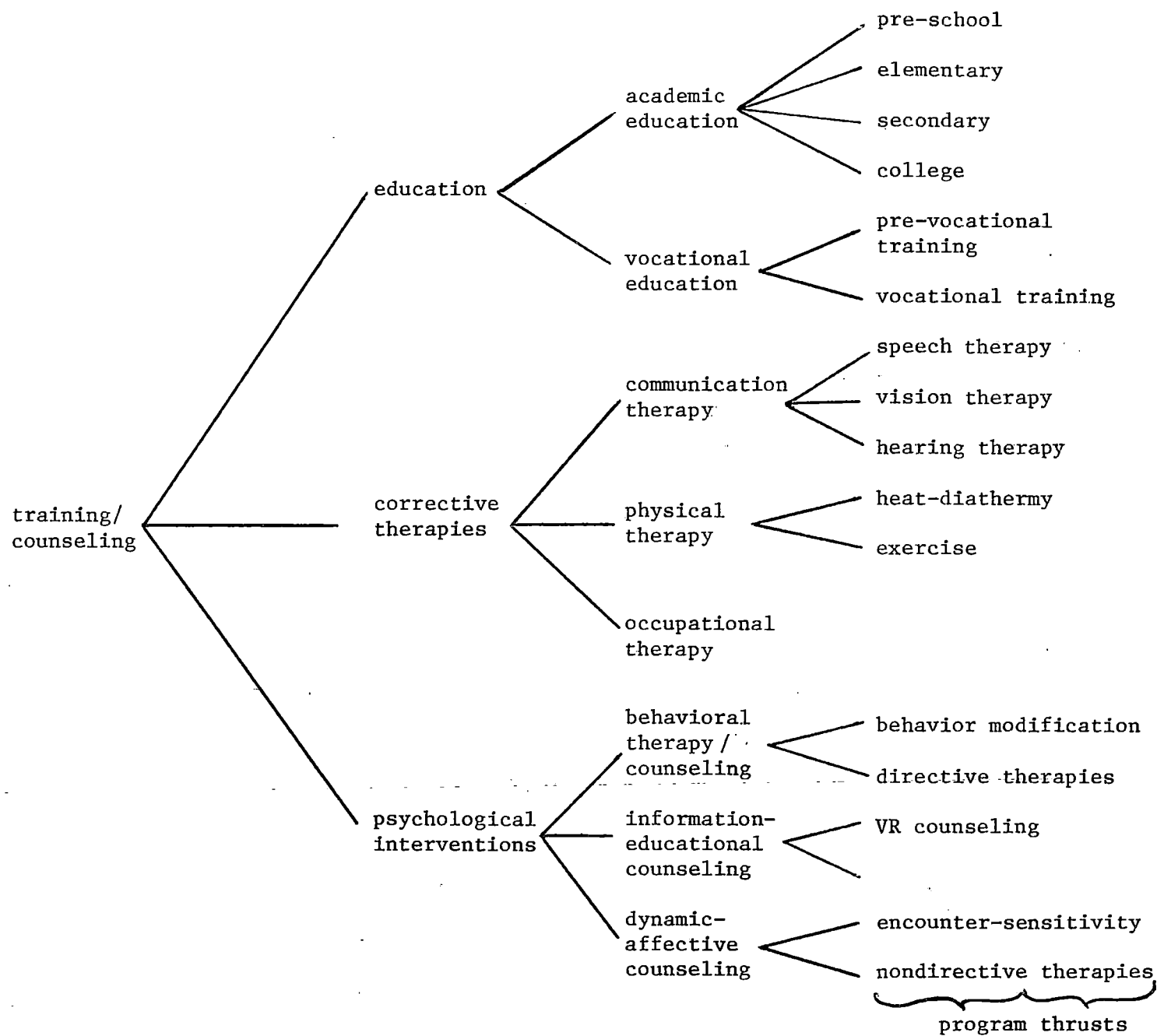


Figure 8. Tree Diagram: Technology Levels for Training and Counseling

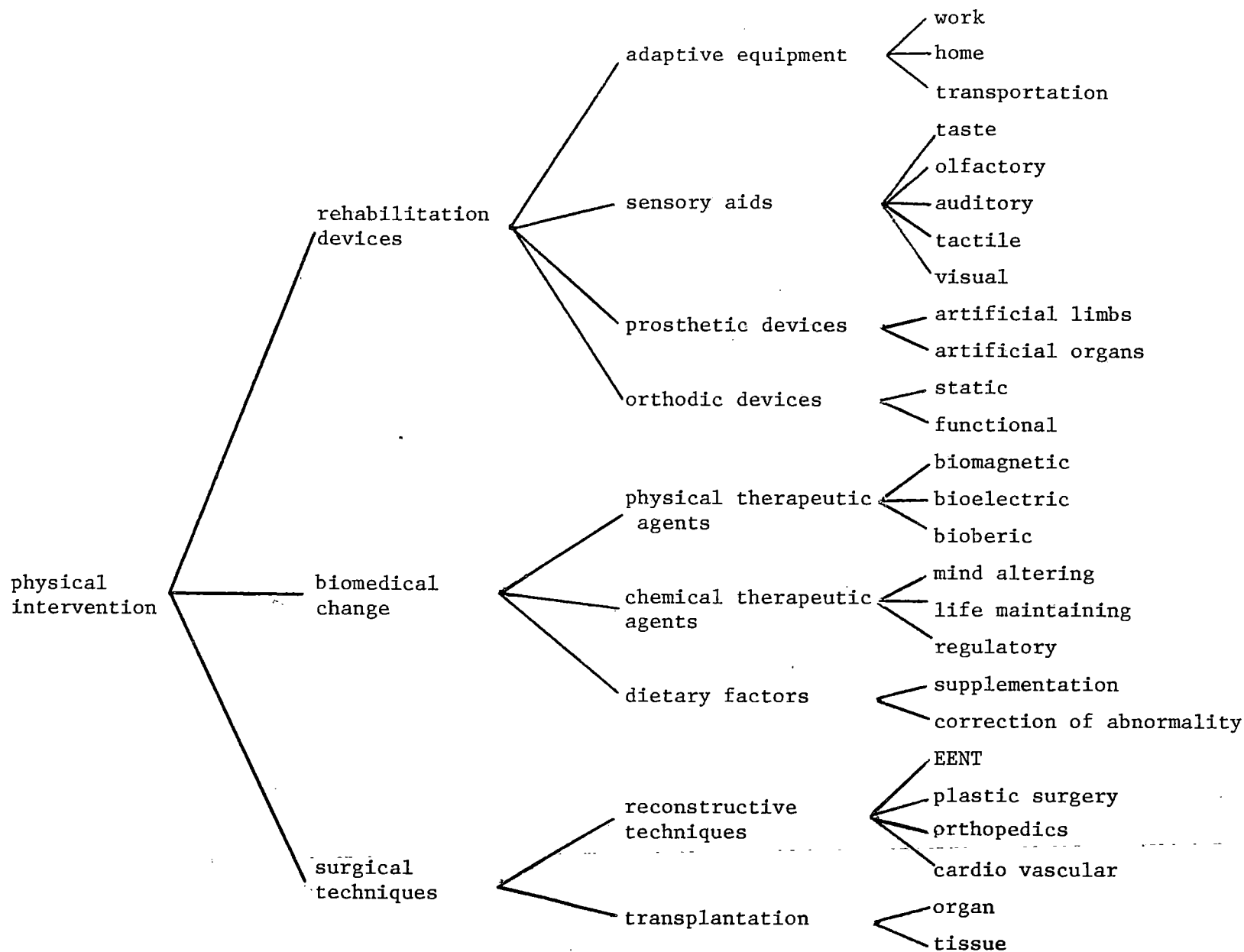
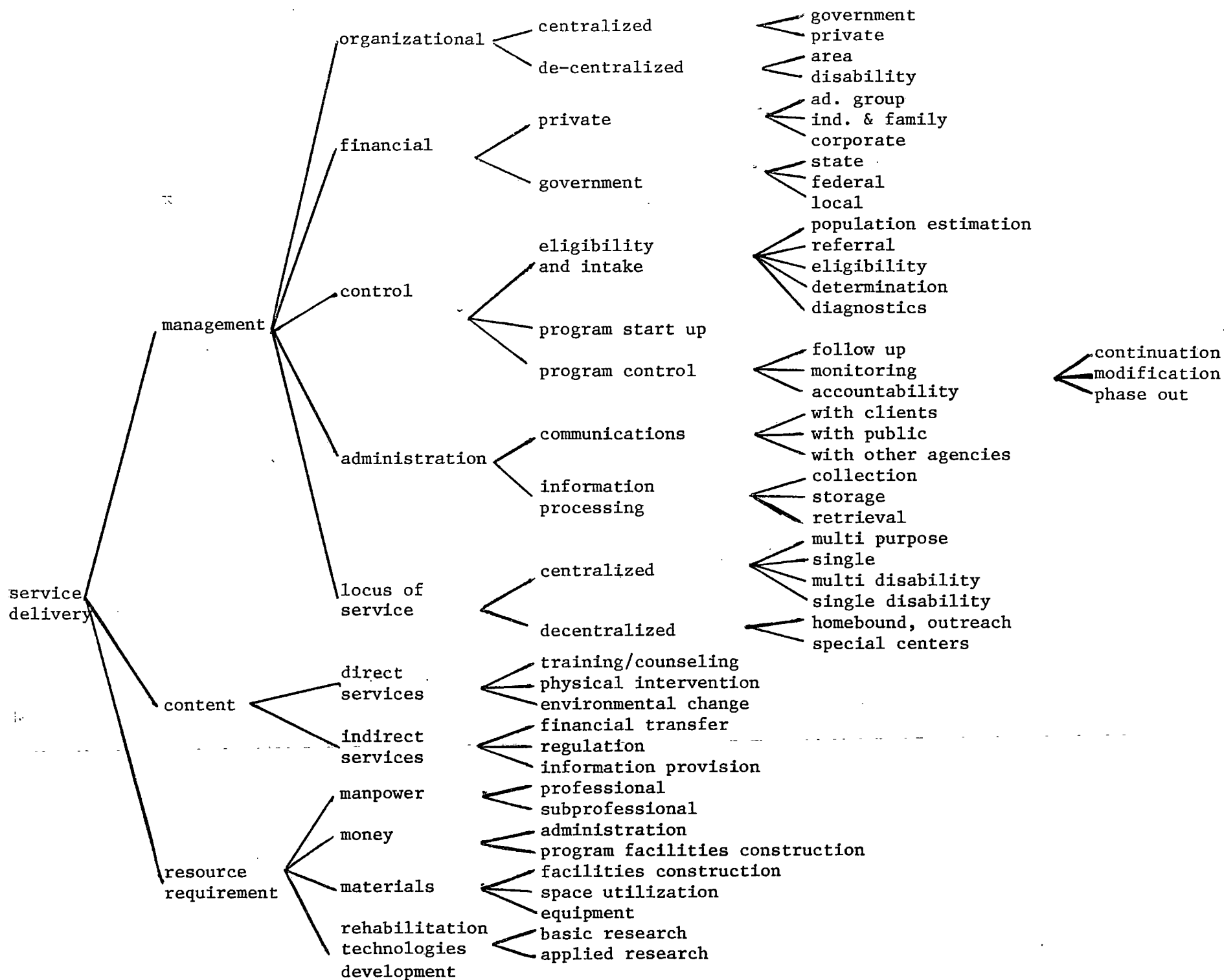


Figure 9. Tree Diagram: Technology Levels for Physical Intervention



Figures 10. Tree Diagram: Technology Levels for Service Delivery

system and technologies. This data is being compiled by way of the disability report for those disabilities listed in Figure 3. Additionally experts have been contacted to develop special reports relative to housing, education, income and income supplementation, transportation, and programs of rehabilitation, as well as special reports on the economics, the legal/legislative problems, and the service delivery of rehabilitation programs. A technology data base is also being developed and will culminate in a technology report addressed to the technologies presently being used in the rehabilitation of disabled, as well as those technologies that are under development at present, those that appear to be promising for the future, and those which can be transferred from other technological fields.

Parallel with this effort a state of society report is under development. Two broad categories of variables are being considered in the development of state of society assumptions. The first relates to those variables that provide a description of the societal system (society) in general, and the second to those variables that are descriptive of the rehabilitation system itself. For the first category of variables, the project will utilize state of society analyses previously accomplished. There are several good state of society reports in existence which document well such things as general population figures, income, growth, etc. It is felt that there is no need for this project to duplicate these efforts; therefore, the project will concentrate on the development of the second category of variables, those relating to the rehabilitation system. These variables will include such things

as the size of the disabled population, percentages having no need, partial need, and total need, trends in the growth of the disabled population, the life functions affected, the size of population used in providing service to the disabled, etc. Upon completion of the description of the present state of all of these variables, projection techniques will be utilized to describe potential scenarios of the future. At least three scenarios will be defined: one that assumes a somewhat steady state of growth and projection, a second which depicts an optimistic view of the future, and a third which depicts a pessimistic view of the future. Two additional scenarios, each falling between the median scenario and a bounding scenario, may be utilized.

In the phase of model development one additional effort is receiving consideration and that is the development of a simulation model which would interrelate all the variables, those descriptive of general society and those descriptive of the rehabilitation system, and permit simulations of the consequences of various alternatives and/or program thrusts under defined scenarios. In this way the effects of specific program thrusts on various variables could be delineated. The simulation model would also serve as a predictor of growth trends for each disabled category upon which the extent and kinds of delivery systems, that will be required in order to meet the needs of each disabled category, can be assessed. The model will also be able to assess the impacts of any rehabilitation technology over a period of

time. Moreover, the model will assess the impacts upon the larger societal system involving the economy, the environment and the general welfare of the whole of society. The approach forces a comprehensive consideration of the dynamic structure and has the ability to reveal causes and effects which may be far removed from the disabled population. In short, anticipated that these simulation studies will corroborate the other activities in some very important respects.

Supporting all these efforts is the development and administration of various surveys to specific groups of individuals such as advocacy groups, rehabilitation centers, etc. for specific information relative to the areas under development. Also supporting all steps is a set of literature search and review procedures and procedures for obtaining topic papers, other expert testimony, and work session participants.

These data gathering/model development steps will culminate in a set of reports which are aimed at describing the total social/rehabilitation system in which the program thrusts must be assessed. These reports will describe four broad models, those of life functions, rehabilitation technologies, potential technologies and the community. Upon completion, these reports will be subjected to review by experts, again to bring a greater number of views into this all important consideration of the future.

The material developed in the previous phase will be that provided to the interdisciplinary participants of a work session to held at Texas Tech University in July of 1976 for the purposes

of conducting an impact analysis of the program thrusts of human rehabilitation techniques. Four working groups will be composed: one for each of the rehabilitation technology areas and one for service delivery systems. Each group will be lead by an adept leader and will be made up of experts from various disciplines representing various segments of society, rehabilitators and rehabilitation researchers, policy makers, industrialists, and so on. These work groups will be performing the task of considering the various consequences, effects and impacts of each program thrust identified for assessment and depicted in the tree diagrams indicated earlier. The objective is to anticipate the influence on society of efforts of human rehabilitation techniques with greater comprehension and confidence. This will be carried out under the assumption that rehabilitation has the goals of improving the life style of the disabled by way of his acceptance into a community and/or into a work force, which can be accomplished by improving the life functions. The influences or effects on society will be assessed in terms of social and economic benefits and disbenefits, both for the disabled and non-disabled populations; interactions with other technologies and programs; and deliverability. The work session groups will also be requested to make some estimation of the extent or degree of the effect, such that some quantitative estimates can be made for each program thrust.

The output of the work sessions will also be subjected to review, and upon completion of this review process, a final report of the technology assessment of human rehabilitation techniques will be produced.

REFERENCES

1. Coates, Joseph F., "Some Methods and Techniques for Comprehensive Impact Assessment," Technological Forecasting and Social Change, 6, 341-357, 1974.
2. Coates, Vary T., "Teaching Technology Assessment," University of Michigan, College of Engineering, Continuing Engineering Education Short Course, 1975.
3. Jones, Martin V., et al., Technology Assessment 1. Same Basic Propositions; 2. Automatic Emission; 3. Computers-Communication; 4. Enzymes (Industrial); 5. Mariculture (Sea Farming); 6. Water Pollution: Domestic Wastes. Mitre Corporation, McLean, Virginia, June 1971.
4. Zissis, George, University of Michigan, Technology Assessment Short Course Lecture.

LIST OF ATTENDEES

Ms. Sherry Arnstein
National Center for Health
Services Research
Rockville, MD

Dr. William Bean
Office of Mental Retardation
Washington, DC

Dr. C. David Campbell
205 So. 15th Street
Corsicana, TX

Dr. A.E. Coleman
University of Houston
Houston, TX

Mr. Harley M. Dirks
Senate Appropriations
Washington, DC

Dr. Allen Dittmann
Office of Education, BEH
Washington, DC

Mr. Lex Frieden
9667 Meadowvale
Houston, TX 77042

Dr. Marcus Fuhrer
Texas Institute for Rehabilitation
and Research
Houston, TX

Dr. Pat Johnson
National Science Foundation
Washington, DC

Mr. Graydon Larrabee
Texas Instruments
Dallas, TX

Dr. Colin McLaurin
Ontario Crippled Children's Center
Toronto, Ontario, Canada

Dr. David Malone
Center for Technology and Administration
Washington, DC

Dr. Jim Paul
Developmental Disabilities/
Technical Assistance Project
Chapel Hill, NC

Mr. Greig R. Siedor
The National Center for Law and
the Handicapped, Inc.
South Bend, IN

Dr. Evan Vlachos
Colorado State University
Fort Collins, CO

Mr. Barney Whigham
Texas Employment Commission
Lubbock, TX

Dr. John D. Worrall
Rutgers University
New Brunswick, NJ

Dr. James Clotfelter
Center for Public Service
Texas Tech University
Lubbock, TX

Dr. Clay E. George
Dept. of Psychology
Texas Tech University

Dr. Ted Hartman
Orthopedic Surgery
Texas Tech University School of Medicine

Dr. William B. Jarzembki
Biomedical Engineering
Texas Tech University School of Medicine

Dr. Emory Davis
Dept. of Sociology
Texas Tech University

Dr. Blair Rowley
Biomedical Engineering and
Computer Medicine
Texas Tech University School of
Medicine

Dr. John Wittman
Dept. of Economics
Texas Tech University

Dr. James White
Dept. of Architecture
Texas Tech University

Research Team:

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Dept. of Industrial Engineering
Texas Tech University

Dr. Gerard Bensberg
Research & Training Center in
Mental Retardation
Texas Tech University

Dr. Charles Brewer
Dept. of English
Texas Tech University

Dr. James Burns
Dept. of Systems
Texas Tech University

Dr. Richard Dudek
Dept. of Industrial Engineering
Texas Tech University

Dr. Brian Lambert
Dept. of Industrial Engineering
Texas Tech University

Cynthia Lyle
Dept. of English
Texas Tech University

Dr. William Marcy
Dept. of Systems
Texas Tech University

Dr. Andy Martin
Research & Training Center in
Mental Retardation
Texas Tech University

Dr. Robert Powers
Dept. of Industrial Engineering
Texas Tech University

Dr. Carol Sigelman
Research & Training Center in
Mental Retardation
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Onur Ulgen
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Texas Tech University

Linda Vengroff
Research & Training Center in
Mental Retardation
Texas Tech University

Gary Wood
Dept. of Systems
Texas Tech University

1 = strong in function
2 = moderate
0.1 = weak

(A)

productivity

unemployed

(B)

workers

Disability in

Disability

total available jobs

(C)

willingsness

other life functions

total labor force

access to jobs

mobility

Funds for transportation tech

capability

self-determination

independence

community integration

advance tax payer

public awareness

transp. facilities for nonabled

continence of nonabled

public awareness (public empathy)

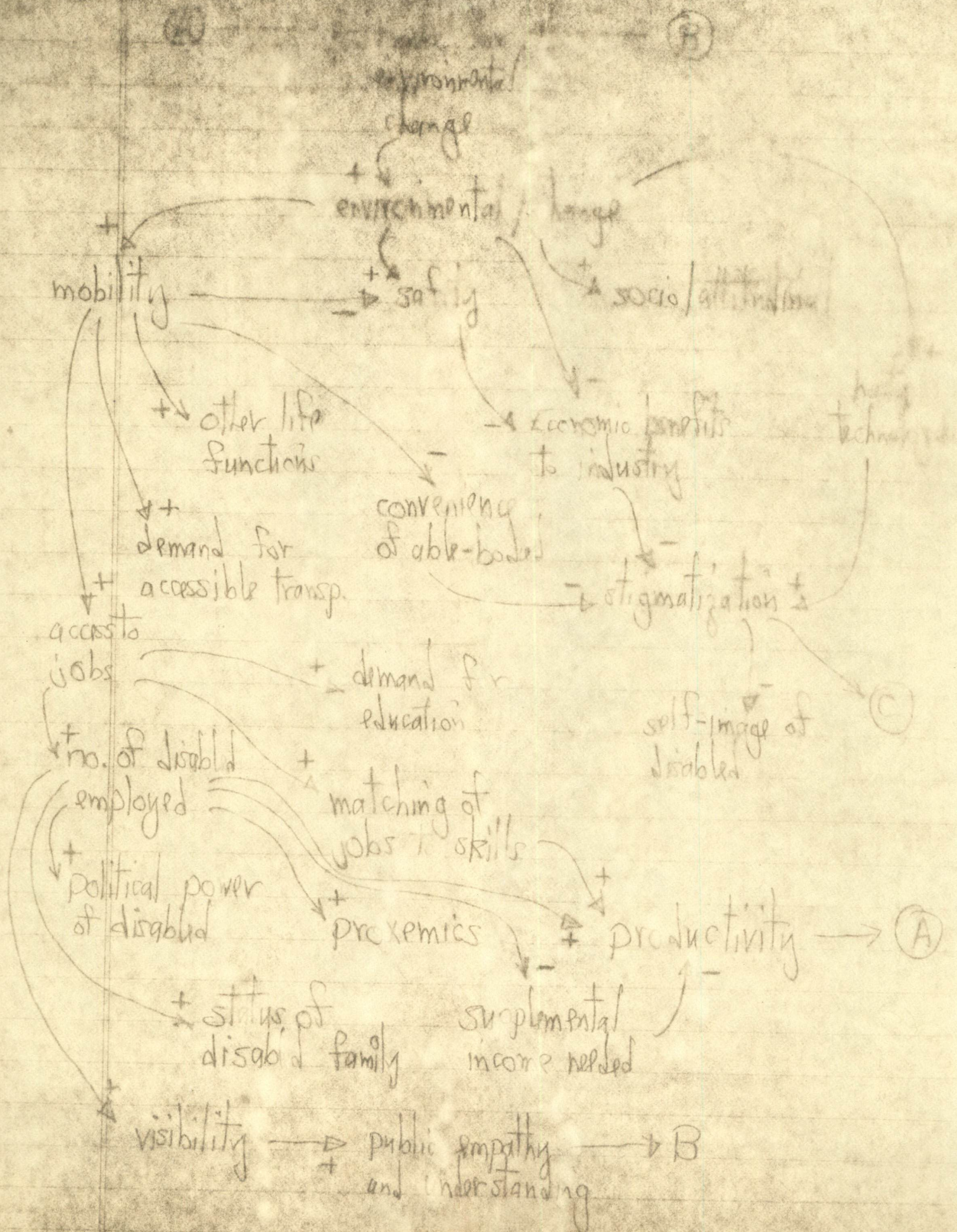
transp. facilities for nonabled

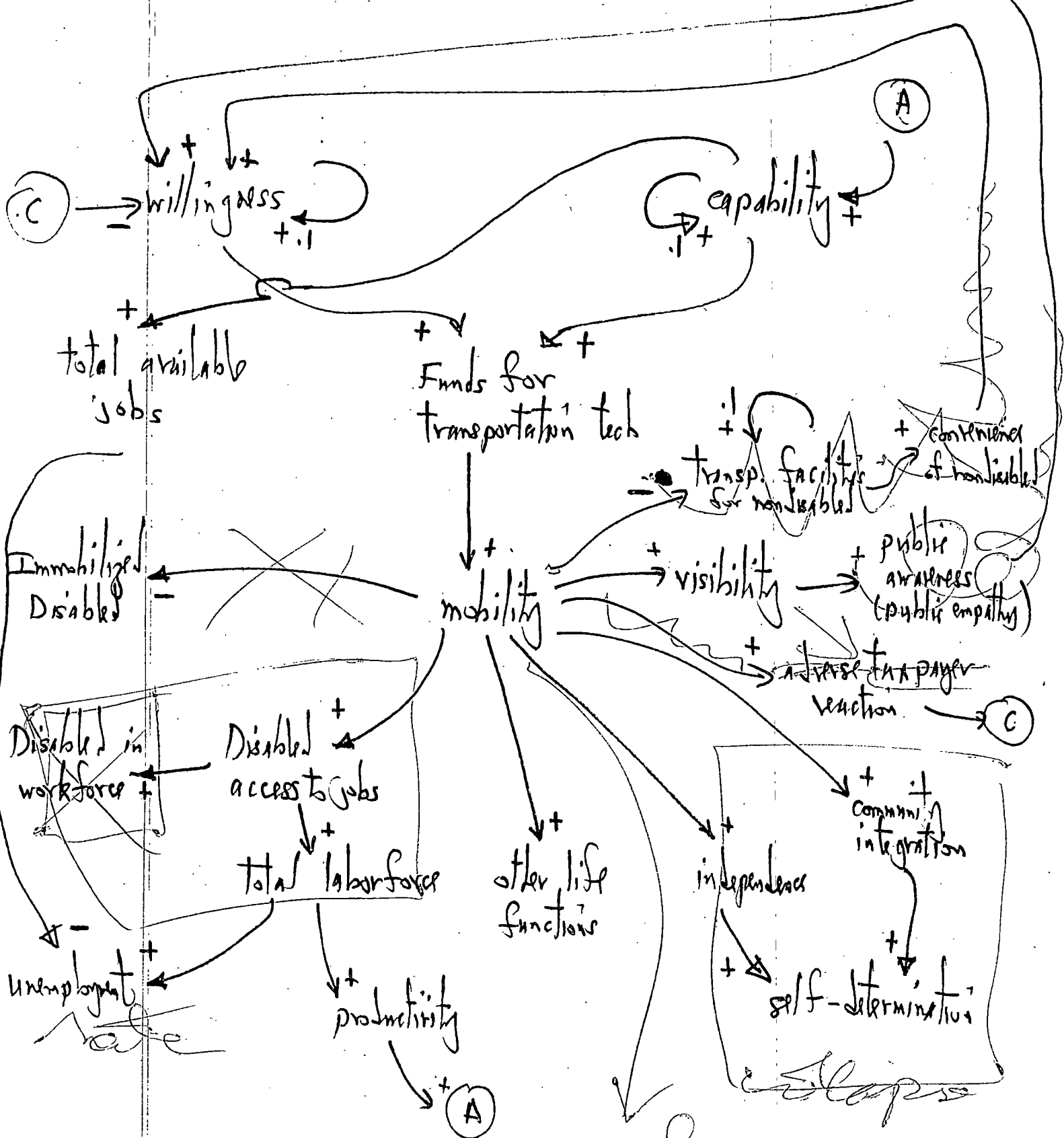
continence of nonabled

public awareness (public empathy)

transp. facilities for nonabled

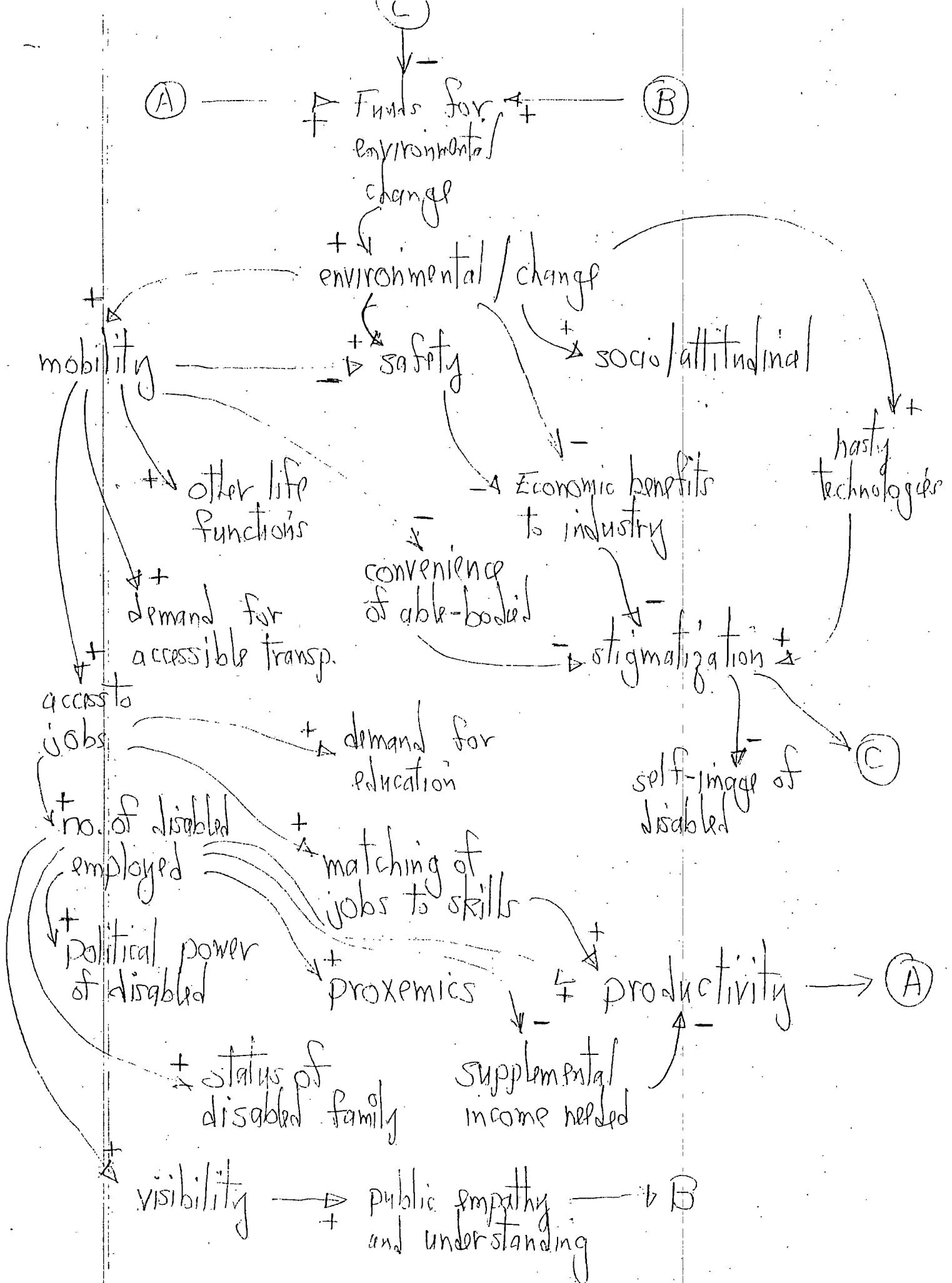
continence of nonabled





1 = strong interaction
 .1 = intermediate "
 .01 = weak "
 - = negative

Other
and
Change



				VACS Art. 4344 F.I.S. 5-S 6175		STATE OF TEXAS PURCHASE VOUCHER (For Purchases and Services other than Personal)		AMOUNT 360.78	
				Pay To Mr. Lex Frieden					
				Address 9667 Meadowvale					
EXPENDITURE ACCOUNT NO.						City Houston, State TX 77042			
COMPTROLLER'S		DEPARTMENTAL				Vendor's Invoice Number _____ Date of Invoice _____			
Acct. No.	Amount	Liq.	BU-OB	Amount	State Agency		Date of Order		
			5235	360.78	TEXAS TECH UNIVERSITY P.O. Box 4410, Lubbock, Texas 79409		TTU Account Name Technology Assessment		
					Board Control Order No.				
					Departmental Voucher No.				
Acct. No.		Bank No.		TTU Order No.					
22 E088 200000		23-014N-200000-0000							

Date Received	Description of Articles or Services	Quantity	Unit Price	Amount
7-15-76	Travel expenses for Technology Assessment Work Session July 5-9, 1976: Participated in a consequence analysis work session to develop a consequence analysis of specific rehabilitation program thrusts culminating in a final report which was presented Friday, July 9, 1976. This work session was sponsored by the Departments of Industrial Engineering and the Research and Training Center in Mental Regardation. Line 17		71819	\$360.78
Cash Discount _____ %				

REMITTANCE COPY

This is not an order. The attached State Warrant is in payment of invoices referenced above.

Texas Tech University

RESEARCH AND TRAINING CENTER IN MENTAL RETARDATION

P.O. Box 4510

Phone (806) 742-5161

Lubbock, Texas 79409

July 12, 1976

Mr. Lex Frieden
9667 Meadowvale
Houston, Tx. 77042

Dear Lex,

Before you forget all about us, I thought I would send you the draft of the spinal cord injury report. Again, I want to say that I am embarrassed by it. It is not just that it is less than exhaustive of the literature; it is that I do not fully trust the accuracy of some of what is presented. I hope you will be able to provide a few tips on resources without spending a great deal of time and effort. I'm guessing you'll be so dissatisfied with it that you'll want to do a thorough overhaul. If what you want to do amounts to more than just a light touch, why don't you call me so that I can try to work out a consultant fee for you? If you don't want further work (I'm sure your schedule is full already), a couple of key references for weak sections would be nice, or just comments on which parts are inaccurate, far from complete, etc.

I never got a chance to get back to Mac about brain damage. I did talk that last day to about three people whom I thought might know something. They didn't know of any new developments which would offer hope to someone like Mac. Whenever I get around to revising Working Paper 3, I believe I'll add a section on Forgotten Disabilities in honor of Mac's question.

Thank you again for coming to the work session and contributing so capably. Hope to see you next time I'm at TIRR.

Sincerely,



Carol K. Sigelman, Ph.D.
Director of Research

CKS/cl

encl.

Texas Tech University

College of Engineering
P.O. Box 4130
Lubbock, Texas 79409

Department of Industrial Engineering

July 5, 1976

Phone (806) 742-1271

M E M O R A N D U M

TO: Participants of TA Work Session

FROM: R.A. Dudek

SUBJECT: State of Texas Purchase Voucher

To satisfy State of Texas procedures in providing you with your expenses and honorarium we will need your signature on both the Travel Voucher (sign on line designated signature of claimant) and on the two State of Texas Purchase Vouchers (sign on the line in the lower left hand corner under Certification). You should also fill out the Travel Voucher on the back side. We will transpose this information to the front side. Please check the address we have typed on the voucher for your check will be sent to you at this address. If you should have any questions about these procedures, please see Dr. Dudek or Dr. Lambert. When you have completed the vouchers and travel leave turn them in to Dr. Lambert. Our system is such that it will take approximately three weeks for these vouchers to be processed. If you do not receive your check within four weeks, please let us know. Upon your return home, please mail us your airline ticket stub.

Attachments

COMPTROLLER'S VOUCHER NO.	FUND NO.	DEPT. NO.	APPROPRIATION NO.

Form 6-1.01
VACS Art. 4344
F.I.S. 5-S
6175

STATE OF TEXAS
PURCHASE VOUCHER

(For Purchases and Services other than Personal)

Mr. Lex Frieden

AMOUNT
500.00

Pay To

Address **9667 Meadowvale**

City **Houston,** State **TX 77042**

Vendor's Invoice Number _____ Date of Invoice _____

State **TEXAS TECH UNIVERSITY**
Agency **P.O. Box 4410, Lubbock, Texas 79409**

Board Control Order No. _____ Date of Order _____

Departmental Voucher No. _____ TTU Account Name **Technology Assessment**

EXPENDITURE ACCOUNT NO.				
COMPTROLLER'S		DEPARTMENTAL		
Acct. No.	Amount	Liq.	BU-OB	Amount
			5235	500.00

Acct. No. _____ Bank No. _____ TTU Order No. _____

22 E088 200000 23-014N-200000-0000

Date Received:	Description of Articles or Services	Quantity	Unit Price	Amount
7-5-76	Consulting for Technology Assessment Work Session July 589, 1976: Participated in a consequence analysis work session working 8-10 hours per day developing a consequence analysis of specific rehabilitation program thrusts culminating in a final report which will be presented Friday, July 9, 1976. This work session is being sponsored by the Departments of Industrial Engineering and the Research and Training Center in Mental Retardation.			\$500.00
Cash Discount _____ %				

REMITTANCE COPY

This is not an order. The attached State Warrant is in payment of invoices referenced above.

70369

TA: Human Rehabilitation Techniques
Work Session
Texas Tech University
Lubbock, Texas

QUICK REFERENCE INDEX TO WORKING PAPERS

<u>Item of Interest</u>	<u>Page</u>	<u>Work Book</u>
Scenario Descriptions	26	2
Scenario Recap	Separate Sheet	
Case Study Disabilities	13	3
Prevalence of Case Study Disabilities	36	3
Demographic of Case Study Disabilities	45	3
Etiology	52	3
Life Function Need Trees	57-62	3
Need Constellation Tables	64-68	3
Employability	86-93	3
Life Function Definitions	3-4	4
Rehabilitation Technologies Definitions	7-8	4
Summary of Technologies Application	66-74	4
Data Base Material		6

TA: Human Rehabilitation Techniques
 Work Session
 Texas Tech University
 Lubbock, Texas

RECAPS OF SCENARIO GROUPS

variable/scenario	I MGFS	II AGFS	III RGFS
Funding for rehab	moderate growth	accelerated growth	reduced
Disabled population	moderate growth (same % of total pop.) until the year 2000, stabi- lizes thereafter	moderate growth (same % of total pop.) until the year 2000, dimin- ishes at .7% per annum thereafter	increased growth (same % of total pop.) through the year 2025
NNP	3.4% growth	4.5% growth	1.33% growth
Total population	.685% growth	.682% to 1985 .201%, 1985 to 2020 .255%, 2020 to 2025	1.125% growth
Capability	moderate growth	increases with economy	reduced growth
Willingness	moderate growth	increases with economy	reduced growth
Tax rate	increases	very moderate increase	accelerated increase
Inflation	increases	moderate increase	increases
Standard of living	decreases	general prosperity	lowered
Unemployment	6-7% maintained	4-5% maintained	9-11% maintained
Productivity	moderately in- creasing	increasing	reduced after 1985

Texas Tech University

College of Engineering
P.O. Box 4130
Lubbock, Texas 79409

Department of Industrial Engineering

June 9, 1976

Phone (806) 742-1271

Mr. Lex Frieden
9667 Meadowvale
Houston, TX 77042

Dear

We are certainly pleased that you have accepted our invitation to be a workshop participant in the Technology Assessment of Human Rehabilitation Techniques. Accommodations have been arranged for you at the South Park Inn in Lubbock where the entire work session will be held. Enclosed is a brochure describing some of the facilities of the Inn. If you can provide us with your flight number and arrival time by returning the enclosed form we can arrange for the hotel limousine to be waiting for you. If not, a phone to the Inn is available at the airport and you can call them directly for limousine service.

Although we anticipate a considerable amount of time in actual working sessions, recreational facilities at or near the Inn are available. These include swimming, tennis, handball, etc., and will be available for your use.

We are looking forward to your arrival and if any problems are encountered please call us.

Sincerely,

Brian K. Lambert

Brian K. Lambert, Ph.D.
Associate Professor

BKL/sm

Enclosures

Texas Tech University

College of Engineering
P.O. Box 4130
Lubbock, Texas 79409

Department of Industrial Engineering

April 16, 1976

Phone (806) 742-1271

Mr. Lex Frieden
9667 Meadowvale
Houston, TX 77042

Dear Mr. Frieden:

As we have discussed with you, Texas Tech University is conducting a Technology Assessment (TA): Human Rehabilitation Techniques under the sponsorship of the National Science Foundation. Technology Assessment, as an emerging concept, can have profound effects on technology, economics, social values, legislation, and policies. An important ingredient of TA is the input that can be received from professionals and the lay public. Thus, in conjunction with this TA, Texas Tech will host a work-session for the period of 6-9 July 1976. You are invited to attend this four day meeting and to participate in the discussions of the possible effects rehabilitation technology will have on the various aspects of society in general as well as the effects it will have on the disabled population.

The rehabilitation techniques, have been categorized into three general areas - environmental change, physical intervention, and training-counseling. A related technology, rehabilitation service delivery systems, including income transfers, constitutes a fourth area. The participants in the work sessions will be divided among these areas in order to facilitate the identification of and the effects that may possibly and probably arise through the use of these various techniques.

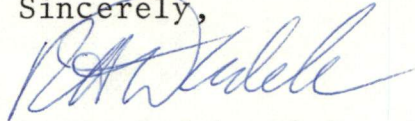
Technology Assessment is complex. We do not pretend to be able to completely orient an individual through one letter. Rather we have included a "first draft" paper with this letter that is intended to familiarize you with the study. One month prior to the meeting, we will mail additional material intended to provide the setting for your role as a participant.

A tentative schedule for the work-session meeting is enclosed. At the opening of the meeting, we will demonstrate the form a typical work-session might take in that these sessions are intended to be highly interactive and policy oriented. Finally, the closing session is intended to aggregate the results of the four individual discussion groups.

Page 2
Mr. Lex Frieden
April 16, 1976

We hope that you will be able to join us. Of course, we will pay your travel and expenses plus those of your attendant. Additionally, we will provide an honorarium of \$500 for the four day session. Please indicate the order of your preference of assignment to the individual work-session discussion groups. You are also requested to provide us with a copy of your vita for use in the final report of this TA.

Sincerely,

A handwritten signature in blue ink, appearing to read "R. A. Dudek", written over the word "Sincerely,".

R. A. Dudek, Ph.D., P.E.
Horn Professor and Chairman

as

Enclosures

Texas Tech University

RESEARCH AND TRAINING CENTER IN MENTAL RETARDATION

P.O. Box 4510

Phone (806) 742-5161

Lubbock, Texas 79409

December 17, 1975

Mr. Lex Frieden
9667 Meadowvale
Houston, Texas 77042

Dear Mr. Frieden,

Mark Fuhrer of TIRR offered your name to me as a person who knows a great deal about nonmedical needs of the disabled, particularly the spinal cord injured person. We are in the midst of a large scale study of rehabilitation, which includes reviewing the literature on selected disabilities. At this point, we are interested in nearly any references about the spinal cord injured, but I thought that you might be able to provide references or materials in the following areas: mobility impairments and needs; communication impairments and needs; and impairments and needs with respect to personal and social functioning, e.g., literature on self-concept, motivation, personal-social deficiencies, and attitudes toward the spinal cord injured.

Mark mentioned that you had been doing some work to collect these kinds of information, and we would be grateful for anything you can provide in the way of references, statistics, or unpublished papers. We will be happy to pay any Xeroxing costs if you will simply tell us in advance how much it will cost so that we can put through the proper purchase request.

Also, if you would like to discuss it further, feel free to call collect. We find it difficult to find good information on nonmedical aspects of disability but feel it is essential to our project's success.

Thank you. I look forward to hearing from you.

Sincerely,

Carol K. Sigelman

Carol K. Sigelman, Ph.D.
Director of Research

CKS/cl

*planned to reply (sent)
2 paper 1/15/76.
sent 11 3/24*

BAYLOR COLLEGE OF MEDICINE

TEXAS MEDICAL CENTER
HOUSTON, TEXAS 77025

December 9, 1975

FLEMING DEPARTMENT OF REHABILITATION
(713) 526-4281

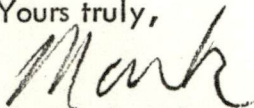
Carol K. Sigelman, Ph.D.
Director of Research
Research and Training Center in
Mental Retardation
Texas Tech University
P.O. Box 4510
Lubbock, Texas 79409

Dear Carol:

To try to be responsive to your expressed interest in the needs of disabled groups beyond health needs, I recommend that you contact Mr. Lex Frieden, a near-Ph.D. graduate student in psychology at the University of Houston who has been integrally involved in some of the research efforts here. Lex is a quadriplegic who has exerted a great deal of leadership in the community on behalf of disabled persons. In particular, he has been assisting our Rehabilitation Engineering Center program to obtain precisely the kind of information to which you are referring. Lex's address is: 9667 Meadowvale, Houston, Texas 77042.

Please call upon me again if you think I can be of assistance.

Yours truly,



Marcus J. Fuhrer, Ph.D.
Professor

MJF:gb

cc.: Mr. Lex Frieden

Thompson
P17COP - copy as per
C.A.M. Duncan

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