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THE COMPUTER AS AN AID TO JOBS FOR YOUTH IN THE CITY

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## TABLE OF CONTENTS

<u>Chapter</u>	<u>Page</u>
I. Introduction. . . . .	1
A. The Problem . . . . .	1
B. The Purpose . . . . .	3
C. The Procedure . . . . .	4
II. Social Considerations. . . . .	5
A. The Rapid Acceleration of Change. . . . .	5
B. The Knowledge Explosion . . . . .	6
C. Individualized Self-guided Study. . . . .	8
D. Issue-Oriented Approach to Study. . . . .	9
E. The Emergence of a World Culture. . . . .	11
F. Automation in the Classroom . . . . .	11
G. Libraries Coming Into Their Own . . . . .	13
H. <i>Youth in Social Change</i>	
III. Ethical Considerations -	
The Computer and Human Values. . . . .	16
A. Depersonalization - Persons versus Machines. . .	16
B. Standardization - Freedom versus Control . . .	22
C. Desocialization - Relationship versus Isolation.	27
D. Legitimization - Copyright versus Plagerism. . .	32
IV. The Proposal	
A Computerized Youth Employment Service. . . .	39
A. Who Are the Youth. . . . .	39
B. Where Are The Jobs . . . . .	42
C. What are the Services Provided . . . . .	44
D. Funding . . . . .	44
E. Evaluation . . . . .	45
F. A Prototype: Juan . . . . .	46
V. Summary . . . . .	48
VI. Bibliography . . . . .	49

## I. INTRODUCTION

### A. The Problem

The motivation behind this research paper is the increasing problem of unemployment among youth of the city. It is particularly acute in poverty areas and has led to feelings of frustration and hopelessness in the face of increasing odds against their ever finding meaningful employment and vocational fulfillment.

These frustrations are generally acknowledged background for and contributive to the recent riots and the emergence of the national urban crisis. The need was portrayed vividly and dramatically back in 1964 in the report of the HARYOU study.

"That the unemployment situation among Negro youth in Central Harlem is explosive can be readily seen in the fact that twice as many young Negroes in the labor force, as compared to their white counterparts, were without employment in 1960."<sup>1</sup>

They go on to point out that the menial and unrewarding nature of the employment of most of the Negro men and women living in the ghetto can only mean a marginal subsistence for their families. Relegating Negro males to menial and irregular work, furthermore, has seriously weakened the role of the father in the family and has thus

<sup>1</sup>Harlem Youth Opportunities Unlimited, Inc., Youth In The Ghetto, A Study of The Consequences of Powerlessness and a Blueprint For Change, (New York: HARYOU, 1964), p. 246

added even greater family instability.

"As Conant warns, such a situation building up, this mass of unemployed and frustrated Negro youth, is social dynamite. We are presented with a phenomenon that may be compared with the piling up of inflammable material in an empty building in a city block."<sup>2</sup>

The need is further illustrated by the fact that nearly a million young men and women between 16 and 25 today are out of school and out of jobs. This age group makes up 21 percent of the unemployed, but only 11 percent of the labor force. Moreover, our population will increase by an estimated 30 million in the 1960's, but there will be no increase at all in the number of jobs for unskilled workers (those jobs chiefly available to minority groups in ghetto areas).

Another series of situations reported by HARYOU sheds light on the employment problem and serves as a basis for the central proposal of this paper.

First, the discrepancies between the white and non-white labor force is said to stem basically from three major sources: 1) racial discrimination, 2) inadequacies in education and preparation for employment and 3) the process of obtaining jobs.<sup>3</sup> (This paper focuses primarily on item three.)

<sup>2</sup>Ibid, p.247

<sup>3</sup>Ibid, p.266

Second, in the process of obtaining jobs, there are two general approaches: a) through formal channels (employment agencies, newspaper ads, and professional associations), and b) through informal channels (parents, relatives, friends, and neighbors).<sup>4</sup>

Third, although most youth get jobs through informal channels, ghetto youth are forced more and more to get jobs only through formal channels because of their lack of personal and social contacts. The formal channels, in turn, are based more on formal education, which again has been a deficiency in the growth experience of ghetto youth.

Additional clues as to the need for some form of automated resources and vocational guidance service for youth was revealed in the Youth Opportunity Conference held January 29-31, 1968, under the sponsorship of the President's Council on Youth Opportunity. Attended by more than 600 persons, including mayors and youth leaders from about 50 of the nation's largest cities, the purpose of the conference was to help formulate and begin implementing youth programs of employment, recreation, and education for the coming year.

A keynote of the conference was the need to help youth become more involved in the solution of their own problems.

"If urgently needed programs are to be really successful in reaching young people, new attitudes and new methods of operation are required... A key to the acceptance and success of programs for the young people is their involvement in planning...

<sup>4</sup>Ibid, p. 279

We must help them help themselves -- they want a voice, they need a chance to act in a sensible and responsible fashion so that they will not act violently and irresponsibly ... Unless the young people are emotionally involved, programs are likely to fail... We must help the young people become a constructive rather than a destructive force."4a

There is, therefore an increasing demand on the part of youth, in the ghetto, especially, for a "breaking-out." Bound by the bonds of hopelessness, all too often their agenda and indeed the very course of their lives, have been set for them by structures of society over which they have no control.

Tools, resources, and skills ~~are~~ needed to make it possible for them to identify and work on their own hang-ups and problems.

Take, for instance, the problem of choosing and getting into the right school. A group of junior highs that I taught in a laboratory school in Harlem recently listed this as their number one concern. A number of prior questions need to be considered before one can say that a particular school is the right one. Some concept of what constitutes a well-equipped and effective school is needed. What kind of skills does the work one is interested in call for? Does the school provide help with these skills?

Too often these kinds of questions are dealt with exclusively by the administration or faculty, or else inadequate information is available to youth to anything about them.

4a"Top of the News", NEA, April, 1968, Dan Dodson, 'The Poor: Myths and Realities' p. 269

Also, if goals are to be meaningful and achievable, youth need to be involved in the formulation of goals of their own that are specific enough to be related to their particular problem world. Possibly one of the major causes of the breakdown of communication between youth and adults is the rather subtle confusion between goals of youth and goals for youth as conceived and formulated by adults.

This need was highlighted recently in a statement by the National Council of Churches entitled, The Crisis in America. It pointed out that

"We often assume that failures in communication between youth and adults are caused by the irresponsibility of the young, their unwillingness to take charge of their own lives. Now that we have heard the voices of the poor and the black, we have perhaps reached the point where we can understand that the young also are striving for the power over their own lives that will permit them to prepare themselves for the world in which they live. In a sense youth in our time are technologically unemployed, and in a sense high schools and colleges are ghettos in which youth are contained. It is not surprising that they should develop their own culture."<sup>4b</sup>

Finally, and most important, if youth are to be enabled to help themselves in these ways, there is a need for access to information and resources to make it possible for them to be in on the action. Increasingly, youth and young adults are insisting on being where the action is, actively participating in the removal of the barriers that stand between them and their goals.

But the means and facility for doing this are not always

<sup>4b</sup> Crisis in America: Hope Through Action. Edited by Paul Maves, New York: Friendship Press, 1968, p. 29

available to them at the right time. If low income stands in the way of a college education, for instance, where does one go from a poor neighborhood to find out about scholarships, loans, grants, and part-time work opportunities? Or, if his present high school program is such that it will of itself prove to be an academic barrier to his pursuit of his vocational goals, what are the avenues open to him to help change the situation, or at least to alter its detrimental effect on him and his future?

The automated information and vocational resources service proposed here is intended to enable youth to get at problems such as these.

#### B. Purpose

Therefore, the purpose of this paper focuses on one way of making the formal channels of job placement for youth more effective. The central thesis is that a broadly-based, computerized job placement service will significantly decrease the unemployment problem by:

1. Providing job-seeking youth with a wider exposure to the job market, and
2. Providing employers with an almost unlimited source of per-



sonnel profiles from which to screen and choose, and

3. Handling mechanical detail efficiently, so that guidance and counseling personnel can be used for guidance and counseling, rather than for clerical work, and
4. Providing resources, information, and contacts on a massive scale, that have been so lacking in the experience of youth in the ghetto.

C. Procedure

The development of this purpose will be according to the following procedure:

1. A consideration of some of the social conditions which have given rise to a climate which makes possible, feasible, and necessary some such automated approach to resources and jobs for youth.
2. An analysis of the application of the computer to a human problem, such as joblessness, considering some of the ethical implications and the impact on human values.
3. A specific proposal for a feasibility study, designed to test several factors involved in an automated job placement service for youth in the city.

## II. SOCIAL CONSIDERATIONS

The following are some of the conditions which have motivated this research and led to the writing of this paper.

### A. The Rapid Acceleration of Change

Some analysts of the future suggest that the rate of change is so great today that, if it continues, the world of 1986 will be almost totally different in character and texture from the world we live in, a difference larger than that which separates today from the days of the Civil War.<sup>5</sup> If this kind of forecast, which we are hearing increasingly has any validity at all, it speaks rather pointedly to the vocational education of youth, a discipline so steeped in tradition. Never before has there been such a demand for innovation and relevance.

For instance, Don Fabun points out that the automobile will doubtless give way to television as a means of "commuting" to work causing most business firms to decentralize management into private, closed-circuit television homes.<sup>6</sup> This is tied in with the fact that man has always tried to find ways to transport his body to the scene he wants to experience. Now, more and more, the scene is brought electronically to man. The result is that communication is replacing

<sup>5</sup>Don Fabun, The Dynamics of Change, (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1967), Chap. 1

<sup>6</sup>Ibid

transportation as far as the human body is concerned.

The focus for job training, therefore, can no longer be oriented simply to one particular place or routine, but rather to find ways of resourcing and helping persons find meaning and fulfillment in new settings and changing relationships brought on by the technological revolution.

B. The Knowledge Explosion.

According to some historians, the world's recorded knowledge has doubled four times: 1750, 1900, 1950 and again in 1960.<sup>7</sup> This means that all the accumulated knowledge up to 1750 was doubled in 150 years. This doubled again in fifty years. Then with the emergence of the electronic mass media, it took only ten years for it to double again. It is now doubling every 8-10 years.

Public School, college, and university libraries are feeling the pressure particularly acutely. The American Library Association recently received a five million dollar Ford Grant to help libraries keep pace with the information explosion.<sup>8</sup> In order to keep up at all with the continually increasing flood of new literature, libraries are moving more and more to automation. This is evidenced by the recent publication of a book entitled, Libraries and Automation, a 3,079 item bibliography of major writings since 1958 in the rapidly expanding area of automation

<sup>7</sup>Charles William Stewart, Adolescent Religion, (Nashville: Abingdon, 1967) p. 293

<sup>8</sup>College and Research Libraries News, Jan., 1968, p. 11

in libraries.<sup>9</sup>

Where does guidance and job placement fit into this picture? Perhaps a real situation will help to illustrate. A large church in a metropolitan area was recently in search of a Minister of Education with special skill, training and experience in youth work. They consulted the Executive Secretary of Conference Board of Education and were told that such a person would be especially difficult to find for at least two reasons.

In the first place, the trend is to look upon youth work more holistically, in terms of the needs of the whole person, in all of his relationships, throughout his whole life span. Therefore, since youth ministry involves the complexities of a person's relationships with the whole of society and his involvement in his total life-world, it becomes increasingly difficult for one person to be a "specialist" in youth work.

Secondly, the nature of youth culture, and the actual experiences of youth are changing so rapidly that some say that a youth "leader" actually grows old on the job and becomes outmoded in two or three years, unless he is continually retooling. The professional youth worker is typically a very short-lived vocation.

It is, therefore, no longer possible to depend on the "expert" youth worker to stay on top of all the opportunities resources, to have

<sup>9</sup>Ibid, p. 14

all the answers, or to have access to the "right" idea at the right time in order to solve all the youth programming problems.

The knowledge explosion in any one phase of youth culture is so great, for instance, that the notion of a "youth director" in charge of the "program" is untenable. A new style of leadership is called for. A consultative service is needed whereby youth and their adult leaders can be enabled to locate the needed resources and develop the necessary skills in order to deal with a particular problem at a particular time.

A centralized information and job placement service is needed whereby decision-makers and program builders can quickly and efficiently locate a bit of information without having to go through volumes and volumes of books and magazines to find it.

C. Growing emphasis on Individualized Self-guided Study.

There has been a major shift recently from handed-down programs and adult-dominated activities for youth to more involvement by youth in the decisions that affect them. One illustration of this is more effective use of individual study and research in schools and colleges.

For instance, Hampshire College, Amherst, Massachusetts, is attempting to design a program for its students that will use computers and "dial-access" communication systems to bring library services into their dormitory rooms.<sup>10</sup>

<sup>10</sup>College and Research Libraries News, Nov., 1967, p. 229

The emphasis here is on helping the student choose the resources and information he needs as quickly and as efficiently as possible. The process of choosing is the key step -- the individual must determine what his needs are and the kinds of information he must have in order to meet them. Automation is then helpful in searching all the available data to produce the needed materials in light of the student's inquiry.

In the church's ministry with youth, this takes on the dimension of greater local initiative. This means that there are fewer "pre-packaged" programs from general boards and agencies. More responsibility rests with the local church and its programming groups. Instead of preparing and carrying out an activity "from the book," a planning committee will spend more time analyzing their own needs and providing experiences and resources based on those needs.

The need, therefore, is to find some more effective way of enabling persons and groups involved in this kind of localized, individualized planning and study to maintain continuing and efficient contact with the sources of information and resources.

D. This leads to a fourth development which serves as a basis for this proposal for an automated approach to resources and job placement for youth. It is what some have called a more Issue-Oriented Approach to Study.<sup>11</sup>

In today's pluralistic society, problems are more particularized

<sup>11</sup>George Koehler, "Which Knowledge? And How to Use It?", The Church School Magazine, May, 1968

and localized. It is less and less possible, for instance, to select a problem, prepare a manual with resources and expect that all senior high youth across the country will work on that problem during a given month. Instead, there seems to be growing awareness among the new generation of activist-oriented youth of the many unresolved issues of life -- his own, his neighbor's, his community's. The desire is to be where the action is, to be involved. Youth are identifying in increasing numbers with social action and service projects.

This desire to be involved with the big problems, working on the real issues, means that resourcing and training need to be more "issue-oriented."

The Institute of Labor and Industrial Relations of the University of Michigan is publishing a new journal entitled Poverty and Human Resources Abstracts. It represents a major effort in providing an automated index to resources in a given problem area, and was designed to fulfill a three-fold purpose: "1) to collect, evaluate, collate, and digest the increasing mass of material, published and unpublished, being generated in the fields of poverty, human resources, and manpower; 2) to provide a publication outlet for original essays in these topic areas; and 3) to service researchers and practitioners with comprehensive and flexible information system on the literature."<sup>12</sup>

With more and more local youth programs geared to an issue-approach to programming, some way needs to be found to provide a classification

<sup>12</sup>Poverty and Human Resources Abstracts, Institute of Labor and Industrial Relations, U. of Michigan, Ann Arbor, 1966, Intro.

and indexing of resources in order that they might be topically and timely available.

E. The Emergence of a World Culture.

Marshall McLuhan reminds us that youth of today are the first citizens of a truly world culture. Not only is it ecumenical and pluralistic in nature, but also world-wide in scope. Communications media are developed to such a point that all forms of information -- oral, written, photo, or drawing, whether on paper, film, radio or TV can now be translated into identical electronic impulses which can be processed and either stored or transmitted anywhere in the world in less than one-seventh of a second.<sup>13</sup>

Within such a context, it becomes more and more inconceivable that any one group or segment of society should become isolated, ghettoized or handicapped because of lack of resources or training opportunities.

F. Automation in the Classroom.

Computers are now assimilating data on students' past school records to recommend course programs that the student can handle. This process will also predict which students are likely to encounter academic problems in their present courses.<sup>14</sup> Use of computers to store and instantly locate millions of pieces of information is well-known. They can also store graphic materials -- maps, charts, blue-

<sup>13</sup>Fabun, op. cit., p. 23, Chap. IV

<sup>14</sup>Ibid, p. 25, Chap. IV



prints, photos, etc., and on command reproduce, enlarge and project this material.

The scope of this development was dramatized in the publication in 1960 of a 700 page volume of papers on Teaching Machines and Programmed Learning. It was edited for the Department of Audio-Visual Instruction of the National Education Association by A. A. Lumsdaine and Robert Glaser of the American Institute for Research. It is outdated already, of course, but does highlight the vast amount of research that was done in this field by psychologists, educators, and engineering specialists prior to the present revolutionary decade.

The world of business is obviously taking seriously the growing "information explosion" as well as the growing school population problem. The Raytheon Learning Systems Company recently ran a two-page advertisement in Nations Schools magazine showing how their Random Access Teaching Equipment could add as much individual attention to students in a class as adding thirteen additional teachers and aides.<sup>15</sup> Pressured school systems, they say, are helped to amplify the teacher's role -- providing a center for flexible and efficient learning that frees teachers for individual instruction. The student has dial-access to a practically unlimited number of audio-video program sources and can progress at his own speed.

<sup>15</sup>Nations Schools, Oct. 1967, p. 80

G. Libraries Coming Into Their Own.

Libraries coming into their own as information and research centers. Vice President Hubert Humphrey was quoted recently in the American Library Association Bulletin, "Top of the News," saying, "I hope that the public libraries of the nation will strive to make this and every summer count in the lives of our youth."<sup>16</sup>

Technology now for the first time in history makes it possible to organize, process, and disseminate unlimited volumes of information. Used with some imagination and courage, it could be a key to some significant advances against the illiteracy and unemployment problems plaguing today's sprawling urban centers of population.

It is estimated that the entire store of nonredundant information in the world's libraries amounts to one quadrillion bits. One manufacturer has announced a computer memory that will hold one thousandth of the world's recorded information.<sup>17</sup>

Information, rightly used, is power. Communications technology could become the means of unleashing vast reservoirs of creative potential within youth on the verge of disenchantment and hopelessness because existing educational and vocational systems seem to be passing them by.

The next two sections of this paper deal more specifically with a proposal having to do with the role of automation in the employment

<sup>16</sup>Top of the News, American Library Association, April 1968, p. 269

<sup>17</sup>William T. Knox, "The New Look in Information Systems", Citation Press, 1967

problem among urban youth. The following statement by Dan W. Dodson, from an article entitled, "Disadvantaged Youth and the Library", provides a rather vivid backdrop for those proposals.

"People on fire with ideologies read. You look at these groups that are attempting now to take power in these communities. They're young people; young adults who have some glimmer of some kind of ideology that is going to make life meaningful. Is the library a place to entice these youngsters, or are we simply providing leisure reading for maddle class people who don't have anything else to do?

The upsurge of the Civil Rights revolution has given great hope to thousands of Negro youngsters who otherwise see themselves as culturally deprived. Can the library be a resource readily accessible to these powerless groups as they mobilize to take power, or is it accessible only to the dominant power interests of the community?

The prime place of activity is in the young adult group that our society calls disadvantaged. For it is these deviants who are caught in the great encounter. They are the educable ones. If you can find the art and skill in dealing with them, I think you will have made the greatest contribution of all."<sup>18</sup>

Another librarian helped to put technology further within the context of constructive purposes and human need in the following statement:

<sup>18</sup>Top of the News, April, op. cit., Dan Dodson, "The Poor: Myths and Realities" p. 270

"How can we recognize the stand we should take on crucial matters and challenges that continuously face us in these times? We have perfected techniques, we have evolved professionally, we have acknowledged and accepted standards of services and materials.

Yet basic to all this is our sense of mission and purpose which is, I am afraid sometimes all too easy to "disremember". The justification for our designation as librarians to the generation of future adults is, I think, the nurturing of an environment which makes possible the widest range of experiences to insure the integrated personality of a vital, involved citizen. If we renew this dedication, I feel convinced that we will come closer to our purpose.

For it is the essence of love and humanity which must set us free from the limitations of our own experience."<sup>19</sup>

These, then are some of the conditions calling for new attitudes and new strategies if the so-called underprivileged youth are to be challenged to meaningful and productive involvement in the life and work of the community: the rapid acceleration of change, the knowledge explosion, more individualized self-guided study, and issue-oriented approach to study, the emergence of a world culture, automation in the classroom, and the new and strategic status of libraries as information and research centers.

<sup>19</sup>Ibid

## H. Youth and Social Change

It is not the intent of this chapter to present a sociological or psychological analysis of teenagers or of youth culture, but simply to show some of the social changes that make it both possible and necessary to take seriously the fact of automation in dealing with the problem of joblessness among youth in underprivileged areas.

A few specific comments are necessary, however, concerning the effect of these changes on youth, particularly their motivation and their attitudes toward work.

In the first place, the knowledge explosion and mass media have made youth from deprived families and settings painfully aware of the goods and services that others have that they do not have. Their anger and militance are therefore becoming increasingly real and manifest. The poor people's march on Washington is an expression of a growing determination to share in the prosperity they see around them.

Another illustration has to do with the effect of these changes on family life. Urie Bronfenbrenner, professor of Child Development and Family Relationships at Cornell University, in the October 7, 1967, issue of Saturday Review, pointed out that children are no longer brought up by their parents. He claims that defacto responsibility for upbringing has shifted away from the family to other settings in the society, where the task is not always recognized or accepted.

"While the family still has the primary moral and legal responsibility for developing character in children, the power or opportunity to do the job is often lacking in the home, primarily because parents and children no longer spend enough time together in those situations in which such training is possible. This is not because parents don't want to spend time with their children. It is simply that conditions of life have changed."19a

The author goes on to report from recent studies of adolescents how prolonged separation from parents has an adverse effect on motivation and achievement. His studies indicated that, in general, father absence contributes to low motivation for achievement, inability to defer immediate for later gratification, low self-esteem, susceptibility to group influence, and juvenile delinquency. All of these effects proved to be much more marked for boys than for girls.

There are obviously a number of serious implications of this change in pattern and structure of family life for the readiness of young people for employability, especially in poor and deprived areas where joblessness and absentee fathers are more common.

Suffice it to say here that the many facets of the technological revolution now taking place is posing a unique challenge to the "now generation" concerning its image of vocational fulfillment, and indeed his basic self-image as it relates to the external world of work.

This interrelatedness of technology and work underscores again both the possibility of and the need for an automated job placement and vocational resources service in order to keep pace with the accelerating problem in this area.

19a Saturday Review, Oct. 7, 1967, "The Split Level American Family"

### III. ETHICAL CONSIDERATIONS - THE COMPUTER AND HUMAN VALUES

#### A. Depersonalization - Persons Versus Machines.

The question always arises from the critics of automation, "What happens to a person when he and his future are manipulated in a giant machine as just another punched card?"

Depersonalization is one of the real hazards of living in a highly technological society. Not only is one caught up in the vast impersonal movement of large population centers, he is further dehumanized by the prospect constantly of having a machine take over the work he has prided himself in mastering through extended periods of discipline and training.

C. R. DeCarlo, in an article entitled, "Educational Technology and Value Systems", contends that man is easily seduced by the elegancies of materialistic science, to the detriment of purpose, in building for the future. He refers to a definition of technology by Max Frisch as "the art of organizing the world so we don't have to experience it".<sup>20</sup>

Charles Malik criticizes our Western educational system for excluding much of our spiritual and moral tradition, "producing a world of perfect technicians, not a world of human beings, let alone of beings

<sup>20</sup>Dialogue on Technology, Robert Theobald, Ed., (New York: Bobbs-Merrill Co., Inc., 1967) p. 68

divine. A dreary and boring world, where there is nothing beyond man and his mastery over nature, including his mastery over other technicians through his scientific management of them. Perfect hierarchy, perfect organization, total efficiency; but no spirit, no freedom, no joy, no humor, and therefore, no man."<sup>21</sup>

This is a dilemma faced in a particular way by the church in recent years particularly as the trend moves more toward mergers, larger and more complex organizational structures. The emphasis more and more is on how to keep the organization functioning efficiently and with less expense, often losing sight of underlying purposes and personal dimensions in the process.

A large suburban church in the midwest received a great deal of criticism when it installed a punched card record system for its church school and church membership files. The concern was that now the church had gone the "way of the world" and members of the redemptive fellowship were now becoming simply another number in the file.

In their mammoth volume, Teaching Machines and Programmed Learning, Lumsdaine and Glaser, the editors have put together a great deal of information concerning auto-instructional methods in public schools. One of their major concluding observations has to do with this human factor in the relation between man and machine:

"As we learn more about learning, teaching can become more and

<sup>21</sup>Ibid



more an explicit technology which can itself be definitively taught. The belief that teaching is primarily an art with which the gifted teacher has to be born and which defies precise description thus gives way to the conviction that teaching consists of techniques and procedures which can, in large part be made communicable or teachable. This is not to say that the talent of the superior teacher can be replaced. On the contrary, it seems clear that outstanding performance in teaching, as in any profession, is achieved only by those who, in addition to a firm grounding in a communicable technology, bring to their practice a high degree of creativity and inspiration. This certainly must remain true in teaching as well as in medicine, law, architecture, engineering, physics, or musicianship. At the same time, however, the highest achievements in any profession seem likely to be realized only when they build upon a well-developed underlying technology."<sup>22</sup>

They point to an increased utilization of programmed instruction in public schools, but maintain that careful planning and preparation need to be made to insure more efficient learning, as well as wiser and more constructive use of the teacher's talents in providing individual pupil attention.

In order to take a closer look at the relative "goodness" or "badness" of technology as it relates to the integrity of persons, perhaps it will be helpful to come at it from the vantage point of Fletcher's situational "love ethic". His position is that in Christian

<sup>22</sup>Lumsdaine and Glaser, Teaching Machines and Programmed Learning, (Washington: NEA, 1960), p. 564

situation ethics nothing is worth anything in and of itself. "It gains or acquires its value only because it happens to help persons (thus being good) or to hurt persons (thus being bad)."<sup>23</sup>

In this value system, therefore, computer technology becomes very complex, obviously a mixed blessing. It is capable of removing so much of the drudgery from many of the routine tasks that have been done manually previously. It is also capable of removing numbers of persons from the work force.

On the other hand, if it can be made to provide an effective automated employment service (as was suggested earlier in this paper), the computer might be put to work correcting one of the problems it creates by its very existence.

This is to suggest that the dehumanizing and detrimental effects of computer technology can be controlled by more responsible planning for its application.

One of the most extensive research projects ever done on the handling of information and resources electronically was the Automated Literature Processing, Handling and Analysis (ALPHA) System, a part of the U. S. Army Missile Command. In a summary report of the first phase of the project the authors give a rather simple and understandable summary of the limitations and uses of the computer for projects such as this.

<sup>23</sup>Joseph Fletcher, Situation Ethics, The New Morality, (Philadelphia, Pa., The Westminster Press, 1966), p. 59

"The computer is a machine and not a super brain. It does what humans cause it to do, and nothing else. Because the operation of a computer is purely mechanical in nature, and automated system requires of its user a rigorous consistency in adherence to the rules of operation. A computer does not have the ability to examine a difference between two supposedly identical entries and conclude that the difference is unimportant. "Jones space comma" is not the same thing to a computer as "Jones comma space".

What, then is the advantage of using the computer? The advantages a computer really offers have little<sup>in</sup> common with some of the magical attributes alleged in newspaper and magazine articles. The truth is impressive enough, but perhaps not so colorful. The biggest reason for using a computer is that it works very fast compared with a human. It is also very accurate at this high speed. Humans get tired; computers don't. Humans have difficulty in checking their own work; computers (within their limitations) don't. Humans get bored doing routine jobs; computers do routine jobs best of all."<sup>24</sup>

This 491-page report summarizes the results of the application of automation to a highly specialized library -- indicating again a way of adapting technology to meet human needs and problems.

Human values, then seem to be the key to responsible use of machines without becoming less than man. Is technology an end in itself,

<sup>24</sup>"Automated Literature Processing Handling and Analysis System", (Hayes International Corp., Huntsville, Ala., 1967), p. 15

or does it serve some larger purpose? Humanization has to do with the achieving of basic, lasting values and meanings. To the extent that this can be achieved through the application of automation, the process then becomes "persons and machines" rather than "persons versus machines".

Perhaps one other illustration will suffice. Strommen in his Profiles of Church Youth discovered that the area where youth indicated a desire for help most was in vocational guidance.<sup>25</sup> An Automated Youth Employment Service, therefore, would put computer technology to work at a critical "humanizing" task rather than creating unemployment with its resulting dehumanization.

As to the challenge and responsibility in this dilemma of technology and dehumanization, DeCarlo points the finger of accountability at educators and religious leaders.

"To the extent that a technological society takes on aspects of dehumanization, religious and educational leadership must counter by placing urgent and highest priority upon the human values in the educational process. Otherwise life can become inhumane, can become bound in technique and can suffer confusion of purpose.

Where is the life we have lost in living?  
Where is the wisdom we have lost in knowledge?  
Where is the knowledge we have lost in information?

It is incumbent upon religious leaders and educators to help prevent a future in which these questions need be asked."<sup>26</sup>

<sup>25</sup>Merton Strommen, Profiles of Church Youth, (St. Louis: Concordia Publishing House, 1965), p. 189

<sup>26</sup>Dialogue on Technology, op. cit., p. 75

### B. Standardization - Freedom Versus Control

Modern man seems to be driving toward two ends: freedom, and the enjoyment of the things which modern technology is able to provide. However, these two goals often seem to contradict one another. Man is more and more controlled by the gadgets which his freedom allows him to produce and use.

The issue is standardization -- assembly-line efficiency, pre-fab houses, little boxes -- "and they all look just the same". The card sort is efficient, and places all of each category in separate piles -- and they all look just the same.

Everything now is cheaper by the dozen -- even children. You can buy everything from oranges to clothes pre-packaged, pre-cut, and cheaper if purchased in quantity. But the style, the size, and the individuality are controlled!

The computer could provide a person with the names of 25 business firms looking for delivery boys on Saturdays. But these leads in themselves decrease the chances that he would find a place in the stock room of an art supplies store where he would have opportunity to further develop his curiosity, interest, and latent talent in art.

Voters have far more information much earlier on election night than ever before. But it is now a well known fact that the computer not only reports the statistics; it becomes a factor as well in determining the outcome. The medium has indeed become the message.

"A society which places a premium upon loyalty and conformity to the larger organization must teach its children to hold dear their self integrity and accord dignity of self to others, sometimes at the expense of the immediate needs of the group. It must place highest emphasis upon individuality and freedom of decision in the face of the collective nature of the technical act."<sup>27</sup>

The ethical issue here is the integrity and dignity of the individual in view of the changes brought about by industrialization and the concentration of corporate power. With more and more of the routine decisions being made electronically, and more policy decisions made by a few corporate heads, how is it possible to preserve the creativity and initiative of the individual?

Huston Smith, of the Massachusetts Institute of Technology, maintains that technology tends to compound and concentrate power. This, in turn, becomes a problem of freedom and control in international politics.

"Technology compounds wealth and power, causing them to increase geometrically rather than arithmetically. This fact gives nations whose industrialization starts first an immense advantage. Up to the sixteenth century Asia, the Arab world and the West were relative equals. Europe's technological takeoff upset this parity, creating the world imbalance called colonialism. Thereafter the United States and the Soviet Union, the two largest industrial powers, shot to the fore with the United

<sup>27</sup>Ibid

States well in the lead, partly because World War II set us back less but even more because we started industrializing earlier. The working out of technology's compounding process has now produced a situation in which a small proportion of the world's population -- we the people of the United States -- wield the bulk of the world's power. This imbalance is going to increase. With population exploding most in the less developed nations, Americans are going to become a smaller fraction of the human race while commanding a larger share of its power."<sup>28</sup>

His recommendation is that this unhealthy trend be countered by deliberate watchfulness and checks and balances on the part of citizens in order to maintain control of their political destiny.

Freedom obviously becomes rather quickly a complex and philosophical concept. My concern here is only with those facets of one's freedom that become controlled and manipulated by advancing technology.

Another radically new factor has entered the scene in this connection. It has to do with the "anti-work" ethic and the increasing numbers of youth who find that their decisions about entering the work force have been weighted by technology. There are, for instance, the so-called "disadvantaged" youth who lack years of formal education who are left with few job opportunities that they are likely to find satisfying. So they drop out of the job race.

This problem was discussed by one of the working groups in a con-

<sup>28</sup>Human Values and Advancing Technology, compiled by C. P. Hall, (New York: Friendship Press, 1967), p. 18

sultation on Technology and Human Values in Chicago, May 2-4, 1967, under the sponsorship of the National Council of Churches. The following are some of their conclusions.

"Most affluent Americans, bound by a commitment to work as desirable for all men, have responded to this segment of youth by seeking to bring them into the work force. If only retraining can take place, the argument goes, these young people can be effectively absorbed into the society of the middle class. Work is an opportunity which the affluent are willing, in a sense, to let these individuals in on so that they might enjoy it as those who are already involved in the work force supposedly do.

"This response may well be begging the real question, however, for even many young persons who are not "disadvantaged" are subscribing to anti-work ethics. Some challenge the structural organization and stifling bureaucracy of existing institutions and want no part of them. Some seek major change in what might constitute work. Some see technological change as already beginning to allow man to escape from the drudgery of routine, even the subtle routine of the junior executive.

From these perspectives the question is not how does society train the "disadvantaged" youth to fit traditional concepts of work. Rather, it is how society must change itself to fit new understandings of the nature of work and leisure, which technological advances are making not only possible but imperative."<sup>29</sup>

<sup>29</sup>Ibid, p. 137



Will modern scientific developments bring about a situation where regular schedules of work are no longer necessary for everyone? Will it become necessary for us to re-examine our generally accepted value that work is in itself good and desirable for everyone?

In any case, the answers to such questions, and in fact, the very resources upon which the answers depend, are tied in very intimately with the fact of advancing technology.

Huston Smith contends that it is both irrelevant and futile to raise such questions as: Can technology be stopped? Or: Is its assured continuance promising or alarming? Such academic questions detract from the main issue of understanding and responding to the changes that are taking place.

"It is man's nature to tremble one moment and celebrate the next. This is as it should be, for it is the stance reason prompts. On the one hand reason tells us we are not entitled to take a human future for granted. Paleontologists report that for every species that has survived, nineteen have vanished from the face of the earth. But reason also reminds us that we have come this far, thanks to God's grace and the fact that we smelled bad to carnivores during those long millennia when they could have eaten us up. This is a survival record that is impressive, but insufficient to guarantee a future -- this is as far as evidence can carry us.

"On this elemental platform I suggest we individually be optimistic or pessimistic as we please. Or better, let us be neither.

For though optimism and pessimism appear as opposites on hope's continuum, they share as much as divides them. What they share is common devaluation of the present. Pessimism underestimates the extent the present can affect the future; optimism the extent it need do so. Perhaps the only undisputed lesson of technology is that the human power it augments is value-ambiguous. Our technological future can go well, badly, or middlingly. Time given to crystal-balling the direction it will go is time taken from determining the way it shall go. Optimism, pessimism, both are irrelevant. Let us put them aside and go forward."<sup>30</sup>

His mood sounds deterministic at points, yet he goes on to outline an aggressive plan for responding to present social, political, and philosophical realities.

The preceding data suggests, then, that, although man's basic capacity and freedom to choose may not have been altered, the fact is that emerging technology has radically affected the kind and number of choices open to him, as well as the nature of the resources available to him in the process.

Another way of looking at this issue of standardization is in terms of who controls the computer. The kinds of data that are screened and put into the computer would admittedly represent a certain bias. The job placement service described in this paper is within the context of church sponsorship. This poses severe implications for the control and dissemination of information.

<sup>30</sup>Ibid, p. 16.

The kind of jobs listed in the data bank, for instance, would reflect the contacts and the emphases of the sponsoring institution -- in this case the church. This could result in limiting the scope of the service as well as perpetuation of an ethical bias of a denomination.

On the other hand, a job placement service, growing out of the church's basic concern for human need, could be a legitimate investment in its own mission, pursuing goals basic to its reason for existence.

Any major information storage and retrieval system would, therefore, need to be sensitive and responsive to this dual possibility: 1) manipulating data and persons for the sake of a particular point of view, or 2) providing resources and information as objectively as possible for particular needs and for the resolution of particular problems.

#### C. Desocialization -- Relationship versus Isolation

One of the basic needs of man, particularly in young adulthood, is to achieve a true sense of intimacy -- a close human relationship, a meaningful involvement of one's person with another. Yet the tech-

nological environment in which youth must function complicates and makes this task more difficult.

What is the nature of this relationship said to be so basic, but which seems to be less and less possible as persons become more caught up in the pace and structure of an automated society?

Eric Erickson puts it this way: "The young adult, emerging from the search for and the insistence on identity, is eager and willing to fuse his identity with that of others. He is ready for intimacy, that is, the capacity to commit himself to concrete affiliations and partnerships and to develop the ethical strength to abide by such commitments, even though they may call for significant sacrifices and compromises.

Body and ego must now be masters of the organ modes and of the nuclear conflicts, in order to be able to face the fear of ego loss in situations which call for self-abandon: in the solidarity of close affiliations, in orgasms and sexual unions, in close friendships and in physical combat, in experiences of inspiration by teachers and of intuition from the recesses of the self.

The avoidance of such experiences because of a fear of ego loss may lead to a deep sense of isolation and consequent self absorption."<sup>31</sup>

The issue is: in what ways do emerging technological developments impair or frustrate this normal developmental process and make it difficult

<sup>31</sup>Eric Erickson, Childhood and Society, (New York, W.W. Norton, Inc., 1963), p. 263

for persons to have meaningful human relationships?

Sophisticated communications systems tend increasingly to link man with machines rather than with persons. Who has not had by now the frustrating experience of dialing a phone number and hearing the voice on the other end begin with "This is a recording..."? It obviously does not contribute to one's feeling of closeness and intimacy to call a friend to discuss a problem and hear him say, "I am out of the office now, but if you will leave your name and number, at the sound of the beep, I will communicate with you as soon as possible."

Another factor in the electric era that tends to accent isolation rather than intimacy is the continual bombardment of the senses by the mass media. As one is encouraged to enter into and experience total environment with all of his senses, that environment is more likely to be filled with noise, lights, images, and motion, than with people and interpersonal relationships.

Recently I visited one of the popular "drop-in" spots in Greenwich Village. Featured at the time was a teen combo. One of the first things you are conscious of on entering is the volume of the noise from the electronic musical instruments turned up to a fever pitch. Sitting eye-ball to eye-ball with your neighbor, it is impossible to communicate words that are understood, shouting at the top of your voice. However, it is doubtful whether words are felt to be necessary or desirable in such an atmosphere. A New York Times columnist described the discotheque experience this way: "... having every cubic inch of space filled with a maximum number of decibels until your brain is beat to a pulp by the

noise. Then you are 'with it'."

The issue is, being bombarded with so much, are we prepared to sort the data, to separate the trivia from the essence?

At least two kinds of things seem to be happening. On the one hand, there are those who are "tuning out". These, incidentally, are not all youth. A teenager recently asked Dr. John Culkin, Director of the Communications Center at Fordham University, whether youth are not actually more tuned in to reality than adults. He admitted that he felt that youth probably are more attuned to what is happening through the media than many adults. He went on to add, however, that all of us are rather selective in what we tune into.

This tuning out produced what was described some time ago as the "uncommitted" generation. There are some who still contend that there is a genuine lack of awareness and concern among youth. This they say is in part due to the amount of information each individual receives, perhaps so large as to overwhelm the senses, benumbing them to such a degree that they become incapable of responding. Others say it is a part of the comfortable conservatism of suburban youth who have become staunch supporters of the status quo.

More recently, however, there has emerged a more activist "turned on, tuned in" generation of youth, particularly among the college students. This movement has been facilitated by communications media which make it impossible for anyone to be unaware of the issues and events. Furthermore, many of these youth are becoming not just informed, but also

concerned and actively involved. They are insisting on being where the action is, and having a piece of the action.

Another one of the work groups at the Chicago Conference on Human Values and Advancing Technology summed up the matter of the involvement of youth as a result of communication technology this way:

"Youth have lived with this great outpouring of information and sensory data for a much greater percentage of their lives than have their parents. They appear less bothered by it and may even be able to screen and evaluate data more thoroughly. More youth are involved in action based on comprehension of issues than ever before. The apparent anxiety of some young persons over a lack of awareness seems to occur because this growing segment of youth is itself highly aware of issues and concerns."<sup>32</sup>

In connection with the issue of involvement and intimacy, as opposed to separation and broken relationships, it seems that modern technology is a mixed blessing. It has the potential for either tuning us in or tuning us out.

The individual, in relationship, in the learning situation is brought into clear focus by Sidney Pressey as he discusses some problems related to teaching machines.

"My contention is that much learning is of an integrative complexity beyond what automators mostly now seem to recognize. From Kind-

<sup>32</sup>Human Values, op. cit., p. 130

ergarten through graduate school, the most effective learning is usually in various respects, social: in motivation and continuing stimulation from other pupils, teachers, parents, community; in guidings and elucidations from both classmates and teachers; in goal-settings and appraisals.

Recent efforts at increased educational effectiveness have stressed such factors. Practically all the writer's experiments with automation over the past 30 years have been in informal laboratory settings with such values of sociality recognized and sought. But most recent work seems to neglect such possibilities, or even make a point that the student works by himself, the learning situation being depersonalized.

In contrast, the writer would argue that use of teaching machines might better be shared fun, and could distinctively aid in further desirable socialization of school work."<sup>33</sup>

The conclusion here is obvious. Particularly in the area of human relationships, the role of the machine must be evaluated and challenged at each step along the way. It must not be allowed to become a crutch for the policy maker who can bury his value assumptions in the questions he asks the computer and then claim he is doing only what is required.

#### D. Legitimization - Copyright versus Plagerism

One of the ethical issues looming larger and larger in the use of electronic equipment for information storage, retrieval, and dissemination is the question of copyright.

<sup>33</sup>Lumsdaine and Glaser, op. cit., p. 499



With the increasing demand and capacity for handling vast amounts of library and resource materials, it becomes increasingly difficult to secure the necessary authorization from the sources of copyrighted items.

When, for instance, a resources and information service is provided, much of the information and many of the resource materials could not legally be abstracted and distributed unless copyright clearance was secured.

Only one major source of information was found relative to the issue of copyright. It is a document entitled "The Copyright Law as it Relates to National Information Systems and National Programs", which reports on a study made for the Federal Council for Science and Technology, Washington, D. C.<sup>34</sup>

It analyzes the problems of copyright protection in relation to the development of national information networks, particularly from the standpoint of the scientific and technical information activities of the Federal Government.

The following is a summary of some of the issues raised which seem to have relevance for the purposes of this paper.

A. The Problem of Ready Access to Copyrighted Material

Universities, research organizations, private companies, and the government, are now working to develop information networks or systems

<sup>34</sup>Federal Council for Science and Technology, The Copyright Law As It Relates To National Information Systems and National Programs, July, 1967, p. 7-42

that will use computers and electronic equipment to speed information -- which may include copyrighted material -- from source to user.

While users of such systems are willing to pay for the copyrighted material that they contain, they fear that the permissions procedures of copyright law, by imposing upon them the burden of contacting each individual copyright owner to secure permission to use his material, may impede the development, or restrict the use of information storage and retrieval systems.

The National Science Foundation reports that there are operating now at least 118 information storage and retrieval systems that use computers. In light of this expanding activity, including projects by the Department of Defense, Health, Education, and Welfare, NASA, and others, the report suggests that in the near future information in the form of articles, books, or other copyrighted material, may be located and transmitted instantaneously from one section of the country to another by means of computer networks.

There is pending a proposed revision of the copyright law which would include a "fair use" clause. The report lists and discusses several possible harmful effects the proposed revision might have, centering basically around the possibility of hindering the development or the maximum efficient use of information systems.

#### B. The Problem of Making Computer "Input" an Infringement

Since the use of computers for storage and retrieval of information may to some extent replace the sale of books and journals, there

is general agreement that in most cases the payment of some copyright compensation should be required. But, at what point in the process of putting information into the system, manipulating it, and recovering it should compensation be charged?

It seems to be generally agreed that no charge should be made when information within a system is manipulated by, for example, being transmitted from computer to computer. It is also agreed that when copyrighted material emerges from the system in written form (whether on paper or on a screen), copyright royalty should be paid.

The major issue is whether a copyright royalty should also be charged when copyrighted material is fed into the system. In other words, "output" that reproduces a copyrighted work infringes the copyright; should "input" also constitute a copyright infringement? The proposed revision has been interpreted as providing that it does.

There are cases present both for and against this.

#### C. The Problem of Exemptions for Nonprofit Users

In the future much of the output of information systems, including systems that use computers, may be used by educational or other non-profit institutions. If, as is provided in the proposed revision, reproductions that emerge from a computer are treated for copyright purposes like any other reproduction, they will be affected by the exemptions from copyright liability that the Act contains.

Under present law the public performance of non-dramatic literary or musical works is exempted from the copyright act when it is carried

on without motive of profit. These exemptions are of considerable benefit to schools and other nonprofit institutions.

The proposed bill, however, replaces the "not for profit" exemption with a narrower exemption.

The exemption as written in the proposal would not apply if teachers or students were not in classrooms but were, for example in their homes or private places of study. Moreover, the exemption would be lost if students used machines that allowed them to call for the information on an individual basis so that they might progress in learning at their own rate of speed. Further, the exemption does not apply if a transmitter is used and it is located more than 100 miles from where its signal is received.

Finally, the limited exemption that this bill gives may, as a practical matter, be lost if computers are used, for the definition of "reproduction" is such that to put a copyrighted work into a computer constitutes infringement whether or not the work is ultimately used in a non-infringing way. If so, the fact that a computer's output might be exempt is irrelevant.

#### D. General Observations

1. Although the general purposes of copyright legislation are "to promote the progress of science and the useful arts" and to maintain the "balance between public and private welfare", one of the important bases for this study was the creation of a national information system.

2. Copyright legislation goes back to action taken by George Washington, with a heritage in British common and statutory law as far back as the reign of Queen Ann, 1710.

3. At the international level, the report points out that lack of uniform concept and procedures in copyright raises a serious problem of access and dissemination of the world-wide scientific and technical literature.

4. The following are some of the techniques utilized in information systems and implementation of federal programs which relate to copyright concepts:

- a) Computerized data banks of individual works and derivative works, with repackaging of the material either before it is put into the computer or when it is drawn out for different users and uses.
- b) Facsimile transmission of unique holdings to remote locations.
- c) Rapid dissemination of information automatically selected to meet the needs of individual users.
- d) Search of mechanized stores of information and text from individual consoles.
- e) Programmed instruction with interaction between the student and the computer.

For instance, "information systems may use electronic and mechanical equipment together with photographic and chemical processes to locate, to transmit, and to reproduce digital and graphic material from one place to another.

Thus a research worker at Stanford may be able to discover electron-

ically that he needs a paper in the MIT library, and a copy of this paper may be electronically transmitted to him. Or, the computer itself may contain a copy of a paper that could be called up at his request. Moreover, books, articles and papers can be translated into machine-language and read directly into a computer and the computer can operate directly with the information contained in the books or papers to produce answers to problems."

5. Copyright laws are very much in flux now because of the revolutionary changes taking place in information systems.

6. Unless statutes can be simplified, clarified, and broadened immediately, a great deal of potential research could be discouraged, and national and international systems especially curtailed.

7. The automated job information and vocational resources project which is proposed in the early part of this paper would fall under the "not for profit" and, unless the new legislation is extremely limiting, would not be greatly affected by copyright restrictions.

#### IV. THE PROPOSAL:

##### A Computerized Youth Employment Service

A. Who are the youth who would benefit from the automated job placement service?

They are youth basically from hard core poverty centers in the city. They are from families already on relief, or existing on bare subsistence-level income.

They are employable youth who are able to work, but who are unemployed because culturally they have been deprived of the academic or some other normally-required skill qualification.

They may be from families for whom unemployment and idleness have become a way of life, therefore lacking incentive and initiative to seek out work opportunities on their own.

They may be persons with feelings of disillusionment and hopelessness. They may have developed attitudes of anger or hostility toward the "establishment". They sometimes will have a commitment to an "anti-work" ethic, particularly if work means joining the structures which they see as being the cause of the condition in which they find themselves.

In any case, they would be eligible to participate in the job placement service by meeting two requirements:

1. Be of employable age.
2. Submit a personnel profile sheet (see sample pg. 41)

How would they be contacted:

1. Referrals through community centers or other youth-serving agencies.
2. Contacts with leaders of YMCA, civic, church programs for youth.
3. Conversation with guidance counselors in school.
4. Communication with other employment and placement agencies (i.e. Mobilization for Youth, HARYOU).
5. Individual contacts.



(Sample)

PERSONNEL PROFILE SHEET

1. Name
2. Address
3. Telephone
4. Name of School (if attending)
5. Grade in School
6. Previous employment experience
7. Schedule you are available to work  
Days  
  
Hours
8. Type of work in which you are interested

B. Where Are The Jobs

Where are the jobs that would be fed into the computer as available opportunities to be matched with the profiles of youth applicants?

The jobs, hopefully, would come from a wide variety of sources, types of work, salary scales, and working conditions. The basic purpose of the service is to provide the widest possible range of exposure for the applicants, and a wealth of resource options on the part of the employers.

Therefore, in order to secure input from as many kinds of sources as possible, contacts and relationships need to be established and maintained with a representative cross-section of the job market of the area, some of which might be:

1. Youth Employment Agencies
2. State Department of Labor
3. Urban League
4. YWCA
5. Churches
6. Camps
7. Community Service Agencies
8. City Youth Board
9. City Police Department
10. Civic Groups
11. Local Labor Groups
12. Newspapers
13. Business and Industrial Firms

14. Professional Groups

15. Radio and Television

16. Theatre

Personnel needs could be filed in the electronic data bank either by calling in by telephone or by submitting a written Job Profile Sheet (see sample below).

(Sample)

JOB PROFILE SHEET

Name of Agency

Address

Telephone

Type of Job

Hours Required

Type of Skills Needed

Salary Range

### C. What Are The Services Provided

What are the services provided by a computerized job placement center?

1. Provide job-seeking youth with a wider exposure to the job market.
2. Provide employers with an almost unlimited source of personnel profiles from which to screen and choose.
3. Handle mechanical detail efficiently, so that guidance and counseling personnel can be used for guidance and counseling, rather than for clerical work.
4. Provide resources, information, and contacts on a massive scale, that have been so lacking in the experience of the youth in the ghetto.

### D. Funding

In order for a project of this scope to be undertaken successfully, major funding would be necessary. For the purposes of this initial proposal, categories of cost only are listed.

#### 1. Salaries

Director	Secretaries
Assistant Director	Consultants
Research Associates	Data Processing Personnel

#### 2. Employees Benefits

## 3. Travel

Staff

Advisory Committee

## 4. Equipment

Office Equipment

Special Equipment

## 5. Supplies and Materials

## 6. Communication

Telephone

Postage

## 7. Duplication and Reproduction

## 8. Rent

Office Space

Computer Time

## 9. Contingency Fund

E. Evaluation

The program would be evaluated in several ways at various times to discover whether or not the original or emergent goals are being realized. The following are some of the criteria that would be used in such evaluation:

1. Are youth actually being placed in meaningful jobs?
2. Does the service provide a wider variety of job-option for youth?
3. Is enough communication provided between employer and applicant so that meaningful relationships and longer-term employment result?
4. Is there enough demand for such a service to justify major

investment in use of high-speed electronic equipment?

5. Do employers feel that automated screening and the broader field from which to screen have provided better job placement, and better matching of skill, interest, experience with job requirements?

6. How does it compare with other parallel job placement services, in terms of efficiency, personal relations, reaching persons, filling jobs, etc.

F. A Prototype: Juan

Let's assume, for the present purposes, that we have a computerized job placement service -- aimed specifically at summer opportunities for youth from underprivileged areas of the city. What would it look like to a teenager? Consider Juan Hernandez as an illustration.

The Director of the Neighborhood Community Center, discovers that Juan, a newcomer to the center program, is interested in and in need of a job for the summer. Juan has just moved into an apartment around the corner with his mother and three younger sisters. His mother works, and if he is to go to college this fall, he has to have a job this summer. The director encourages Juan to fill out an information form and submit it to the Youth Employment Service Office.

In one section of the data bank there are hundreds of profiles of teenagers. Included in this personal profile are such bits of information as: name, age, address, school, grade in school, previous employment experience, a description of the kind of work in which he is interested. (See attached sample personnel profile sheet.)

In another section of the data bank there is a list of agencies and employers including an index to available jobs. For each job there would be a description of the type of work and the qualifications required. Location, schedule, salary, and other relevant information would be included. (see attached sample job profile sheet.)

Two days later Juan receives a notice listing four job openings that match his interest and experience profile. One is too great a distance so that transportation would be a problem. Another he rules out because it would not fit into his afternoon school schedules. The other two he calls immediately and arranges an appointment.

One of the situations appears to have more congenial working conditions, so he makes his decision and notifies the Youth Employment Service Office as he had agreed when he submitted the original information form a week earlier.

This is to suggest how one teenager might benefit from an automated job placement service in one situation.

## V. SUMMARY

In summary, this study and research has attempted to show some of the factors involved in the possible utilization of the computer in the problem of unemployment among urban youth.

The fact that both formal and informal sources of help with job placement have touched the problem only superficially, indicates a need for some more far-reaching and efficient way of helping youth in poverty areas of the city become exposed to the broader dimensions of the job market.

Changing social conditions point to an increasingly fertile climate for, and growing need to use every resource available (including automation) to respond to the mounting urban crisis, particularly the frustrations, and the hopelessness of vast numbers of unemployed and so-called unemployable youth.

The debate over various applications of the computer to human problems (such as jobs for youth) has brought into focus clearer than ever before some of the ethical issues related to automation.

Mass media have exposed contemporary youth to a world culture in a unique way. Within this context, electronic communications may well be a key to a much-needed response to the smouldering impatience and restlessness of increasing numbers of so-called unemployable youth in the ghetto areas of the cities of America.



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