INDUSTRIAL ARTS IN OCCUPATIONAL THERAPY

A Dissertation

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

DONALD WILLIAM THIEL, B.S., M.S.

The Ohio State University

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Approved by

Adviser

Department of Education
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CHAPTER I

PLAN OF THE STUDY

Nature of the Problem

An impressive fact of the times is change—a rapid, pervasive change tremendously complicating life in the free society of America. The impress of change is of paramount importance within the educational scope of society in general; it affects not only the physically able but those of lesser means as well. The simple life of the pioneer has given way to an existence of advanced science, machine controlled production, increased longevity, and atomic powered advances in peace and war. The schisms and social differences that a modern and growing economy based on industry and technology produces are so many and so varied and their effects upon man's life so strong and so extensive that they raise important problems for the whole range of educational endeavor.

Statement of the Problem

Industrial Arts education has given little evidence of being guided by these changing concepts of life; in truth the profession attempts to ride on the comet's tail, rather than accept its rightful share in the roles of educational leaders. Towers (68, p.267) states, in part,
that the principles of industrial arts education should be,

1. re-examined in order to bring them up to date.
2. that specialized professional education programs be revised and broadened to include activities that make up the diverse situations existing in advancing technology.
3. that there be a continuous program of evaluation.
4. that an organized program of professional and public relations be in evidence.

Much has been gained in the relatively short historical span since industrial arts education was introduced. This includes the attainment of continuity through a developed and stated philosophy of industrial arts education, the establishment of such professional organizations as the American Industrial Arts Association, the American Vocational Association, and Professional Fraternal organizations. Yet, within plain sight of these obvious steps of progress there lies an area of neglect. Industrial arts should be cognizant of its sister profession, occupational therapy. It should be cognizant of the civil demands made upon registered therapists; of the skills required in the practice; of professional preparation in formal educational settings; and of the American Occupational Therapy Association in its efforts to serve the membership effectively.

Professionally, industrial arts should set about to serve where need is evident. By virtue of the large blocks of educational time required of the occupational therapists
as established in the Essentials of An Acceptable School of Occupational Therapy, in the acquisition of technical skills and understandings of technology, and by virtue of the industrial information necessary for the therapists to do pre-vocational testing and counseling, leaders in industrial arts should make a resolute effort to provide adequate, worthwhile, and essential services to occupational therapy students.

**Purposes of the Study**

The writer, in the capacity of teacher of occupational therapy courses in industrial arts at The Ohio State University for three years, recognized the need for improvement in this important service particularly in view of the ever increasing number of graduating therapists, and the ever increasing number of accredited schools offering occupational therapy as a part of their educational program (Table 1). In an attempt to make some improvement in the above mentioned course work, a search was made of professional literature within industrial arts to determine the course organizational methods used in other industrial arts settings where there were courses for occupational therapy students. Very little was to be found. An attempt was then made to look through the literature in occupational therapy, and although many registered occupational therapists were originally graduated with a baccalaureate degree in industrial arts, and the American Occupational Therapy
Association recognised the valuable contributions industrial arts could make to its members, little was found which could be construed as bringing the professions within understanding range. It was therefore hypothesised that some organ of professional understanding should be established; hence a purpose of the study, that of revealing essential, commonly understood facts in regard to the mutual concerns of occupational therapy and industrial arts education.

In this study the author has for his general purpose attempted to ascertain the contributions that industrial arts teacher education can bring to the occupational therapy profession. In the attempt to realize any degree of accomplishment of the above purposes, it was found necessary to make a survey of literature within the field of occupational therapy, this to establish personal understanding and background as well as to present an up-to-date history of occupational therapy, its professional nature and scope, and how the therapist has been educated. Because of the assumed similarities in the professional requirements of the occupational therapists and the teacher of industrial arts, certain facts to substantiate this assumption were sought. The search revealed that technical skills of both professions were basically the same and that both gained these technical skills as a part of their preparation for roles as practitioners of their respective professions. It was also revealed that occupational therapists spend a great deal of
time teaching these skills to the physically and mentally disabled (Appendix D). A second point revealed by the search was that the skill areas basic to industrial arts were also very important to occupational therapists. For in 1952 the American Occupational Therapy Association conducted a national survey called "Treatment Media," from which significant statements were drawn to cause this writer to hypothesize that industrial arts was not performing its fullest professional obligation in the preparation of occupational therapists. In Appendix A, Study F, there were found such points as "Selection and Teaching of Techniques or Skills" and "Development of Student Skill in Teaching". These were analysed as essential areas where industrial arts education could make contributions to occupational therapy. The "Treatment Media Study Report—Final Report," of 1952 was a starting point and a guide for activities of mutual concern to occupational therapy and industrial arts.

Methods of Investigation

Even though preliminary investigative steps were taken in the initial survey of professional literature in both professions, a more comprehensive survey seemed prudent. Therefore an intensive search of the historical archives in occupational therapy was made. Although little organized historical data was found, the American Occupational Therapy Association cooperated in making unpublished research
available, and Miss Wilma West, Past National Director of the Association, provided findings of personal research in the physical disabilities. In essence, the survey of these data relative to the subject made possible the compilation of a bibliography. Additional bibliography was compiled through the facilities of the General Library of The Ohio State University, the Education Library of the College of Education of The Ohio State University, and the Library of the College of Medicine of The Ohio State University.

Other references were found through examination of indices of certain educational journals, professional books, pamphlets, college catalogs, periodical articles, unpublished dissertations and special reports. Various association monographs in occupational therapy, and in industrial arts were consulted in an effort to discover as many aspects of the problem as possible. Additional sources were the bibliographies that accompanied many of the articles encountered.

The items of the bibliography thus obtained were carefully examined, each read and briefed. After each of the items had been examined, the data were organized in order to ascertain what generalizations might be made and how they could be utilized for most effective presentation. Since the basis of this study evolves around the skill areas used by those teaching occupational therapy and industrial arts, a list of such factors was made from historical facts, studies, statements, and inferences encountered in the reading.
The next step in carrying out the investigation concerned the designing of a research instrument to determine what educational practices were being utilized in the occupational therapy schools across the nation. A letter (Appendix B) in the form of a request was sent to each of the 30 accredited institutions offering occupational therapy education. This request concerned (1) permission to include their school in the study, and (2) certain facts about the personal qualifications of the students entrance requirements, and general, technical, professional and field experiences. Twenty-seven of the contacted institutions responded. A thorough examination of information obtained from these sources was made (Table 1). This examination authenticated the broadened list of mutual technical skills to be used in determining the general construction of a questionnaire format to be sent to occupational therapists graduated since 1952 from the twenty-seven institutions included in the investigation.

A tentative instrument was constructed and then subjected to trial by locally available therapists as a check to determine its usability. This resulted in a few minor revisions in basic terminology. It was then sent to the writer's major adviser, after which several other suggested minor changes were carried through, putting it in final form for printing.

The questionnaire, containing a list of eleven skill
areas, was submitted to 324 Registered Occupational Therapists graduating from the accredited educational institutions included in the study. The span of the study, using 1952 as the base year, followed through the year 1957. As a random sampling of skill experiences, two therapists from each of the graduating classes of the twenty-seven schools in the above mentioned years were sent questionnaires. Names of therapists were obtained from the American Occupational Therapy Association Yearbook. This document lists the names of all therapists registered with the American Occupational Therapy Association, and who are still active in the United States.

A quick check system was devised to answer the eleven questions relative to the eleven skill areas in which experiences were obtained by the therapists, where and by whom these skills were taught, what skills were considered most beneficial, what skill deficiencies were noted, where these skills might most effectively be taught and the need for more skill experiences. Also asked were four opinion questions relative to representativeness of skills listed, skill level of the therapist, vocational counseling qualification of the therapist, and the amount of educational theory a therapist should receive.

**Limitations of the Study**

Efforts to promote industrial arts, occupational therapy relations program that will realize the purpose of
this study necessitated certain limitations:

1. Only the undergraduate programs of twenty-seven institutions of higher education offering occupational therapy were studied. One exception to this limitation resulted when one of the twenty-seven schools offered only an advanced standing certificate in occupational therapy; that is, a prerequisite to the educational program was a baccalaureate degree. However, the program was essentially undergraduate in nature.

2. The many possible directions of the study made it necessary to choose from the varied techniques which could have been used only those which seemed to relate significant data most effectively to the purposes, with a reasonable consumption of time and energy.

3. The inability of the investigator to interpret properly the testimony of a large number of individuals as to the skills and strengths received or developed through their college experience was perceived as a limitation.

4. A fourth probable limitation involves the period of time covered by the study. The data gathering device was sent to graduates of the twenty-seven schools between the period of 1952 and 1958, or a period of six years.

5. A fifth limitation was that only registered occupational therapists were involved. It is possible that graduates of the schools surveyed in the study who were not members of the American Occupational Therapy Association
could very readily have contributed significantly to the study.

**Definition of Terms**

Communication is an attempt to create understanding between two or more persons, and in such an attempt there is always the danger of misunderstanding. This danger increases in a study where closely allied terms are often used interchangeably and where allied professions make use of the same terminology in different contexts. In an effort to reduce this danger of misunderstanding and to increase the effectiveness of the communicative processes, certain basic terms which lend themselves to different interpretation are defined in so far as they pertain to this report.

1. **Occupational Therapy.** This term is derived, defined and documented in the third chapter, and is used for purposes of this study to mean: the science of employing creative, industrial, educational, and recreational activities in a restorative program for the sick, injured, and disabled. The concern of the therapist is with the patient and the process rather than with the finished product made by the patient. The activities used must be sufficiently interesting to motivate the patient's active participation.

2. **Rehabilitation.** As used in the context of this report, refers to the inclusion of all medical, psychological, and social services to the mentally and physically disabled. Rehabilitation is the restoration of the handicapped to the
fullest physical, mental, social, and economic usefulness of which they individually are capable. Occupational therapy, physical therapy, vocational training, medical social service, and placement are all parts of the rehabilitative program.

3. **Physical Medicine.** For purposes of this study this term is used in the same manner as the American Medical Association. The meaning here is the diagnosis and treatment of disease by various physical agents, including both physical therapy and occupational therapy. Physical therapy uses various means as light, heat, water, electricity, physical manipulation, physical exercises, and mechanical devices in the treatment of disease.

4. **Industrial Arts.** As defined in Chapter V, the term is thought of as a phase of general education non-vocational in nature which attempts to provide students with real life experiences, using the implements, materials, processes, and products of the industrial society of which they are a part, and as the cooperative study of secondary schools points out, industrial arts activities are, in general, exploratory in nature and continue to be exploratory in nature until pupils require more specialized training in industrial vocational education. When satisfactory vocational facilities are not available, the industrial arts department must assume some responsibility for this specialized training.
For all pupils, both boys and girls, the curriculum offers orientation to an industrial environment, occupational information, opportunity for the development of consumer knowledges and skills related to industry and industrial products, and a variety of leisure and hobby pursuits to meet particular interests and needs.

5. **Industrial Arts Education.** Limitations of this term refer to the program on the college or university level, where the subject and experiences are geared to professional development and competencies of the various groups served, the teaching profession—elementary, junior high and secondary, the occupational therapy profession, industry—technicians, management and training, and the military forces.

6. **Laboratory.** A laboratory is a place where research and learning is carried on. It is a place devoted to experimental or developmental study in any educational setting; a place where something is prepared or some operation is performed.

7. **Technology.** Technology describes the accumulated knowledge, techniques, skills and their application to the scientific and systematic knowledge of industrial arts. Technology is considered as being broader than the term "industry," since industry is commonly construed to mean manual employment as applied to products for consumption.
Review of Other Studies

In the research and survey process many educational periodicals, research indices, university and college publications listing master's degree and doctoral degree researches were reviewed. None on the subject of this investigation were noted. Several studies in related areas were examined: Ashbrook's Master's thesis on "A Study of the Educational Needs of the Mentally Retarded Boy in a Large Industrial City;" Bural N. Osburn's study, "Adult Education in Handicrafts in the United States;" and Keith S. Armstrong's dissertation on an "Investigation to Determine the Effectiveness of an Intensive Training Program for Cerebral Palsied Children and Their Parents as a Part of the Home Cure Program." Although each study examined gave valuable hints in research techniques and possible approaches to the problem, none were concerned directly with the subject of this paper.

The writer did discover one research in process with similar objectives. Duane A. Jackman, Director of Industrial Arts at North Dakota State Normal and Industrial School had set out in a doctoral dissertation to determine skills, information and techniques used in industrial arts that should be provided in the preparation of an occupational therapist. His study was limited to the State of Minnesota and up to the year 1952. At last report February 17, 1959, the study was still in progress.
Summary

The investigator proposes to examine the educational program of occupational therapy to determine how industrial arts education can better serve its sister profession, and to bring to light certain facts relative to cooperative understanding. A survey of the professional literature in occupational therapy and industrial arts education was made, which resulted in the accomplishment of a suitable bibliography. In addition to the literature survey an extensive search of the occupational therapy curricula for twenty-seven colleges and universities in the United States was made. The information gained from this search and that gained from the "Treatment Media Study" report of the National Office of the American Occupational Therapy Association, provided sufficient material to formulate a questionnaire. The questionnaire was sent to 324 registered occupational therapists, graduating from the twenty-seven schools between the years of 1952-1957.
CHAPTER II

HISTORICAL BACKGROUND OF OCCUPATIONAL THERAPY

Compendium

Medicine and its allied fields offered employment for more than 1,200,000 persons in 1952, and is vital to the public welfare. It offers a variety of employment opportunities, of which occupational therapy is one. These health services were recently reported by the Women's Bureau, of the United States Department of Labor to be second only to teaching among the professional and semi-professional occupations in the number of persons employed (55, p. 1). Occupational therapy as a recognized profession is only about forty years old, beginning when General of the Armies John J. Pershing, Commander-in-Chief of the A. E. F., called upon the Army Surgeon-General for women volunteers to do "bedside occupational work."

Traditional

One of the primary references used in the review of the historical beginning for occupational therapy is that of a source book for the profession, edited by Sidney Licht, M. D., entitled Occupational Therapy Source Book (43). Here is carried through one of the most complete compilations of historically significant recordings that cover the twenty centuries up to early modern times. It is a work which
traces man's attitude toward and the treatment of mental illnesses. It is a source rich in materials of a psychiatric nature from antiquity to World War I. But it fails to complete the picture of a profession so magnificently endowed with the many facets of human endeavor toward creating a better life for mankind. For this reason, Chapter II will be written basically in two parts, that is: the inception or traditional approaches, and the application of this discipline of treatment to other types of disabilities, or the physical disabilities concept.

Occupational therapy in the medically prescribed and supervised institutional forms currently in evidence is new, but the principles and application of occupational therapy techniques to dissipate melancholia, and to aid in physical recovery is exceedingly old. Evidence is recorded in very early sociological settings of the principles using activity as a means of aiding recovery from an illness. (Figure 1). References to medical exercises called "Cong Fu" utilized by certain religious factions in China are noted as early as 2600 B.C. (42, p. 311). These Chinese physicians taught that diseases were caused by organic activity. A series of medical gymnastics was invented similar to modern Swedish gymnastics. The ancient Chinese believed that faithful practice of this art would not prolong life but insure immortality of the soul. In 2000 B.C. the Egyptian Priesthood understood the contributions which an awe-inspiring
atmosphere could make to dispel morbid moods. The ritualistic songs and dances of temple maidens, botanic gardens, rural concerts, and barges floating down the Nile were some of the techniques of the period (51, p. 66).

... at both extremities of ancient Egypt, which was then very populous and flourishing, there were temples dedicated to Saturn, to which the mentally depressed came in large numbers and where priests benefited by their assured credulity. The priests enhanced the supposedly miraculous cures by all the natural hygienic measures: games, and all kinds of recreational exercises were conducted within the temple. Exhibitions of voluptuous paintings and seductive pictures were prominently displayed. The most delightful songs and melodious sounds often charmed their ears. The patients walked in flowering gardens and exquisitely landscaped groves, breathing the fresh salubrious air of the Nile from the decks of gaily decorated boats or while attending outdoor concerts. At other times they were taken to verdant islands where under the symbol of some divine protector they watched ingeniously contrived entertainments in the company of well chosen companions. Every moment was devoted to some gay episode such as a grotesque dance, or to a series of diversified amusements enhanced by religious associations. From the outset a varied regime was scrupulously observed starting with the trip to these holy places and the planned festivities along the route. Hope strengthened by superstition, coupled with the ability of the priests to offer desirable diversion and to dispel sad and depressing thoughts could hardly fail to relieve the dejected feeling, to quiet uneasiness and to effect salutary changes when such measures were used to inspire confidence and establish the influence of divine guardians.

Other early civilizations shared the understanding and values derived from activity treatment. The Bible relates that in about 1030 B.C. in Gilgal, Judea, King Saul was depressed by an evil spirit from the Lord, and a servant went out to find a man who was a cunning player on the harp; at which
Figure 1. Historical Compendium of Occupational Therapy Adapted to this Study from *Practical Occupational Therapy*, by Louis J. Haas.
time David was brought in to play on his harp until King Saul was refreshed (11, p. 301).

More comprehensively chronicled are the indications of Greek and Roman physical exercise cults that played an important part in the everyday life of these people. The Aesculapian cult, dedicated to Asclepiades, a Greek physician (born 178 B.C.) who had a reputation for curing, was one of the more important groups. Asclepiades advised that humane treatment was the keynote in the physical as well as mental healing of the insane. Heretofore the melancholy and disturbed cases of insanity were driven forth as outcasts or confined to dark cells, but Asclepiades broke with this tradition and ordered the darkened rooms lightened and aired, and advocated activity as an aid to recovery. His basic philosophy of treatment seemed to be physical and he used therapeutic baths, massage and music in his prescriptions. There was also evidence of patient employment in Greek temple libraries indicating the "work-cure" idea (45, p. 6). Throughout Greece, sixty of these temples were dedicated exclusively to the dealing of mental and physical illnesses. The paucity of available literature makes it difficult to determine to what extent these people practiced enlightened views, but Licht, (43, p. 4) states that the reputation of Asclepiades as a physician in his own time was legendary. Licht further makes the statement that professional antagonism caused many practicing physicians of the time to
discredit Asclepiades and practice the teachings of Hippocrates, the so-called traditional forms of treatment. This was somewhat rectified when about a century later a Roman, Celsus by name, revived the teachings of Asclepiades to a point. It was his belief that patients should be treated with the somatic views of Hippocrates and the psychic advances of Asclepiades. Celsus prescribed exercise to the point of fatigue to calm excited patients. These obvious advancements in the treatment of mentally ill were somewhat shaken by Galen, who settled in Rome about a century after the death of Celsus. Galen disregarded the psychological approach to mental conditions and advocated complete physical treatment. The statement that "employment is Nature's best physician and essential to human happiness" is often contributed to Galen. There is some doubt that Galen made this statement, but it is none-the-less one of the first direct references to occupations as a healer.

As history progressed, various types of work treatment were suggested: Soranus in 98-138 A.D., Caelius Aurelianus in the fifth century, Rhazes in 852-932 A.D., Avicenna in 980-1037 A.D., John the Actuary in 1250-1300 A.D., and Bartholomew, a thirteenth century Englishman, all agreed upon physical and mental activity as valuable to recovery of health. Within the life periods of these men there appeared a gradual change in the actions of men
toward their fellow beings, for in the third century there is record of a military hospital, and in the fifth century there was organized a mental hospital in Jerusalem by the Monks. In the tenth century the great medical school at Salerno did what it could to advance knowledge, but no real contributions seem to have been made, for this was the era of witchcraft and those who treated the insane dared not advertise their cures for fear of being considered in league with the devil (43, p. 4).

J. J. Walsh relates (71, p. 192) that the thirteenth century did show some definite progress in that a clergyman, Bartholomew, published a widely consulted book which advocated that "... madness cometh sometimes of passions of the soul, as of business and of great thoughts, of sorrow and of too great study, and of dread; sometimes of the biting of the wood-hound or some other venomous beast; sometimes of melancholy meats, and sometimes of drink of strong wine. . . . but that such illnesses could be relieved by kindness and active participation in real life situations." Also, during this century a hospital, Santo Spirito, was erected in Rome by Pope Innocent III, specifically for the insane. This was the beginning of many such religious institutions established for the purpose of housing the insane. During the great crusades the Hospitallers and other religious groups were responsible for more hospitals.
By the sixteenth century, as cities grew and it became necessary to the public welfare to segregate mental illness, the insane asylums began to make their appearance and by the end of the eighteenth century there were many large institutions for this type of patient. It was because of the growth of these hospitals that physicians were able to see large numbers of psychotics under one roof and finally realized the mass inhumanity with which they were managed, for the treatment in almost all was the same; cruelty and depotism on the part of the superintendents, with poorly ventilated and unsanitary cells. Even the humane physicians and attendants became habituated to the universally used physical restraint and punishment. There were some exceptions, notably in 1723, when Miguel Escartín, Bishop of Lerida, issued orders for the care of patients in the Spanish Insane Asylum of Saragossa. Here it was advised that the patients should be allowed to perform any work on tasks their condition permitted, with the women spinning thread, sewing and performing other chores under the supervision of attendants. In 1752 Benjamin Franklin recommended that inmates capable of manual labor should be supplied with small spinning wheels, wool and flax. Philippe Pinel, the medical director of two large insane asylums in Paris, could not tolerate the types of control to which he was a witness and in 1786 removed the shackles from the patients in the institution for women at the Salpêtrière and put
them to work. He believed and proved that manual labor secures good morale and discipline among mental patients. In 1792 Pinel further proclaimed his belief and proof that occupations were advantageous to better mental adjustment by striking the chains from fifty maniacs at Bicetre. Pinel has been called the father of occupational therapy, although he did not publish his experiences until 1801 when he wrote a paper, *Medical Philosophical Treatise on Mental Alienation*, (43, p. 19). In this work he described his methods of treatment and clearly demanded that "Prescribed physical exercises and manual occupations should be employed in all mental hospitals." Pinel's examples were soon followed by Reil in Germany, who in his "Rhapsodieen" seemed to show even greater appreciation of the objectives and philosophy of occupational therapy than Pinel. Shortly after Pinel introduced occupational therapy in France, Tuke (35, p. 10), an early English Quaker, succeeded in the establishment of an asylum for the insane at York, England. His Retreat was begun on a very small scale, but embodied most of the principles advocated by Pinel.

The use of occupational therapy spread slowly and steadily to the mental hospitals in the civilized countries. Thomas Scattergood, an American minister of the Society of Friends, spent some time at the Retreat near York, England. He became deeply interested in the management of the insane. On his return in 1800 to Philadelphia his efforts were
directed to the establishment of the "Friends Asylum" for
the insane at Frankford, where "occupations and non-re-
straint were twin sisters" (43, p. 9).

In 1815 Thomas Eddy, New York merchant and member of
the Society of Friends, was so impressed with improved
medical care of the mentally ill that he proposed a series
of suggestions to the Governors of the "Lunatic Asylum" of
the New York Hospital pleading for moral management of the
insane. It wasn't until 1821 that these suggestions by Eddy
were realized when at this time the Bloomingdale Asylum was
opened in New York City. Here moral management and occupa-
tional therapy were practiced as they are today in the in-
stitution now known as the Westchester Division of the
New York City Hospital (35, p. 8).

Perhaps one of the greatest achievements of these
early years was the introduction of regular classroom in-
struction into hospitals. The examples set by Voisin,
Ferrus and Falret in Bicetre, Salpêtrière, and St. Yon were
powerful stimulants of action for other countries and soon
schools were established in Hanwell near London and at
Utica in New York. The instruction was designed to
"... excite, relieve and recreate as well as to inform the
minds of patients" (43, p. 6). Full-time instructors were
hired for teaching, but the patients themselves often were
delegated full responsibility for some classes. It must be
remembered that even in this country education was neither
compulsory nor generally available to all and these courses included the most elementary disciplines of the three "R's". Many adults first learned to read and write in such hospitals.

In the latter part of the nineteenth century, occupational therapy had spread to Portugal, Norway and many other European countries, and from these examples much was gained by the then young America. The American Journal of Insanity, October 1862, published an article by Edward Jarvis, (43, p. 11) who visited asylums in the British Isles in 1860 and was greatly impressed by the "... quietness and loneliness of the wards during the daytime; quiet because all the patients were busy at work in the gardens, on the grounds and at the shops. I found these in all the public asylums I visited, for it is acknowledged policy of those who manage the asylums, to employ the patient's body and brain as much as possible for some real purpose."

This attitude of medical men was reflected even in the words of the Poet Cowper, (8, p. 159) who in one of his best poems, "Retirement," set down the following phrase:

Absence of occupation is not rest
A mind quite vacant is a mind distressed.

This thought was later put to good use, as Cowper, with his many burdens in a turbulent era of history, became mentally ill, and was called upon to utilize occupational activities of various types to invoke relief.
The Reverend John Newton, Curate of Olney, in 1773, while caring for the mentally ill poet, wrote about his attempts to help Cowper by consulting a physician, but when this failed to bring results, Newton encouraged Cowper to take up gardening and animal care. With these activities Cowper began to show signs of improvement, for as Newton states (8, p. xii) "... he began to make remarks on the state of the trees, and the growing of them." Carpentry as well as gardening and animal care were utilized by Cowper in his road to recovery, and Newton in noting this, said: "As long as he is employed, he is tolerably easy; but as soon as he leaves off, he is instantly swallowed up by the most gloomy apprehensions."

Early American Uses. Licht (43, p. 13) credits much of the positive development in the maximum use of occupational therapy in America to Thomas Story Kirkbride, who at the age of 31 was elected Superintendent of the Pennsylvania Hospital for the Insane. In 1842 Kirkbride wrote, "The value of employment in the treatment of insanity is now so universally conceded that no arguments are required in its favor. Its value cannot be reckoned in dollars and cents. The object is to restore mental health and tranquilize the restlessness and mitigate the sorrows of disease." Kirkbride was responsible in the organization of the "Association of Asylum Medical Superintendents," which later became the "American Psychiatric Association".
Willard and Spackman (81, p. 3) credit Kirkbride as outstanding in his efforts to advance American psychiatry and quote him as saying, "It is highly important that patients should, as far as possible, be kept constantly at some pleasant kind of employment—either work of some kind, or riding, walking or amusements; that no suitable opportunity is ever neglected to induce the patients thus to occupy themselves."

Occupations and treatment for mental patients gradually became more highly organized and hospitals began to hire persons to teach various crafts or to amuse patients. The final quarter of the 19th century was the least auspicious for the profession, for physicians became too busy with increasing responsibilities to carry on an effective occupational therapy program. Hamlin (43, p. 13), in an article published in 1901, indicated that "Hospitals have grown larger and the very men who should be best fitted to teach a school of such pupils, the physicians, are from their numerous and onerous duties, least able to attend to it and they must necessarily relegate it to the care of others."

In addition, it was pointed out that not only did the physicians lose interest, but in many hospitals budgets for activity treatment were reduced.

The lull in activity treatment from about 1850 to early 1900's was somewhat alleviated when in 1906 the Harvard University became interested in occupational
therapy as a therapeutic agent to combat neurosis and through a Proctor Fund granted $1,000 to H. J. Hall and Company to make a study of the treatment of neurasthenia by progressive and graded manual occupation (30, p. 12). As a result he opened a craft center near Marblehead, Massachusetts, for "Industrial Therapeutics." It was his theory that work was both palliative and remedial and that it could be used as therapy or as diversion to brighten the hours of the incurably diseased. He made systemic use of occupations and was one of the first to give an occupational assistant the opportunity to earn an adequate medical background.

In the same year that Dr. Hall began his outpatient clinic, Susan E. Tracy instigated the first course in occupations for the nurses of Adams Nervine Hospital in Boston where she was head nurse (69, p. 4). She was the first to designate specific crafts for special needs. In 1910 she synthesized her experiences into book form titled *Invalid Occupations*, and thus is often referred to as the first occupational therapist.

Up to and during these early 1900's the practice of employing craft teachers as persons most capable to work with patients was common in both public and private institutions. However in 1908 when the Chicago School of Civics and Philanthropy offered a course to trained nurses, leaders in the field began to examine the qualification needs for
work of this type and found that some medical background
was necessary to effectively carry on an occupations treat­
ment program. In the spring of 1911 the first course in
"Occupation treatment" for nurses was given at the Massa­
chusetts General Hospital. In the fall of this same year
Dr. W. R. Dunton, Jr. established a training course for
nurses in a mental hospital and later published his lectures
under the title "Occupational Therapy" (24, p. 7). A course
in occupations for invalids was inaugurated in 1913 at
Milwaukee-Downer College which formed the basis for the
present occupational therapy training program.

**Development as a Profession**

The **American Occupational Therapy Association.** The
principle organization of the profession was begun in 1917,
under the influence of a rather small group of the more pro­
gressive thinkers in the medical field. This group, then
organized as "The National Society for the Promotion of
Occupational Therapy", under the leadership of H. J. Hall,
M. D., was instrumental in the development of the now in­
ternational organization called "The American Occupational
Therapy Association." The first objectives of the American
Occupational Therapy Association were ambitious, but
practical, stating (36, p. 61):

The objectives of the Association shall be to
study and advance curative occupations for
invalids and convalescents; to gather news of
progress in occupational therapy, and to use such
knowledge for the common good; to encourage original research, to promote cooperation among occupational therapy societies and with other agencies of rehabilitations.

As a result of the adroitness of these few in 1917-21 there evolved the ever growing profession, occupational therapy. Mrs. Eleanor Clark Slagle was appointed in 1923 in collaboration with the Council on Medical Education and Hospitals of the American Medical Association; a series of activities were initiated proving the worth of this organization. A partial and notable listing of these activities follows:

1. Practice of registration of trained therapists.
2. Publication of a list of acceptable standards for schools training occupational therapists.
3. Publication of an organizational journal called The American Journal of Occupational Therapy.
4. Publication of A Yearbook listing the name, school, and current address of every occupational therapist registered with the Association.
5. Professional publications (Appendix C).
6. Controls and administers the National Examination for registration of those therapists graduating from approved schools.
7. A monthly newsletter.
8. Reprints from various articles.
10. Photostatic reproductions of interpretive material.
11. Lists and requirements of approved schools.
12. Lists of audio visual aids.
The objectives currently in acceptance are somewhat revised but in general follow the original line of thinking, in that the Association works to promote the profession, to improve the standard of education and practice in this field, and to encourage research.

The Association now is staffed by an executive director, an educational secretary, a speaker to the house of delegates, and an editor to the American Journal of Occupational Therapy. These are full-time employees of the Association. In addition the elective administration includes a president, two vice-presidents, a treasurer, and a Medical Advisory Council.

The technical journal of the American Occupational Therapy Association began as "The Maryland Psychiatric Quarterly", and was first published in July, 1911, devoting its pages to articles related to occupations and therapy. This quarterly was discontinued in 1923, since the Archives of Occupational Therapy began publication in 1922. In this year, 1922, the Archives of Occupational Therapy served as the official organ of the American Occupational Therapy Association. The title was again changed, however, after the third volume of this Archives was published. This time, because the title seemed more descriptive of the scope and subject matter of the profession, it was changed to "Occupational Therapy and Rehabilitation." Here was deposited the greater part of the professional literature on
occupational therapy.

In 1947 the Association had grown to a size that dictated a publication of its own, and so was begun the "American Journal of Occupational Therapy", a bimonthly journal devoted to the promotion of the profession, and improvement of education.

Association membership. As stated in the American Occupational Therapy Association Constitution, basically, membership is divided into six divisions, thus giving interested but medically not qualified personnel opportunity to participate in Association activities: (1) active registered therapist; (2) fellows who by virtue of their professional or community status can relate the profession to the public need; (3) students in accredited schools; (4) associates interested in promoting the profession but not eligible for active membership; (5) sustaining members who are eligible for active or associate membership but whose interest prompts them to give larger contributions for the support of the organization; (6) honorary life members who have performed distinguished service and upon whom life membership has been conferred.

To be eligible for active membership in the American Occupational Therapy Association, the therapists must be a graduate from an accredited school of occupational therapy. In addition the applicant for membership must be listed on the register of the Association. Examinations for this
registration by the Association are held two times a year, and those who successfully pass these examinations are eligible.

**First Formalized Training Efforts**

Through the efforts of individuals and institutions like H. J. Hall, S. E. Tracy, W. R. Dunton, and the Chicago School of Civics and Philanthropy, the foundations of the profession were laid and the slow transition from the old to newer concepts of treatment activity for all categories of medical patients began. Education is one of the marks of a profession, and certainly the educational development of occupational therapy over the past one-half century has helped distinguish this field as a profession, as can be attested by the following brief resume of events leading to the current educational philosophy of occupational therapy.

A training program designed to give experience in occupational activities was first cited in 1906 (76) with Miss Susan Tracy as instigator and teacher. This was a course for nurses in invalid occupations at the Adams Nervine Asylum, near Boston.

In 1908 a training course in occupations for hospital attendants was organized at the Chicago School of Civics and Philanthropy by Julia Lathrop and Rabbi Hirsh. Included in this course was instruction in inexpensive raffia work, old fashioned yeast dyeing, bookbinding and pasting work, stencilling, knotting and weaving, gymnastics, and playground
work. It will be noted that these early educational endeavors were centered in the area of psychiatry, and any application of occupations during these formative years was primarily in terms of activity programs directed by people whose ingenious methods developed the pattern for future more scientific bases.

The Sheppard and Enoch Pratt Hospital in Maryland, under the direction of Dr. William Rush Dunton, in 1911 started an occupational course giving instruction in book-binding, stencilling, needelwork, reed and raffia work, weaving, library, and athletics. Two full-time and nine part-time teachers were utilized. Also in 1911 a similar course in occupations training for Junior nurses at the Taunton State Hospital in Massachusetts was conducted by Reba G. Cameron, Superintendent of Nurses.

In 1913 a course in occupations for invalids was inaugurated at Milwaukee-Downer College forming the basis of the current educational program at this institution.

In 1914 Teachers College, Columbia University, was the site of a course in invalid occupations. Here Miss Evelyn Collins a kindergarten teacher with post graduate work in industrial arts, and experience in teaching nervous and mental patients, was in charge. She gave lectures and demonstrations on the various forms of handicraft, plus the utilization of practical experience for the students.

The Henry Phipps Psychiatric Clinic of Johns Hopkins
Hospital, as part of a nurses training program in 1915, was given over to special instruction in occupations. This course was first taught by Eleanor Clark Slagle, and later by Henrietta Price. The students were taught a number of the occupations but received more emphasis on the principles underlying the work. Reed, raffia, simple carpentry, weaving and needlework were the only activities taught. Also in 1915, there was conducted a six-week training program in occupations by the Chicago Chapter of the Red Cross at the Henry B. Favill School of Occupations, Illinois Society for Mental Hygiene. This course was under the direction of Mrs. Slagle and actually appeared to be continuation of the work started in 1908 at the Chicago School of Civics and Philanthropy.

Dunton (22, p. 19) states that these were the only known training courses including occupations at that time, but that a number of hospitals and sanitoriums trained their nurses in a less formal way, usually the nurse acquiring what she could through observation.

During the 1915-1919 period, as has been mentioned, great strides were made by occupational therapy, and although the exact date cannot now be located in the literature, the Chicago School of Civics and Philanthropy instituted a more formalized course in conjunction with the Favill School which embodied 55 clock hours of work in two ten-week periods. The course content was organized on a lecture
laboratory basis and consisted of the following (76):

**Winter Term**

<table>
<thead>
<tr>
<th>Lecture Courses</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration of charitable institutions</td>
<td>2</td>
</tr>
<tr>
<td>Medical agencies in relation to social services</td>
<td>2</td>
</tr>
<tr>
<td>Industrial and public hygiene</td>
<td>2</td>
</tr>
<tr>
<td>Principles of case work</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technical Courses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Kinesiology</td>
<td>2</td>
</tr>
<tr>
<td>Folk Dancing</td>
<td>3</td>
</tr>
<tr>
<td>Gymnastics</td>
<td>4</td>
</tr>
<tr>
<td>Games</td>
<td>2</td>
</tr>
<tr>
<td>Hand work (weaving, cement work, bookbinding, woodwork, metal work, chair caning, rush seating, furniture making, coping saw work)</td>
<td>15</td>
</tr>
</tbody>
</table>

**Spring Term**

<table>
<thead>
<tr>
<th>Lecture Courses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Principle of case work</td>
<td>1</td>
</tr>
<tr>
<td>The psychology of play</td>
<td>1</td>
</tr>
<tr>
<td>Psychopathic principles in occupational and recreational treatment</td>
<td>2</td>
</tr>
<tr>
<td>Hospital organization and management</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technical Courses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Kinesiology</td>
<td>2</td>
</tr>
<tr>
<td>Organization of occupational and recreational department</td>
<td>1</td>
</tr>
<tr>
<td>Folk dancing</td>
<td>3</td>
</tr>
<tr>
<td>Gymnastics</td>
<td>2</td>
</tr>
<tr>
<td>Games</td>
<td>4</td>
</tr>
<tr>
<td>Hand work (weaving, woodwork, bench work, basketry, sewing, woodcarving, leatherwork, brush making, chair caning, rush seating, furniture repairing, elementary mechanical drawing, and designing)</td>
<td></td>
</tr>
</tbody>
</table>

Columbia University's Teachers College in about 1918 offered a course in occupational therapy covering one and one-half college years including four weeks in hospital practice at the close of the first year. Extra practice teaching was required for a certificate, but this could be
done in a part-time position with or without compensation, during the first half of the second year. A high school diploma was required for admission and successful completion of the course led to a Teachers College Certificate. Then, as today, provision was made for students with educational or professional experience beyond high school to complete the course in a shortened span of time, depending on the amount and kind of professional work which could be credited toward a professional major. An outline of the subjects covered, points credited, and hours devoted to study is shown by Figure 2.

Usually credited as the first war emergency courses in occupational therapy were those known as the "Mansfield War Service Classes." Mrs. Howard Mansfield, of New York City, through the Surgeon General's Office, was directed in 1918 to establish a "Training of Reconstruction Aids for Military Hospitals."

*All information on the Mansfield War Service was obtained from unpublished historical material on file in the American Occupational Therapy Association, 250 West 57th Street, New York City. Included among the materials examined and excerpted were: "Minutes of Meetings of Directors of War Services Classes for Reconstruction Aids in Occupational Therapy," April 12 to December 27, 1918. Also No. 2, September 1, 1918, "Outline of Work of War Service Classes in OT, NY," sent to Major Haggerty, Surgeon General's Office, August 10, 1918. Applications, school records and letters of students, lecture notes and course outlines. These materials were made available to the writer by Miss Wilman West, Executive Director, American Occupational Therapy Association.
### Principles, theory and practice of Occupational Therapy (including four weeks hospital practice teaching under supervision)

<table>
<thead>
<tr>
<th>Course</th>
<th>Points</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>3</td>
<td>90</td>
</tr>
<tr>
<td>Sewing and Needlework</td>
<td>8</td>
<td>240</td>
</tr>
<tr>
<td>Weaving and Dyeing</td>
<td>5</td>
<td>150</td>
</tr>
<tr>
<td>Clay Modelling</td>
<td>4</td>
<td>120</td>
</tr>
<tr>
<td>Woodwork (including 15 hours hospital practice not credited)</td>
<td>2</td>
<td>75</td>
</tr>
<tr>
<td>Art Appreciation</td>
<td>2</td>
<td>30</td>
</tr>
<tr>
<td>Basketry (including 15 hours hospital practice not credited)</td>
<td>2</td>
<td>75</td>
</tr>
<tr>
<td>Metalwork (choice is allowed between the third term of metalwork and clay modelling)</td>
<td>6</td>
<td>180</td>
</tr>
<tr>
<td>Minor Crafts (chair seating, rug making, cord work, including 15 hours of hospital work not credited)</td>
<td>2</td>
<td>75</td>
</tr>
<tr>
<td>Mental Hygiene</td>
<td>2</td>
<td>30</td>
</tr>
<tr>
<td>Personal and General Hygiene</td>
<td>2</td>
<td>30</td>
</tr>
<tr>
<td>Physiology and Anatomy</td>
<td>2</td>
<td>30</td>
</tr>
<tr>
<td>Kinesiology</td>
<td>2</td>
<td>30</td>
</tr>
<tr>
<td>Principles of Teaching</td>
<td>2</td>
<td>30</td>
</tr>
<tr>
<td>Elements of Psychology</td>
<td>4</td>
<td>60</td>
</tr>
<tr>
<td>Social Science</td>
<td>2</td>
<td>30</td>
</tr>
</tbody>
</table>

**Totals** 54 1320

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*Figure 2. War Service Class -- Major in Occupational Therapy.**

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*Points at the top of the first column of numbers denotes semester hours credit.

Two courses were offered; that is, a short course from eight to ten weeks for those skilled in one or more crafts and presupposing a knowledge of design and color; and a second course covering twelve to fifteen weeks, again according to individual needs and qualifications.

The first course started on June 6, 1918, and ran to September. Forty-two students were accepted and trained in three groups of fourteen each. Hospital practice teaching varied from two weeks to two months, "depending on the time students could give to it" and was scheduled at the Rockefeller War Demonstration Hospital, Presbyterian Hospital, New York Orthopedic Hospital, Neurological Institute, and the Bloomingdale Hospital.

The second course began October 3 and ran to December 21, 1918. Sixty students were trained in this course, many of whom had prior instruction or experience in one or more manual skills. The applications of these students revealed the following information: they came primarily from the fields of teaching, social work, art, music, and secretarial work. Nearly all spoke some French, German, Italian, Spanish or a combination of these languages. Subjects taught were: weaving, block printing, typesetting, wood-carving, toymaking, metalwork, bookbinding without apparatus, basketry, design-modelling, and lectures on: mental and nervous states, orthopedics, hospital etiquette, personal hygiene, application of occupational therapy, hospital practice.
These beginning developments of the pattern of formal education were enlarged and spurred by the employment of early graduates of both the Favill School and the Mansfield Classes in military hospitals at home and abroad. General Pershing's now famous call for 200 Re-Aides for service in the base hospitals in France necessitated the establishment of the additional training courses, and thus, in 1918 three schools inaugurated "emergency" training programs. These were in Boston, Philadelphia, and St. Louis, and each, like Milwaukee, has continued to the present day.

In 1935 the American Medical Association, in conjunction with the American Occupational Therapy Association, established a set of minimum standards of accreditation for accepting schools to train therapists. By 1938 four such accredited schools were in existence, located in Boston, Milwaukee, Philadelphia, and St. Louis. Some of the schools that had originated in the World War I emergency have continued to function and to gain prestige through their well trained graduates. In 1939 the Kalamazoo School of Occupational Therapy was approved. This seems to have been the last accreditation activity until the attack on Pearl Harbor, when there was an emergency need for more therapists.

The Army program in the decade of the 1930's had lapsed for lack of funds. In December 1941 only 12 civilian occupational therapy aides were in Army hospitals, and approved schools were graduating about 150 students each.
year. At that time about 1,000 occupational therapists were registered with the American Occupational Therapy Association. Sudden war demanded the mobilization of 500 therapists, which caused a great concern when it was found that there were only 900 such qualified therapists in the whole United States. As in World War I, the solution was instigation of new schools. These new schools were geared to train personnel in a concentrated 12-month course and were set up for college graduates with a major in applied, industrial, of fine arts, and with skill in the three basic crafts used in occupational therapy treatment, o. e., sculpture, pottery and woodworking. This training consisted of an intensive academic course of four months, followed by eight months of internship in an army hospital. The all-out war effort centered great emphasis upon military needs and in 1943 Lt. Col. Walter E. Barton was ordered to survey the field of occupational therapy in order better to organize its resources. From this survey developed a Chief of Occupational Therapy in the Office of the Surgeon General of the Army, and in the Naval branches occupational therapy departments were established under the direction of officers of the Women's Naval Reserve.

By the end of 1944, two-hundred graduate occupational therapists were employed--in all but two of--the Army General Hospitals. This, according to the Barton survey (7, p. 283), was far from the needed demand and even if
there had been sufficient students to meet these needs
there were insufficient qualified instructors to provide an
adequate teaching force.

During this same period the civilian hospitals had
their supply of occupational therapists depleted by the war
effort demand. Consequently the American Occupational
Therapy Association was swamped with requests for qualified
personnel. By 1944 the American Medical Association reported
that twelve new schools were accredited, and that 218 occupa­tional therapists were graduated from these schools.
This increase of twelve new schools brought the national
number of accredited schools of occupational therapy to
seventeen.

There are now 30 schools of occupational therapy in
the United States. There is however, one such school in
Puerto Rico and another in Canada, which gives the pro­fession international flavor. This influence of inter­national activities takes on added significance when in
1952 the formation of a World Federation of Occupational
Therapists took place in England at the Liverpool School of
Occupational Therapy. Other nations representing schools
of occupational therapy at the World Federation of Occu­pational Therapy were Denmark, Sweden, South Africa, New
Zealand, Australia, Israel, and India.
Federal Government Influences

Historically the governmental influence on occupational therapy began in 1920, following World War I and the experience gained thereof. As the work of the registered occupational therapist became known, more and more governmental recognition was given to this (then small) group of professional people. The government, in its hospitals and through legislation, instigated support for occupational therapy. Also the focused attention of the general public on the disabled soldier, and general cognizance of the infinitely greater numbers of handicapped civilians helped to push the need for Congressional action in relation to the rehabilitative functions performed by the paramedical agencies. The culmination of these needs and resulting research was the passage of the Smith-Bankhead Bill by Congress in 1920. This bill was the basic Federal Vocational Rehabilitation Law (HR4438) and its purpose was the reclamation of persons who would not otherwise be employable.

The 1920 Law remained on our Federal Statutes until 1943 and provided the basis for early 20th Century development of the present day occupational therapy point of view. The objectives of this law, however, were directed toward the purely vocational aspects of rehabilitation, and programs were developed rigidly along the same organizational lines of vocational education. There were no physical restoration or psycho-social services.
Barden-Lafoollette Amendments. The lack of certain occupational therapy services was offset somewhat in 1943 by the Barden-Lafoollette amendments to the Federal Vocational Rehabilitation Law which provided greater impetus to the growing belief that at least certain types of psychiatric disabilities are susceptible to rehabilitation under the practical aims of economical restoration of patients to employment. Public Law 113 provided for the (49, p. 42) "restoration of the handicapped to the fullest physical, mental, social, vocational, and economic usefulness of which they are capable." This Law also removed the fixed ceilings for grants-in-aid to states.

Baruch Committee. Established in 1944 for the purpose of advancing the science of physical medicine by Bernard M. Baruch, this committee was a great stimulating influence on the field of occupational therapy. The committee planned to increase the supply of physicians who could teach and administer physical medicine. Proposals were also made for the recruitment and education of both occupational and physical therapists. Subsequent reports by the committee gained status for, and affected desirable effects on the whole field of physical medicine. These reports indicated a continuing need for effective means to increase the number of practicing therapists and for more physicians who understood the theory and the application of occupational therapy. Outstanding achievement of this
committee, financed by Baruch, was the development of the Institute of Rehabilitation and Physical Medicine in New York, under the directorship of Dr. H. A. Rusk, one of the prolific of writers and workers supporting the profession of occupational therapy.

**The Vocational Rehabilitation Amendment of 1954.** The most recent legislation to influence occupational therapy came after an eleven year interval from the Public Law 113 action. This most recent statute, Public Law, 565, carrying the title "The Vocational Rehabilitation Amendments of 1954", was designed primarily to promote and assist in the extension and improvement of Vocational Rehabilitation Services, and is noteworthy for the sums of money provided to meet its objective.

**Veterans Administration and Occupational Therapy.** The place of occupational therapy in as far as the Veterans Administration is concerned seems to be an important one. The federal government is the employer of the largest number of occupational therapists. The Veterans Administration alone absorbs about one-sixth of the occupational therapists in the country. The 154 hospitals of this agency had from one to twenty-nine therapists in each hospital in 1952. The therapist is a part of the rehabilitation team under the direction of a chief of physical medicine and rehabilitation.

When General Omar Bradley assumed his duties as
Administrator of Veterans Affairs, the medical needs of the veteran received full recognition, and a pledge of the Veterans Administration indicated "that the veterans of the mightiest global struggle of all times shall receive medical care second to none in the world." To achieve this aim, existing facilities were expanded and the Physical Medicine Rehabilitation Service was established (19, p. 123). Dr. Paul R. Hawley was appointed Chief Medical Director and organized this facility into five major divisions; first, the Physical Medicine Division (consisting of Physical Therapy Section, Corrective Physical Rehabilitation Section, and the Occupational Therapy Section) second, Educational Retraining; third, Pre-Vocational Shop Retraining; fourth and fifth respectively, Aural Rehabilitation and Industrial Therapy. A similar table of organization was set up in every Veterans Hospital with specially qualified personnel in each of the areas. The Department of Occupational Therapy in each of these organizations was to be staffed by highly trained personnel so as to fit into the total design of rehabilitation. The functions of these departments as outlined in the journal "Occupational Therapy and Rehabilitation" are stated (19, p. 123):

Occupational therapy projects will not only be concerned with diversional exercises in order to prevent unhealthy introspection, but will be geared toward functional activities to restore usefulness, to provide suitable handicrafts and arts, and to coordinate with scientific procedures designed to aid recovery for vocational ends.
It should be pointed out that the Office of Vocational Rehabilitation is separate from the Department of Medicine and Surgery, but a very close liaison is maintained between them at all times. Such coordinated effort is achieved by placing a Vocational Guidance Officer in each Veterans Hospital. This officer and the Medical Rehabilitation Officer will see a patient soon after admission to the hospital. By means of vocational guidance, testing and exploratory short job experiences, patient abilities and desires are determined. Resulting action usually guides the patient to one of the many programs established—academic, pre-vocational, explorational or vocational. Each hospital in addition to its extensive academic educational system also conducts an intensive shop program designed to give experiences in electronics, fundamentals of electricity, carpentry, woodworking, sheet metal, and small machine tool operations. All occupational therapists in the Veterans Administration Hospitals are graduates of schools approved by the American Medical Association.

Other Federal Government Agencies of Importance. Another large employer of occupational therapists is the Department of Defense. With the large number of service hospitals, training facilities, and legislative acts, influence on the profession of occupational therapy is decisive. For example, prior to 1956 male occupational therapists were not eligible for a commission in service
organizations. However, as of 1956 the passage of the Bolton bill (P. L. 294) in essence states that male occupational therapists may be admitted into the Reserve Corps of the Army or Air Force with commissioned status. The services concerned then changed the name of the Women's Medical Specialist Corps to Medical Specialist Corps. This bill is of particular interest to the occupational therapy profession, which for the past several years has been doing research on how more male therapists could be attracted to the field. It also has special emphasis for the male college graduate therapist who must serve his draft commitment, for he can now serve in the commissioned status rather than the enlisted ranks formerly destined. The United States Public Health Service Hospitals, serving the American seamen, officers and enlisted men of the Coast Guard, officers and crew members of the Coast and Geodetic Survey, federal employees injured at work, and the commissioned officers of the Public Health Services, is also a rather large employer of occupational therapists. In 1951 it employed 22 occupational therapists, both commissioned and non-commissioned.

The Bureau of Indian affairs, and Washington, D. C., Hospitals provided employment for some 37 occupational therapists. The number of therapists employed by the state hospitals is unknown, except for a survey made in 1950 of 190 state hospitals, which stated that 165 of these hospitals
either had a director of occupational therapy or a depart-
ment in operation (53, p. 17).

The Physical Disabilities Concept Development

The review of early historical literature presented in the preceding pages fails to pinpoint with certainty the earliest record of using occupational therapy with other than psychiatric patients. Implications of such therapy are throughout, but specific mention of physical disabilities is very vague. Yet when it is considered that the most significant achievement in the past half-century was made in improved health conditions for the United States citizen (64, p. 111); and that life expectancy of the average American born in 1955, is almost the legendary three-score and ten, the importance of physical disabilities treatment readily attests to a distinction worthy of separate treatment. The 1947-56 volumes of the American Journal of Occupational Therapy have included twenty-six articles specifically related to the role of occupational therapy in the prevocational area. In the many programs where the most severe vocational disabilities have been treated, that is the military and Veteran's Administration Hospitals, Goodwill Industries, and Comprehensive Community Rehabilitation Centers, occupational therapists' use of prevocational activities has been quite extensive. For example, much has been gained, according to Miss Wilma West, in a letter to the editor of the May-June issue of the American Journal of
Occupational Therapy, 1957, through the simulation of occupational skills and patterns required for the clerical, non-skilled, semi-skilled and skilled job families, in an occupational therapy setting.

In the pages following, a cross-section of illustrations from the now out-of-print and nearly unobtainable sources, the developing theory of current occupational therapy practices and early uses of these concepts in the treatment of physical disabilities are traced.*

At McLean Hospital, Waverly, Massachusetts, in 1822 (33, p. 9) statements by Dr. Wyman, Superintendent, indicated that: "Such activities as sawing wood, gardening, reading, writing and music, divert the attentions from the unpleasant subjects of thought and afford exercise both of body and mind. . . ."

In 1836 a noted French physician, Jean Etienne Esquirol, praised the "... value of physical exercise and occupations," and said, "work is a stimulant to all," and that by it "we distract attention from their illness; we fix their attention on reasonable things; we bring back to them some of the practices of order; we quicken their intelligence; and in this way we improve the lot of the most unfortunate"(33, p. 10).

*Much of the information concerning physical disabilities and occupational therapy must be credited to Miss Wilma West, National Secretary of the American Occupational Therapy Association, who made available her unpublished collection on the History of Physical Disabilities.
These early beginnings were on a somewhat scattered basis, usually centered in psychiatry, and largely dependent upon the philosophy of the hospital administrator, the interest of the attending psychiatrists and the availability of ingenious nurses and craft teachers. In his first book, Herbert J. Hall (30, p. 44) noted that "in 1872 pioneering work with cripples was being carried on in Sweden by Reverend Hans Knudsen, who opened a clinic and school whose aim was "ameliorating the corporal deformity of the cripple, and afterward by means of an industrial school, teaching him how to work, so that he might contribute to his own subsistence." This philosophy and practice, Hall pointed out, spread until it was said that there were no cripples in all Scandinavia left untrained if they could possibly become self-supporting. Similarly, efforts in England and the United States became geared to an based on trade training of the physically handicapped.

In 1910 Miss Susan Tracy, in accordance with professional ideology, published a book, Studies in Invalid Occupations (69, p. 2) which inferred value in graded occupations as treatment for physically disabled. It was Tracy's contention that certain types of activity closely associated with occupations would provide healing effects for the illnesses of patients. For example, if a depressive mentally ill person were treated, Miss Tracy would administer small amounts of a particular activity until the patient began to take interest, then larger amounts of activity until the
patient recovered. Dr. Daniel Fuller (then Superintendent of the Adams Nervine Hospital, Boston, Massachusetts) noted the value of invalid occupations, when he wrote in the introductory chapter of Miss Tracy's book that:

> It is the belief of the writer of this chapter that suitable occupation is a valuable agent in the treatment of the sick. It has its place, not as a panacea, but as an important adjunct to other forms of treatment, and sometimes it is quite all the treatment necessary.

During the 1914-1919 era, early pioneers whose work often appeared in such publications as "The Trained Nurse and Hospital Review", and the "Maryland Psychiatric Quarterly", the names of Barton, Dunton, Hall, Kinder, and McKenzie, among possibly many others now lost through the incomplete records of history and the clouding effects of time, were noted. About this time Barton (6, p. 17) was writing regarding the treatment of tuberculosis patients, an interest fostered by his personal experience in three acute attacks of pulmonary tuberculosis. He granted that rest was important for most, but believed that many could work at remunerative occupations and be made capable of returning to their old jobs. He referred to early 1911 experiments in England which proved that carefully graded manual work was beneficial in the treatment of tuberculosis, and also to those at Loomis Sanitorium in Liberty, New York, dating back to 1908.

In 1919 Dr. William Rush Dunton, Jr., a psychiatrist (23, p. 27) wrote on the applications of occupational therapy
to treatment of the blind, neurological conditions, the war injured and cardiacons. It was his belief that re-education efforts in specialties other than psychiatry utilized these activities for restoration of impaired function. As an example he cites the use that neurologists have put occupations in the re-establishment of function to paralyzed or partially paralyzed limbs by utilizing re-education exercises. Dunton also quotes Dr. Thomas W. Salmon, a member of the National Committee for Mental Hygiene, who had charge of the psychiatric units in the military services. It was Salmon's opinion that—

Re-education by physical means is a valuable adjunct to treatment in recent cases, but particularly in chronic cases who have been mismanaged and in those who are recovering from long-continued paralysis, tics, mutism and gait disorders. While drills and physical exercises have their specific uses, occupation is the best means.

The Burk Foundation (6, p. 67) reports for the years 1919 to 1921, contain an extensive section entitled "Occupational Therapy." These reports provide considerable detail on the range and scope of activity programs, revealing that occupational therapy as applied at the Burk Foundation was of a very practical nature and probably consisted in larger part of institutional maintenance and industrial activities. Specific reference was made in these reports: "... this therapy is embodied in creating and keeping the place—grading, path-building, concreting, transplanting forestry, lawn care, gardening and upkeep, snow
removal, preparation and care for the many sports grounds. Women... do seamstress work for the institution."

Dunton, in Reconstruction Therapy, (23, p. 38) outlined what he considered as trends of occupational therapy during the early 1900's. He mentioned that in France following the war some fifty re-educational institutions were organized that the crippled might be taught new trades or learn to adapt themselves to old ones. He mentioned the Military Hospitals in Canada and their commission to schools for vocational training in convalescent hospitals which offered instruction in "anything which will aid the patient to fit himself to earn a living."

As word of the work for physical disabilities being done abroad spread to this country, proponents of occupational therapy recognized that distinct advances had been made over older "traditional" methods and that here was a splendid opportunity for the rehabilitation of the industrial and the war cripple. A period of study and research was instigated by such people as efficiency engineer Frank B. Gilbreth, George Edward Barton, and William R. Dunton. From these studies emerged the basic understanding of the importance of vocational training and placement. Hall (23, p. 201) also noted the physical disability trends and expressed the role of the hospital as going beyond the acute physical care when he said:
If the patient is able to summon considerable physical strength, he may well be given work which will fit him directly for wage earning. Should the hospital undertake vocational training as a part of its program of reconstruction? Logically yes, and I believe the time is not far distant when this will generally be done. . . .

There is a very dangerous interval which comes immediately after the hospital discharge and before and regular work may be attempted. During this time if an out-patient workshop, as well as one for ward patients, were provided, even if it contained only the heavier occupational therapy work, many a discouraged and flagging patient would be kept up to the mark.

As long as ten years ago (about 1913) at the writer's suggestion, the Massachusetts General Hospital started such a shop and the report was that a considerable number of patients, believed by the social service department to be industrially hopeless, were finally restored to wage-earning activity.

One of the finest early references on occupational therapy for physical disabilities is a Walter Reed monograph published in 1919 (5, p. 3). In this booklet very advanced philosophies of occupations used in physical disabilities are presented. As an example, to illustrate what is currently expressed as "Activities of Daily Living" the booklet says this:

Occupational therapy is based on the principle that the best type of remedial exercise is that which requires a series of specific voluntary movements involved in the ordinary trades and occupations, physical training play or the daily routine activities of life. Our curative shops are now being organized, and graduated on the principles which will enable us ultimately to isolate, classify, repeat, and to a limited degree, standardize and control the type of movements involved in the particular occupational and recreational operations. The patient's attention is repeatedly called to the particular remedial movements involved; at the same time the movements have the advantage of being initiated by the patient and of forming an integral and necessary
part of a larger and more complex series of coordinated movements. The purposive nature of the movements and the end products of the work offer a direct incentive for sustained effort; the periodic measurement of the increase in range and strength of movement makes it possible for the patient to watch his recovery from day to day; and frequent comparisons between his progress curve and that of others offers an excellent opportunity to explain and to help him overcome plateau periods or regression which naturally occur. In addition to evoking an attitude of interest, cheerfulness and optimism in the patient, and by showing him that he is really making progress, the records also enable the examiner to determine which mode of treatment leads to the greatest and most consistent gains in a particular case and they directly encourage voluntary effort and personal initiative on the part of the individual.

In the curative workshops special projects, special machines and special tools are set aside for strictly curative cases, and the instructors check the movements which each man makes in order to see that special joints are not favored or over-fatigued.

The above quote gives recognition to the military hospitals of World War I, as the first to give scientific and technical application to occupational therapy, as regards physical disabilities.

From experiences gained during these early years and over the twenty year period of peacetime operations the subject matter and philosophical trends of occupational therapy underwent change as it was administered in military and Veteran's Administration Hospitals. The diversional programs and hand work, such as basket weaving and chair caning were supplemented with physical reconditioning and a recognition of the advancing technological changes demanding activities to meet the needs of people restored to
economical independence. During the period of World War II, as soon as patients were able, they were assigned such activities as radio repair, mechanics, printing, and photography. In some of these hospitals industrial programs were in operation: manufacturing concerns of small parts, screws, nuts and bolts, installed machines in hospital departments to give work to patients on a voluntary basis. Employed as inspectors of piece-work, small-parts assemblers, machine operators, and sorters, patients received wages equal to other factory workers. Such programs can be compared to the Sheltered Workshop aspects of complementary civilian activities.

Of late years, more and more leaders in the field of occupational therapy have seen and urged the value of occupations as a factor in convalescence. These factors influence the prescribed treatment of early therapy, the functional, remedial and without doubt that of prevocational. Evidence of judgements as to the importance of occupational therapy in physical disabilities is clearly shown by the extensive use of "Work Shops", "Sheltered Work Shops," "Curative Work Shops", "Goodwill Shops", and the many recent articles concerned with the "Pre-Vocational Units" as published in the American Occupational Therapy Journal.
Summary

The very broad scope of the field of occupational therapy encompasses many facets of life, and the pages of history turn back to reveal that the present day concept has roots reaching far into the distant past, even to the days when medicine was not yet divorced from superstition and magic. Activity treatment for the insane received initial mention from the Chinese and from a Roman, Asclepides, who lived many years before the birth of Christ.

During the subsequent centuries the management of the mentally ill, the primary concern of occupational therapy during these very early years, ran the gamut from corporal punishment to the prescribed exercises and manual occupations of Pinel. As history progressed, various types of work treatment were suggested: Soranus in 98-138 A.D., Coelius Aurelianus, in the fifth century, Rhazes in 852-932 A.D., John the Actuary in 1250-1300 A.D., and Bartholomew, a thirteenth century Englishman, all agreed upon physical and mental activity as valuable to recovery of health. The final quarter of the 19th Century, was the least auspicious for occupational therapy. During this period it seemed that the physician became too busy with increasing responsibilities to carry on an effective occupational therapy program. This lull in activity lasted until the early part of the 1900’s when a research grant at the Harvard University made it possible for H. J. Hall, to open a craft center in
which "Industrial Therapeutics" was practiced.

In the year 1913, the Milwaukee-Downer College inaugurated a course in occupations for invalids. This early experience formed the basis for the current course now at this school. The year 1917, saw the formation of a professional organization for occupational therapy, and in reality was the birth of the occupational therapy profession. It was then that the American Occupational Therapy Association became the official organization of the profession.

From the year 1906, when Susan Tracy taught a course for nurses in invalid occupations there has been a steady development of schools across the nation, and an ever broadening scope for occupational therapy, note Figure 1.
CHAPTER III

NATURE OF OCCUPATIONAL THERAPY

Definition

Terminology. In the preceding chapter, treatment through activity was found to have been in practice and an accepted procedure in the art of medicine for many centuries. It has been called, as Licht and Dunton (22, p. 10) explain: "morale treatment," "work", "work cure," "egotherapy," "psychotherapy," "diversional therapy," "invalid occupations," "recreational therapy," and many other titles.

Most of these descriptive divisions are objectionable in attempting to define occupational therapy because they are misleading. They place undue emphasis upon a single phase of a broad range of possible treatment modalities.

For example, occupational therapy is a division of the total program called "rehabilitation", whose aim is "... the restoration of the handicapped to the fullest physical, mental, social, and economic usefulness of which they are capable" (22, p. 1). Physical therapy, medical social service, vocational training and placement are other divisions of the program of rehabilitation in treating patients with mental or physical illness. Dr. H. A. Rusk (57, p. 484) emphasizes rehabilitation as the "third phase" of medicine. It is "... the phase which takes the patient
from the bed to the job." In the course of rehabilitation, occupational therapy plays an important role, being a part of each division of rehabilitation, and a division of itself. Physical therapy, a treatment agent of physical medicine, is aided by occupational therapy, for, as described by the American Medical Association, physical medicine (46, p. vii) means "... the diagnosis and treatment of disease by various nonmedical means. "Physical medicine includes the employment of the physical and other effective properties of light, heat, cold, water, electricity, massage, manipulation, exercise, and mechanical devices..." The action of these various modalities, each intended in its own special way, may be passive as in massage or manipulation, or active as in gymnastic exercises. However a patient cannot devote more than a portion of each day to the procedures of physical therapy and must utilize the remainder of the day in some form of useful activity; prescribed to continue the strengthening of muscles, or increase joint range. Occupational therapy fulfills this purpose as well as supplementing the primary aim of treatment with the acquisition of skills for recreational or economic reasons.

Dr. Henry H. Kessler (39, p. 118) says, in relation to this problem:

In cases of surgical and orthopedic disability there is necessarily a period of immobilization, but there is no reason to allow the mental and the physical fitness of a whole person to suffer. Occupational therapy may be employed to maintain maximum general
physical fitness of the disabled patient while the disabled part heals. It may also contribute to the mental fitness as a preventive of neurosis, as a treatment if accompanying mental complications exist, and as a builder of morale. Occupational therapy aids directly in the restoration of function to the disabled part when exercise is indicated.

The fundamental missions of occupational therapy make it admirably qualified as an adjunctive medical treatment essential to the over-all process of rehabilitation. The distinction between the two terms is, in fact, one of degree rather than content, occupational therapy being a part of the whole of rehabilitation. Both, by definition, are concerned with the processes of restoring the handicapped to the maximum degree of physical, social, mental, vocational and economic usefulness consistent with their capacities. The broader scope of rehabilitation is the inclusive coordination of all therapies designed to aid the patient; occupational therapy touches briefly but significantly on most of these phases.

Closely related to the acquisition of skills, the Department of Labor Bulletin 203-2 (53, p. 2) lists the recovery of self-confidence, discovery of interests and aptitudes, and the social readjustment of the patient as important occupational therapy aids to the work of physical medicine. Also pinpointed here are the distinctive parts occupational therapy plays in each of the other divisions of rehabilitation, the social services and vocational training and placement.

To accomplish this broad coverage asked of it, occupational therapy has subdivided into certain broad areas of specialization. These areas proclaim a distinctiveness of importance through common occurrence in professional literature and are considered necessary to a clarification
of the profession. The specialities are (1) preventive or diversional therapy, (2) diagnostic therapy, (3) psychotherapy, (4) functional therapy, and (5) remedial and selected therapy.

**Preventive or Diversional Therapy.** The American Medical Association (44, p. 5) describes diversional or preventive therapy as a type of occupational therapy comprised of simple, prescribed activities, including recreation, which serves to induce rest, to control general exercise, to prevent neuroses and to sustain morale. It is not specifically directed toward the activity of the disabled limb or part, but it can assist indirectly in the ultimate rehabilitation of the patient. This division of therapy is used in two main ways as a treatment of traumatic conditions: (1) as a pure diversional measure to prevent long-term patients from brooding over their injuries and from being hospitalized; and (2) to ensure prescribed rest for an injured part between periods of active therapy.

Any type of activity can be used for diversional purposes, from gardening and domestic work to the complexities of skilled craft work. In some cases it is possible to arrange for local firms or industries to allocate suitable productive work to the occupational therapy department for these purposes.

**Diagnostic Therapy.** Frequently occupational therapy skills are used by the physician as an aid in making a
diagnosis. This is common when the cause of illness is questionable. For this purpose, the patient works in such creative activities as clay, finger painting, brush painting and other areas in which the occupational therapy unit closely resembles a situation of normality, making it possible to observe the patient in an atmosphere of comparative ease. This would be particularly applicable in a rehabilitation center or a psychiatric situation where instances of individual projections and feelings will tend to produce useful information for interpretation by the physician, the counselor and other professional personnel. In this connection the occupational therapist is utilizing his professional training as a skilled observer and is recording and evaluating the patient responses to planned diagnostic activities.

**Psychotherapy.** Work has long been recognized as a useful means of diverting the mind from its troubles and anxieties. Occupational therapy employs this age-old concept in the treatment of nervous and mental disorders. Treatment in this area involves a specific category of patients who are ill, just as the patient with pre-operative or post-operative effects of illness. Within this group are included the "psychoneurotics" and the "psychotics". The therapeutic task here is that of proper use of skills and effort by the therapist toward the restoration of patient action and patterns of thinking to normality.
Haas (35, p. 15) says: "The first mission of occupational therapy as a treatment of those who are mentally ill is to create a modified normal atmosphere in which the patient may spend part of his time. The normal atmosphere of the average person is that of work activity, the production of something."

Dunton and Licht (22, p. 47) emphasize the principle of resocialization as the primary goal of psychotherapy. Through such goals, these authors believe there can often be re-established in the individual three distinct qualities, that of functional efficiency, social integration, and self-respect.

Bryan (15, p. 6), in his work Administrative Psychiatry, says "... work is reality, and provides a powerful aid in keeping the patient in touch with his surroundings."

The American Medical Association (44, p. 46) says that a purpose of occupational therapy in the treatment of the mentally ill is a service and a training aid to the disordered mind; it is a means to maintain habits of normal activity and to re-establish mental and muscular co-ordination. The American Medical Association believes that "employment is nature's best medicine and essential to human happiness."

**Functional Therapy.** Generally functional therapy is designed for patients whose disability will be directly improved by its application. It is a prescribed activity
planned to assist in the restoration of articular and muscular function, to improve the general condition, to build up physical endurance, and to aid the treatment of specific mental disorders. Functional therapy has also assumed the responsibilities of training in the activities of daily living and self-care essential to personal independence. The Institute of Physical Medicine and Rehabilitation, in a monograph on Activities of Daily Living by Edith B. Lawton, (41, p. 2) lists the following as a phase of Functional Therapy, and in describing Activities of Daily Living says: "Activities of Daily Living comprise everything entailed in human relationships. . . (and) for a patient with involvement of one or more extremities, these activities become often equivalent to strenuous athletic achievements and have to be practiced like any other physical skill."

Department of the Army Technical Manual TM 8-291 (48, p. 11) lists the following as a description of functional therapy:

Functional occupational therapy is designed for patients whose disability will be directly improved by its application. It is prescribed for the restoration of function to injured or disabled muscles or joints. Secondary considerations of treatment includes the improvement of general physical condition, the increase of work tolerance, and the maintenance or development of wholesome mental attitudes.

This form of occupational therapy is referred to as "Kinetic Therapy" (25, p. 8). The implication here is that specific activities are used to promote range of motion, strength and coordination. The patients are generally
referred at a point where some active motion is possible and the therapist uses his battery of techniques, that is, skill in crafts, educational or recreational media to gain the desired results.

**Remedial and Selected Therapy.** Department of the Army Manual TM 8-221 (48, p. 58) identifies remedial and selected therapy as a type of treatment for long-term patients to stimulate interest, sustain morale, and promote new skills. Generally tubercular, cardiac, hepatitis and the more serious general surgical patients are most referred. The activities useful in this media furnish an opportunity for self expression, participation in group activities, and social adjustment.

Prevocational activities are considered a phase of remedial and selected therapy, where work processes are planned and prescribed to prepare a patient for his return to his former employment or for vocational education. The occupational therapist is mainly concerned with practical manual dexterity tests, job demands, duplication of the working situation, establishing work tolerance and habits.

For those patients who have a poor vocational prognosis, remedial and special therapy offers avocational pursuits whose purpose is the development of such hobbies and selective interests as will meet the needs of an individual patient. The occupational therapist is in a key position to explore community services and can gear avocational pursuits to purposeful and results.
Physical Medicine and Rehabilitation for the Clinician, by Dr. F. H. Krusen (40, p. 84), amplifies the position of Remedial and Special Occupational Therapy in these words:

In order to satisfy the large range of interests the different patients will have, coming as they do from all walks of life and being of all ages, the occupational therapist must be able to offer a large variety of activities—mental, physical, educational, utilitarian and culture. It is desirable whenever possible to start an activity in the hospital which will lead to further and advanced work in the same or an associated field. Since these patients may have a long convalescence or a somewhat restricted life, they will always need resources within themselves for using enforced leisure to good advantage. Even more than the average person, they will need at least one good hobby and if they acquire this as an outgrowth of the occupational therapy given them in the hospital, then occupational therapy has served a dual purpose for those patients.

Traditional and Neoteric Definitions. In the elaboration of occupational therapy terminology, an attempt was made to illustrate the capaciousness of the profession. The terminology presents a sketchy description of what is involved in occupational therapy, but fails to actually define, for within each of these terminological divisions lie many subdivisions of patient classification, disability classification, and speciality classification. As Willard and Spackman (81, p. 11) state: "Therapy means treatment" and within this realm of treatment lie multitudes of situations non-definable by divisional headings. The many definitions that invariably descend upon a profession so young all seem to carry the traditional meaning that (81, p. 11) "occupational therapy is any activity, mental or physical,
prescribed and guided to aid recovery from disease or injury." However general this definition may seem there is a need to consummate all information relative to occupational therapy, that is, a definition should establish the principal functions of a profession, and then set forth indications as to how these principles can be applied.

Willard and Spackman (81, p. 11) seemed to have had this thought in mind when they sought to clarify the position of occupational therapy in relation to medicine:

... it is important to envisage the full scope of occupational therapy before attempting to understand its relation to medicine. This form of treatment is a program under medical prescription wherein the patient participates in selected activities to benefit his own physical, mental, or emotional condition.

Therapy means treatment; occupational therapy is treatment by means of occupying a person with activities devised to help him work out his special problems.

Dr. F. H. Krusen (40, p. 1) indicated the neoteric nature of occupational therapy by defining it in these words:

Occupational therapy can be defined as medically prescribed activity, other than gymnastics, with a remedial objective. Modern occupational therapy is expanding rapidly from its former preoccupation with arts and crafts and extending into a wider field including new prevocational, avocational and vocational pursuits which (aid in guiding) the patient back to normal activity.

The American Medical Association (44, p. 5) defined the profession as

... an objective type of treatment prescribed by a physician to hasten a patient's recovery from disease or injury or to contribute to his adjustment to hospitalization. The occupational therapist
is professionally trained to carry out the physician's prescription through the selection and adaptations of activities which meet the patient's physical and psychological needs. The activities used as treatment must be sufficiently interesting to the patient to motivate him to active participation.

The Department of the Army, perhaps one of the first to recognize occupational therapy as a definite contribution to medical and psychiatric needs, in its most current publication TM 8-291 (48, p. 1) defined occupational therapy as

... any activity, mental or physical, medically prescribed and professionally guided to aid a patient in recovery from disease or injury.

a. Occupational therapy is the medically prescribed and professionally guided utilization of workshop and other activities to hasten (to aid in) recovery from injury or disease. An activity entered into without purpose is not occupational therapy. Occupational therapy may be prescribed for restoration of function to injured or diseased muscles or joints, for controlled activity for nervous and mental disorders, for readjustment attending chronic disease, for re-education in permanent disabilities, and, when indicated, for the directed utilization of leisure time.

b. The main value of occupational therapy lies in its ability to meet the needs of the patient through the strong motivation of interest directed activity. The types of activities used range from simple crafts to such complex skills as carpentry, metal work and printing. When indicated, industrial activities simulating working situations may be utilized.

The American Occupational Therapy Association (49, p.128) defined its profession as

... a medically prescribed treatment supervised by a registered occupational therapist. The patient carries out a selected activity to assist in his physical, mental, social and economic adjustment and rehabilitation.

This service may be used by physicians from all medical specialties for its therapeutic value, as a diagnostic aid or in therapeutic testing and should be administered in relation to the patient's total medical care.
The Association recognizes occupational therapy services as valuable adjunct to medicine in contributing to and hastening recovery from the abnormal. In addition, the Association lists the following functions for the profession: (1) physically, its function is that of increasing muscular strengths, joint motions, and to improve general bodily health; (2) mentally it has the function to supply as nearly as possible normal activity through avocational projects, and prevocational studies and training.

In accordance with the above quoted definitions from the leadership elements of the profession, occupational therapy may be summarily stated as an activity, within limitations of physician and therapist, prescribed as an aid in the restoration, cultivation and conservation of human resources. This activity is taught and supervised by a professionally accredited therapist, who holds at least a baccalaureate degree in occupational therapy from an approved (through the American Medical Association) institution of higher education.

Unlike other forms of paramedical services, occupational therapy is applicable to almost all branches of therapeutics. It embraces a wide variety of techniques, as: academic endeavors, prevocational exploration, fine arts, industrial arts, and self-help activities.

Utilitarian activities prescribed as exercise restore motion and strength to joints and muscles, and promote
coordination, while other more creative activities are used to assist in the mental, social, and psychological adjustment of the patient. Such activities often serve in the dual role of primary aid with a secondary aspect of a worthwhile avocational pursuit.

Occupational therapy plays an important role in geriatrics, a specialized field which considers a study of the aging and their social and economic problems, as well as the medical problems. Here an objective of occupational therapy is not only to increase the life span of an individual but to assure proper physical and mental functioning. The registered therapist aids the chronically ill to regain maximum capable efficiency in self-help. Activities of Daily Living, to gauge his abilities for remunerative employment by prevocational testing, by adapting specialized prosthetic equipment and other aids, and by work evaluation to determine degrees of work tolerances. Occupational therapy extends beyond the sphere of remedial, in that some of its measures may be applied to preventive medicine and diagnosis. Activity is the keynote in this important profession, demanding enthusiastic participation by all concerned, patient, physician, and therapist.

Scope and Missions

The Reticulation of Professions. Basically there are two widely accepted concepts of what occupational therapy involves. One, a purely medical connotation, views the
profession as recovery expedients involving only medical measures and individual nursing supervision. Here occupational therapy is treated in the light of patient care, record keeping, a place to put the patient and someone to look after him. Although essential, the use of occupational therapy as a diagnostic tool might be illustrative of this way of thinking. This point of view, as Kessler (39, p. 118) indicates, is usually found, for the most part, in the field of general medicine and is employed as a supplement to the specific medical or surgical treatment contributed by the physician.

The second idea (39, p. 118) is more broadly conceived and generally accepted by the professional workers in public and private agencies dealing with the therapeutic treatment of individuals. Here are embodied the principles that therapeutic treatment of patients concerns not only their restoration, but the cultivation (preventative and developmental aspects), and conservation (to retain and utilize maximum capacities) of human resources.

The above mentioned concepts willingly fall into the "traditional" and the "neoteric" roles of occupational therapy. Although treated in this study as separate roles, the principles mentioned have no distinct lines of demarcation; rather as is generally the case, tradition clings incessantly until time and continual use of the new or modern has become traditional. Since occupational therapy is a young profession, much tradition is still very evident.
It therefore becomes necessary for a thorough examination of its literature and a look at the status quo.

**Tradition.** The traditional role as explained by Willard and Spackman (81, p. 12) involves the problems of man centered around his biological structure and his psychological mechanisms, but treated on a somewhat separate basis. In other words treatment of the illness rather than the patient. It is based upon the hypothesis that man's physiological and psychological disturbances stem from the basic principle that man as complex being has a physical or psychological structural breakdown, or both may occur at the same time and the only logical thing to do is treat the affected part or parts:

The human problems that can be benefited by occupational therapy can be of physiological nature, of psychological nature, or both. To understand the scope of the problem, it is necessary to think in terms of man as he lives in society.

Man has physical structure and function within his body. By means of neuromuscular function and bony structures, he moves about and has developed his dexterities to a high degree of manipulative skill. By means of specialized organs and secretions, his body nourishes its structure, throws off impurities and attains development according to an established pattern. Through psychological mechanisms, emotions and feelings, he develops a personality which is manifested in his performance. By his intellect, he learns and plans for the future.

Therefore, Willard and Spackman (81, p. 13) believe that when one or more of these factors are seriously affected, normal functioning of the individual is disturbed; and inasmuch as there are certain physiological and psychological structural similarities between human beings, and because
basically they live within common environmental situations there is also a similarity in the types of problems found in groups of patients benefiting from occupational therapy. In view of this hypothesis, therapeutic treatments are established to concentrate on given types of conditions within the two major area classifications.

**Psychological Disturbances.** The first of these two general areas explaining the traditional approach to occupational therapy is, as exposed by professional literature, one of the largest areas of occupational therapy endeavor, and perhaps the area responsible for the birth of the profession, mental illness.

Franciscus (26, p. 36) classifies this area into two subgroups, psychoneurotics and psychotics. She hastens to explain, however, that this classification of behavioral aspects in the human being, does not indicate that a disability is either entirely psychiatric or entirely physical. For example, the industrial accident victim physically torn by a machine reacts emotionally to the situation, thereby creating a psychotic condition. The importance of this aspect of illness to occupational therapy and to the nation, may readily be illustrated by several statistical studies of note. Kessler (39, p. 269) quotes some figures from a study by Colonel Leonard Rowntree, Chief, Medical Division, Selective Service System, in which Rowntree cited a preponderance of rejections from the selective service during World War II,
due to psychiatric reasons. He reported that 17.8 per cent of all registrants rejected up to January 1945 were rejected for mental and personality disorders.

A study of the admissions to state hospitals indicates that at least one in twenty persons in this country will at some time be admitted to a state hospital for treatment of mental disease. Roth & Luton (61, p. 662) studied the prevalence of mental disorders in a rural area of Williamson County in Tennessee, using a slightly different classification of mental disorders than the Rowntree study. They found a rate for active and inactive cases of mental disorder of 69.4 persons per thousand population. This would indicate that approximately one-half the hospital beds in the country are occupied by mental patients. This high prevalence of mental disorders indicated in statistical studies, plus the vast number of psychosomatic problems in the hands of physicians of all specialties, is perhaps why psychiatric conditions take fifty per cent of the occupational therapy professions' attention. Within this general area certain psychotic conditions are more frequently referred to occupational therapy treatment than others. Therefore, in order to illustrate as clear a picture as possible of the profession and the types of conditions most frequently encountered by the occupational therapist, a listing of nine different illnesses is submitted (79, p. 14):
1. Failure to adjust satisfactorily often caused by a handicap.

2. Distorted emotional relationships among family members.

3. Severe accident cases or prolonged healing periods, or the fear and anxiety group.

4. The long term surgical or orthopedic patients.

5. The neurotic tendencies group.

6. The disorientational and confused group.

7. Daydreaming and fanciful thinkers.

8. The lack of confidence or loss of ego group.

9. Hyperactive or manic actions groups.

As can be readily surmised, the only limitation for occupational and activity programs to be utilized in combating such conditions as those listed above would be that of facilities and personnel involved. Willard and Spackman (79, p. 16) offer the following list of activities useful in such efforts:

- Manual and Creative Arts
- Music and Radio Programs
- Dramatization and Puppetry
- Home Economics
- Children's Play
- Sports and Games
- Parties, picnics and entertainments
- Liberty programs
- Gardening
- Industrial procedures

**Physical Disabilities.** Kessler (39, p. 16) characterizes this phase of occupational therapy as a means to
develop the latent talents and abilities of the very large
group of disabled persons unable to return to a normal way
of life or normal working capacity, even after the comple-
tion of standard medical and surgical treatment. Just how
large and important this group is can but be comprehended
from the variously estimated statistics—that from two to
twenty-three million people in the United States fall into
the disabled classification.

Each year automobile injuries occur to more than a
million people, many of whom are left permanently disabled.
Children who are born with congenital deformities or acquired
orthopedic defects from conditions like poliomyelitis con-
stitute another million. During World War II, 18,000 ampu-
tations were suffered by military casualties. Rusk
(63, p. 490) listed 20,500. During this same period,
1949-1945, 120,000 civilians lost arms or legs through
disease or injury. Seven million people have hearing diffi-
culties, while those who suffer from chronic diseases like
tuberculosis, heart disease, epilepsy or multiple atherosclerosis,
form an army of several million. These are exclusive of the
blind. Return to normal life for these vast numbers of
citizens is as Kessler reports (39, p. 16):

... unfortunately not possible for the majority of
these patients after routine treatment. The amputees,
the hemiplegics, the paraplegics, the severe congeni-
tally deformed, the chronic invalids from heart
disease, tuberculosis, hypertension and diabetes are
left with definite residual functional and structural
impairments which surgery or medical treatment cannot
eliminate.
Some of these individuals, however, achieve a remarkable adjustment despite their disabilities. Many surrender to the social struggle, becoming permanently and completely dependent on their families or communities, a constant burden with concomitant social and emotional dislocations. The majority struggle imperfectly against the rigors of day to day living, making a variable adjustment until the weight of circumstances tips the balance for or against them.

It is obvious that this large group cannot be restored to normal social and economic conditions by medical measures alone. Some means must be found to develop their latent talents and abilities so that they can resume their former place or its equivalent in society at large.

As a means of classifying those cases of physiological disturbances most often encountered in occupational therapy, Willard and Spackman (81, p. 13) establish the following categories:

1. Specific muscle weakness usually contributed to neuromuscular mechanism injury.

2. Incoordinate muscular function, a result of lesion of the higher motor centers.

3. Limited motion of the joints, inter-articular deposits or adhesions, shortened tenons or other mechanical interferences are contributors to this group.

4. Healing process group, that is, the surgery or physical injury patients who can be aided by controlled activity.

5. Loss of a part by amputation; necessitates that the therapist aid in the fitting and teaching of use in prosthetic appliances.
6. Cardiac limitation includes duties for the therapist as determining work tolerances within limitations of the heart efficiency and development of confidence through purposeful performance.

7. Need for physiological rest groups, tuberculosis, arthritis and other chronic diseases, who receive benefit from limited and controlled activity.

8. General weakness as a result of prolonged treatment or disease which requires long convalescence periods.

In the attempt to illustrate information revealed by the survey of the professional literature the traditional role of occupational therapy indicates certain basic ideas pointing out that for the most part this role of occupational therapy involved only those measures most generally used to expedite medical recovery in the form of healing a wound, but seldom considering the after effects of the process.

That is, occupational therapy has, in this aspect, a decided medical flavor in the truest traditional sense, that of saving a life, rather than the total role of rehabilitation. It is therapeutic treatment, still maintaining the stigma of busy work, an activity looked upon by many doctors of medicine as an arts and crafts area where patients may be assigned who have nothing else to do. It is a role of the profession which has failed to cast off the "Arts and Crafts" label for a transformation to purposeful activity with special emphasis on relating treatment activity to the patient's occupational past and future.
Although stated in its definition and purposes for patient restoration, the profession has only recently begun to take cognizance of the person and the establishment of activity toward purposeful, economic, social, physical, and mental treatment. This recent recognition of the total human being is referred to in this study as the neoteric role of occupational therapy.

**Neoteric Role.** During the past few years there has been a striking change in the medical needs of the people and the pattern in which occupational therapy services are given. Dr. H. A. Rusk (64, p. 8) indicates that the saving of human life has been a traditional and cherished goal of medicine, and that for hundreds of years this saving of life was largely a matter of saving individuals; but that the twentieth century brought a change in the character of this whole problem, for with the expansion of research into communicable diseases, the production of vaccines, the establishment of the "wonder drugs" and other control and treatment measures commensurate to advancing technology, the life-saving functions of medicine have assumed mass proportions.

Thousands of Americans are alive today because of this medical and scientific progress, but many of them live only to find themselves confronted with serious disabilities. In addition to these masses of disabilities both congenital and acquired, a third interacting result of increased
medical efficiency, that of "Geriatrics" has caused a new concern for the citizenry. Two thousand years ago the average lifespan was 25 years of age; at the turn of the century it was 49 years of age; and the 1950 figures of the National Office of Vital Statistics show the average life expectancy in the United States as 68 years. Today it is nearly 70 (64, p. 1).

As an adjunct to medical treatment, occupational therapy has also changed its role of service to the millions of disability sufferers. It has, in fact, recognized the industrial nature of the American economy, and developed purposes in accordance with these needs, attested to by the purpose of occupational therapy as described by the American Medical Association's publication for occupational therapy (44, p. 6). This publication lists desired patient effects from occupational therapy treatment as follows:

1. **Mental Effects.**
   a. A normalizing influence on man
   b. Eases emotional stress and restlessness
   c. Gives an outlet for suppressed energy
   d. Aroused interest
   e. Replaces unhealthy mental trends with healthy ones
   f. Substitutes encouragement for discouragement
   g. Conserves the work habit and prevents invalid habits
   h. Gives an opportunity for self expression and development of initiative.

2. **Social Effects.**
   a. Raises in the morale of the patient, the ward and the hospital
   b. Develops group responsibility and cooperation
   c. Gives opportunity for social contacts in normal activities
3. **Physical Effects.**
   a. Restoration to functional use of disabled joints
   b. Aids in repairing muscle tissue and improving muscular power
   c. Increases blood supply and healing processes
   d. Builds up resistance to fatigue
   e. Develops mental and physical coordination

4. **Economic Effects.**
   a. Detects aptitudes, skills and capacities for vocational guidance
   b. Evaluates disability in relation to vocational requirements
   c. Establishes industrial habits and work tolerances
   d. Adjusts permanently institutionalized patients to participate in hospital industries.

These purposes of occupational therapy illustrate the changing concept of medical treatment in general, and in turn focus treatment attention upon the whole problem of the rehabilitative aspects in all causes of disablement.

Recently the Health Resources Advisory Committee from the Office of Defense Mobilization (47) issued a report by its sub-committee on Hospital Services concerning "Necessary Action to Reduce Personnel Requirements for the Care of Long Term Patients." In essence the report emphasized rehabilitation for the severely disabled, for the aging population subject to chronic conditions, for the congenital deformities or acquired orthopedic defects, and for the tens of thousands of mentally ill persons.

Soden (66, p. 111) says that whatever else medical rehabilitation may become, and there are many definitions, it is "... a concept of treatment which combines medical, psychological, educational, and sociological methods to give
the disabled maximum independence commensurate with his limitations."

Kessler (39, p. 28) also believes that occupational therapy is becoming more and more aware of this modern concept when he says that it has:

... now become an accepted part of the American scheme of life. For the physically handicapped person, it is slowly replacing the concept of dependency with that of activity in which the remaining powers of the physically handicapped person are developed to the maximum. This development and adaptation is carried out by medical and nonmedical measures, the former dynamically termed physical restoration. This includes adequate examination and diagnosis; appraisal of the individual's capacity to work; surgery, either general or plastic, or reconstructive, where indicated; convalescent care; physical therapy; physical conditioning; occupational therapy; and prosthetics.

The nonmedical measures embrace vocational guidance, training and placement. These include all the psychological technics for measuring the individual's aptitude, intelligence and interests, evaluation of his skills and experience, and preparation of a plan for future activity which will make the greatest use of his talents while respecting always the social and physical limitations of his defects.

Vocational training includes academic education on all levels from grade school through University, as well as commercial, trade, apprentice, and other technical training necessary to prepare the physically handicapped person for work.

Placement in employment must follow the fundamental activity of adequately training the individual. Employment must be on the basis of skill and abilities equal to those of non-handicapped workers. For the severely disabled, special facilities in the form of sheltered workshops allow these persons an opportunity for partial self support and, more important, deep self respect.

By definition, rehabilitation and occupational therapy are both concerned with the processes of restoring the handicapped to a maximum degree of human usefulness; however the
broader scope of rehabilitation is the inclusive coordination of all therapies designed to aid patient recovery. Occupational therapy touches briefly, but significantly on most of these phases as is attested to by the current trends of the profession in dealing with (a) sheltered workshops, (b) curative workshops, (c) pre-vocational programs, and (d) homebound treatment programs.

In order to conceive the total scope of these important trends and the part occupational therapy plays in each, an explanation of each mentioned aspect of the neoteric role of occupational therapy is developed.

**Sheltered Workshops.** It is estimated that there are more than 600 so-called sheltered workshops in the United States. Although differing in many aspects, mainly in the types of operation, they generally have one thing in common—a service to the handicapped. Among these are several groups or organizations operating workshops, some national in scope, each group identified with a particular type of program.

One of these groups concerns itself with the rehabilitation of its clients through the operation of workshops dealing mainly with salvaging of such things as articles of clothing, furniture, appliances, and the like. This program offers wide and varied kinds of training and experiences to these clients. One of the best known and well-organized groups of workshops specializes in the field of rehabilitation
of the blind. These shops, highly effective in their com-
plex programs, with top flight national as well as local
leadership. They operate workshops many, industrial in
nature, utilizing skills comparable to those found in
industry. Products manufactured by such organizations
include brooms, mops, door mats, and many other public con-
sumption items. They also engage in power sewing machine
operation and the development of clerical skills.

Workshop production is of three major types, each
having its advantages and disadvantages. One depends upon
a free source of materials, discarded articles donated by
the general public which are renovated and sold. This kind
of operation has been brought to its highest peak of per-
formance by the Goodwill Industries' chain of shops.

A second type of production is the manufacture of new
goods. A variety of commodities manufactured by blind
workers are sold by non-profit organizations for the blind
for use by the Federal Government, under a preferential
treatment arrangement authorized by the Wagner-O'Day Act of
of 1938.

Business and industrial subcontract work is a third
important type of production, the least known of the three.
Some of the long-established workshops have built their
operations around this source of work, and in recent years
a number of shops have gone over, at least partly, to work
subcontracted from commercial and industrial concerns.
In effect the workshop is becoming an industrial laboratory in which handicapped people can be trained better to meet actual working conditions. The sheltered workshop essentially is still a special place in which disabled people, unacceptable or unready for competitive employment but capable of some productivity, enter work activity. It is an attempt by the medical world to recognize the industrial economy of the American environment. It would, however, be grossly misleading to say that this fully sums up the present day direction of workshop development.

The workshop now has a clearly defined dual function. It provides a transitional diagnostic experience for its future graduates, and on the other hand, a continuing or recurrent employment for those who are not ready for the transition or for whom opportunities do not exist. A workshop helps to bridge the gap between medical care and employment through its facilities for training, work exploration, and psycho-social adjustment.

In the course of significant advances of the past decade, there have developed not only changing concepts but also, representing these ideas, a confusion of terminology describing facilities of rehabilitation. Some of the various designations of workshops are: Rehabilitation Workshops, Special Workshops, Industrial Rehabilitation Workshops, Vocational Adjustment Centers, Industries, Work Classification Units, and Training Centers.
Some workshops were started with a relatively broad concept of their mission, while others have begun to move toward better-rounded programs. Whereas, formerly the majority of workshops existed primarily to offer employment too often as a permanent "Sheltering Haven", now the combination of employment and special rehabilitation procedures has become more common. In addition to industrial health facilities, workshops are adding physical medicine, physical functional training, travel training of the blind, homebound services, speech therapy and similar rehabilitation methods.

In his address at the 17th annual convention of the 1938 International Society of Crippled Children, Col. John M. Smith, former director of the Institute for the Crippled and Disabled said (82, p. 14):

A comprehensive sheltered workshop, which I think should more aptly be called a rehabilitation center, is one which includes among its activities (1) occupational therapy; (2) provision for artificial limbs, prosthetic devices and aids; (3) homebound services; (4) vocational testing; (5) vocational guidance; (6) vocational shop training; (7) pre-industrial employment remunerative or otherwise; (8) placement services; (9) social case work and advisory service for cases needing medical, surgical, psychiatric and psychological care; (10) relief and family service; (11) recreational and health educational services.

What Col. Smith said about sheltered workshops seems to have been the birth of this phase of occupational therapy, for in the 1950 publication of the National Committee on Sheltered Workshops and Homebound Programs, which is now the
National Association of Sheltered Workshops and Homebound Programs, Inc. (82, p. 15), the following definition was agreed upon:

A sheltered workshop is a voluntary organization or institution conducted not for profit but for the purpose of carrying out a recognized program of rehabilitation for physically, mentally, and socially handicapped individuals by providing such individuals with remunerative employment and one or more other rehabilitating activities of an educational, psychosocial, therapeutic, or spiritual nature.

The sheltered workshop as explained by Willard and Spackman (81, p. 18) offers a modified employment program. It is for handicapped persons who cannot be expected to compete with regular industrial employment conditions. Such a program is administered by a trained occupational therapist and an industrial therapist in collaboration with social and rehabilitation agencies. It is a supervised program of work testing, training and retraining for industry under conditions as nearly like industry as possible. The patient "earns and learns" on a piece work basis which provides an income in accordance with the efficiency of the individual who develops work habits and work tolerance along with specific skills.

Types of Clientele and Activities. The same authors (81, p. 19) list the following medical cases served by the sheltered workshop in order of their frequency: (1) Orthopedic; (2) Tuberculous; (3) Cardia; (4) Epileptic; and (5) Neuropsychiatric. These patients are generally admitted to the sheltered workshop on the basis of not needing
hospitalization but still requiring specially trained supervision before returning or entering competitive industry. The object of this program is assistance to these individuals to live adequately outside the hospital on an income from employment. In addition to the types of patients listed, Willard and Spackman also list the following types of activities most often found in the sheltered workshop:

(1) Tailoring or garment construction; (2) Light assembly jobs—electrical etc.; (3) Upholstery; (4) Furniture refinishing; (5) Weaving; (6) Metal work. Examples of this phase of occupational therapy are shown by the following brief descriptions of programs currently in operation:

(66, p. 213):

**Goodwill Industries** is an important phase of the sheltered workshop services in about 100 communities in the United States and Canada. It is the program of self-help for the handicapped that had been adopted by the Goodwill Industries of America, Inc. While standards and programs may vary at the level of the local industries, the ideals and objectives of the movement are represented in a national office located in Milwaukee, Wisconsin. The program promoted by the national organization is to provide special or sheltered employment, job training, and other special rehabilitative services and opportunities for the personal growth of handicapped and disabled persons. From humble beginnings in Boston's South End more than forty years ago,
the movement has spread rapidly over America and into
several foreign countries. Its founder, Dr. Edgar J. Helms,
believed that every handicapped or disabled person needed
"Not Charity, But a Chance." The objectives of Goodwill
industries require careful attention in placement of the
individual into jobs suitable to his limitations and capa-
cities. After this testing phase of the program is accom­
plished, training is set into action, with employment as its
natural companion. The tools and techniques of a useful
occupation are used under the direction of department leaders
and plant foremen skilled both in teaching and in production.
Far more important than the trade or technique that is studied
is the general skill, dexterity, and work habits of pro­
ductive experience that is developed.

The Community Workshop of Rhode Island, formerly
known as the Bureau for the Handicapped, was established in
1929, and incorporated in 1930 for the "... purpose of
coordinating and conducting activities for handicapped
people." The corporation amalgamated a number of indepen­
dent services to furnish handicapped people in and around
Providence with sheltered shop service, occupational therapy
in the home, and help in job placement.

The community workshop offers the following general
services, mainly to the physically handicapped: Case work
and guidance, occupational therapy, vocational training,
sheltered work, and a differentiated service for the
homebound. In the occupational therapy shop, guided activity is used to help restore or improve joint function, improve muscle strength, improve coordination, restrain skills, establish work tolerances, and help overcome many other types of disabilities. Crutch walkers are taught to use stairs and buses, to cross streets, and similar day to day activities. Amputees are helped to adjust to and to learn to use the prosthesis efficiently. All treatment is aimed at helping the disabled person become as self-reliant as possible in preparation for his return to normal life activity. Registered occupational therapists working under a doctor of medicine's prescription supervise all treatment.

Activities Carried On. The National Committee on Sheltered Workshops and Homebound Programs indicate that activities such as the following are carried on in the several areas of the community workshops:

1. Jewelry Training Shop
2. Pre-industrial shop, to train people for industrial pursuits.
3. Differentiated Homebound Program, where an occupational therapist visits the home bringing treatment, functional and psychological in nature, to patients under a doctor's prescription.
4. Home Industry is an activity where patients who no longer need specific treatment become so skillful that they have their products marketed. These patients do not
have enough tolerance to do production work, and hence they are included in the homebound programs. The community workshop takes the responsibility for marketing their products.

5. Industrial Homework concerns patients able to do production work, but not in normal production situations. Because of necessary tolerances and abilities these patients are put on a factory processes basis through arrangements with the State Labor Department and the Federal Wage and Hour Division. An industrial homework supervisor has charge of teaching and checking this work.

Therapists give pre-vocational testing to most of the patients before their acceptance in the home industry or industrial homework program. They determine also the tolerance and fatigue points and help patients to work in the position most comfortable to them.

The Cleveland Rehabilitation Center was established in 1889 as the Sunbeam Circle, when its first duty was to provide recreation for children in a general hospital. Later those in charge became interested in education and in training for jobs and employment and the name of the center was changed to the Association for the Crippled and Disabled. Now, in a special building constructed in 1938, it has a comprehensive program and is known as the Cleveland Rehabilitation Center. Although somewhat more comprehensive than what is usually thought of as a sheltered workshop, the center is essentially a sheltered workshop offering the
following services to adults and children, either civilian or veteran.

1. Medical examinations by consultants (specialists in various areas)
2. Physical Therapy
3. Occupational Therapy
4. Speech Therapy
5. Braces, prosthesis, wheel chairs, hospital beds
6. Nursery school
7. Adult tutoring
8. Vocational testing and counseling
9. Work experience and development of work habits and work tolerance
10. Regular employment in factory units
11. Case work treatment and individual planning
12. Transportation to and from the center and home or hospital
13. Friendly visiting, crafts, and recreation for the homebound, and home industries.

Curative Workshop. The curative workshop offers a treatment program whereas the sheltered workshop offers a modified employment program. Both can be developed by the same organization but are usually organized separately. Willard and Spackman (81, p. 19) explain that the curative workshop serves patients discharged from a hospital who are continuing a treatment program.

Essentially occupational therapy in the curative workshop concentrates on the development of muscular strength and accuracy as well as on general endurance and emotional adjustment to a residual handicap. The activities most often carried on are closely related to industrial work situations. The work is adapted to meet the immediate problem and the anticipated needs of the patient in employment and in household duties or normal everyday activities.
They are usually supplemented by physical therapy and social service programs with a reasonable fee charged to the patient.

The Curative Workshop of Milwaukee, established in 1919, is an outgrowth of the physical rehabilitation services offered in military hospitals. The curative workshop plans to serve the physical, emotional, social, and economic needs of its patients. Services available in the Curative Workshop Clinic include medical social service, occupational therapy, physical therapy, and speech therapy. In addition to the clinic, the curative workshop serves the patients in their homes, particularly those who need preparatory treatment or adjustment before transfer to the clinic or who can be better treated at home. For example, men and women who have had cerebral accidents and have a residual hemiplegia, can receive occupational therapy services in their homes as well as in the clinic. This not only helps the patient regain as much use of the paralyzed members as possible but in addition enlists the family's understanding and cooperation.

The Curative Workshop of Milwaukee is a non-profit community clinic for physical restoration and rehabilitation. Its services are coordinated with all rehabilitation activities in the community, and it is administered by a board of directors.

Prevocational Programs. In the ubiquitousness of
occupational therapy modalities, the prevocational activities are assuming an increasingly greater share of the occupational therapists' time and effort. Usdane (59, p. 48) believes that: "There are few disciplines better equipped to handle the prevocational exploration of the individual than the occupational therapist."

Prevocational programs are not vocational schools, particularly in view of the fact that the modern hospital is not a school, nor are they particularly interested in assuming the school responsibilities; nevertheless, it was found that long term tuberculosis sanatoria, and orthopedia institutions utilized these activities to improve the patient's vocational status. The Bellevue Hospital in New York, the Veterans Administration Hospitals, and the Institutes of Rehabilitation and Physical Medicine are examples where such activities are used successfully (46, p. 493). The prevocational units are generally planned to bring the working situation to the patient as realistically as facilities permit; that is, prevocational units involve a sampling of actual jobs upon which the patient is tested for both qualitative and quantitative performance. His achievements are matched against the criteria of possible employers.

Redkey (59, p. 20) believes that in undertaking to bring realistic samplings of industry into the prevocational program, the sphere of medical knowledge is being surpassed,
and that administrative teams composed of physicians, occupational therapists and vocational counselors who have basic industrial arts teacher education qualifications should be used. A program of this type is directed toward the exploration, and preparation of the individual for vocational training and placement in industrial trade activity. It is in accordance with the individual interests and needs, providing on-the-job training, refresher training, and exploratory trade experiences. Specific activities carried on in the vocational program—as reported by a neuropsychiatric hospital where 179 patients were enrolled in vocational subjects (59, p. 299)—are carpentry, cabinetmaking, upholstery, textiles, printing, machine shop, sheet metal, photography, electricity, radio, art leather, shoe and luggage repair, graphic arts, blueprint reading, mechanical drawing, precision casting and art metal work.

**Homebound Program.** Occupational therapy strives to bring about an equal opportunity for the homebound disabled individuals unable to compete in open industry. Through the home services, occupational therapy is carried to the homes of patients who have a handicap too severe to enter either the curative or sheltered workshop. Like any other phase of occupational therapy, the home-care program is under medical supervision and prescription.

The United States Department of Health, Education, and Welfare, on the "Study of Programs For Home Bound
Physically Handicapped Individuals," pursuant to Public Law 565, presented a concentrated effort to portray the significance of the problems and needs of this particular segment of the American population. It was found that there are certain characteristics common to the home-bound group not usually existent in other disability groups. The Office of Vocational Rehabilitation published a paper "Workshops for the Disabled" (82, p. 157) which indicates these common characteristics:

1. More severely handicapped.
2. Less education and work experience upon which to draw.
3. Having psychological blocks because of over-protection, neglect or enforced inactivity; developed and exaggerated inertia, timidity, hostility, etc.
4. . . . without normal competitive drives created by interpersonal associations.
5. . . . blocked in the establishment of a work experience by continual interference or proximity of family.

The program of activities, in the early stages of treatment consists of patient encouragement and analysis by the therapist and social worker. If a prescription of craft work is made, then such equipment and facilities as are needed are taken to the home where the occupational therapist then teaches the patient the fundamental steps.

As the patient improves or approaches more complete restoration, home industrial work is introduced on a remunerative basis giving the patient a source of independent earnings, befitting the rights of an individual. The types of work which best suit a home bound program fall into two
general classifications as pointed out in the Government publication, "Workshops for the Disabled" (82, p. 58):
(1) Sub-contracted work and (2) that of manufacturing. Sub-contracting, by nature simpler to operate than manufacturing, carries on such industrial functions as light assembly, packaging, sorting, finishing, counting, stringing beads, lapidary and watch making. The employee (patient) is paid on a piece rate basis comparing equitably to open industry rates. Inspection, pick-up, and delivery, as well as instruction and payroll, are the responsibilities of the occupational therapist.

The manufacturing phase of the home bound program requires much more individual supervision than does the sub-contracting phase. This type of activity usually concerns itself with the manufacture of such luxury gifts as are reflected by regional and seasonal demands. Manufacturing is generally carried on independently of a sponsoring industrial concern, but marketed in the same consumer outlets.

The scope of occupational therapy is so manifold and the young profession growing so rapidly that the specific role of its membership is greatly akin to the multiple duties of the teaching profession. The occupational therapist is part nurse, social worker, psychologist, teacher, librarian, industrial foreman, paymaster, therapist and administrator. In this role the occupational therapist must
interpret and carry out a physician's prescription of appropriate treatment, necessitating individual initiative, imagination, and thorough training to determine the type of occupational activity most helpful to the patient, such as typesetting, leatherwork, woodcarving, to arouse and maintain the interest of the patient. The therapist must also adopt procedures best suited to meet individual patient needs. Such procedures require an administrative and organizational pattern somewhat unique to occupational therapy.

**Organization and Administration**

The variety of duties performed in occupational therapy requires an organizational and administrative pattern that permeates a total program within the employing institution. The American Occupational Therapy Association establishes a pattern suitable to provide the occupational therapist opportunity to attain institutional as well as professional objectives. It is their purpose to make possible the accomplishment of a cardinal objective in the organization and administration of an occupational therapy department and this objective is "... to render the best possible treatment program and service to the patient and to the institution" (51, p. 4).

No attempt is made here to indicate the different types of organization and administration within a given number of institutions, rather a general and authoritatively recommended concept of organizational and administrative
Principles. The American Occupational Therapy Association sets down the following four principles for efficient operation:

1. The first principle covers centralization of executive responsibility. Just as institutional operation responsibility is consigned to the hospital superintendent, so it should be centralized in the person of a director of occupational therapy. Through this principle there is established uniform planning, and proper coordination of activities.

2. As a second principle the delegation of authority and the lines of authority must be clearly defined. This principle will vary in different situations. Generally speaking it is of two types, that is, from an administrative authority and the second from the medical authority, putting an occupational therapy director in the unique position of having two bosses.

The administrative authority may be the superintendent of the hospital, an executive or administrative assistant, the director of personnel, or anyone designated by the top institutional executive. This person's responsibility to the department will concern problems involving personnel policies, supplies, etc. The medical prerogative is usually vested in a qualified physician, a resident or chief of a service. His responsibility pertains to all medical matters,
such as: referrals, treatment prescriptions, attendance of an occupational therapist during periodic inspection rounds at clinics, staff functions, etc.

3. A third principle extends a point of view that industry has come to accept as very important, that of flexibility in operation. Such items as facilities for cooperative planning and operation, which incorporate understandings that minor operative adjustments will become necessary from time to time. Provision must also be made to allow for originality and initiative in the work toward the achievement of objectives.

4. A fourth and last principle of good occupational therapy department organization involves the integration of departmental policies with those of the institution. An implication that a common policy and understanding of reasons for operation, techniques of achievement, and procedures will ensue. Such understandings are generally facilitated through the use of committees and councils, as established by a line and staff organizational channel.

The Physical Layout. In appreciation of the often overlapping and frequently inseparable problems of organization and administration and in view of the point that organization generally precedes administration, certain organizational factors pertinent to proper execution of a good occupational therapy department should be recognized. Here again reference to the American Occupational Therapy
Association is noted as authority to determine these requirements for an Occupational Therapy service physical layout (51, p. 2). Several important considerations will affect this organizational factor: size of plant and staff, number of patients treated in ward or clinic situations, and the extent of outpatient service. However, the above mentioned authority cites a minimum of 36 square feet of space per patient. It is the Association's opinion that (51, p. 3): "The total square footage means the maximum number of patients which can be accommodated at one time in a given space, although most shops take their patients on a staggered appointment schedule." It should be pointed out that this minimum space does not include office, or auxiliary areas for storage or individual treatment areas essential to operation of the department (51, p. 3).

In larger hospitals the current trend is to plan occupational therapy clinic facilities on the unit system, allocating 100-200 square feet per unit for such activities as printing, photography, woodwork, and ceramics; or if fewer units are desired, for 'quiet' and 'noisy' activities or 'dusty' and 'clean' activities. The unit system has the advantage of keeping equipment, tools and materials for specific activities together and thus facilitating organization and maintenance. It also facilitates the assignment of specialist instructors to special activities.

Other physical facility considerations listed as necessary to an occupational therapy department indicate that the shops should be centrally located in the over-all institutional planning, there should be a good diffused lighting, and proper ventilation. Willard and Spackman
(81, p. 66) in this respect indicate that these facilities should be either "U" or "H" shaped in design, utilizing glass partitions separating the office spaces and the various activity areas.

In addition to plant layout, physical facilities include the types of equipment needed, which of course depend upon the extent and variety of activities planned. Willard and Spackman (81, p. 46) indicate equipment needed in several areas. Reference is also made to the "Final Report on the Treatment Media Study" (Appendix A) of August 1952, which lists various activities and their detailed specifics, again indicating equipment. No specific mention of types of equipment will be attempted by the writer, rather a listing will be made of the areas of activity similar to those offered by the Treatment Media Study of 1952; but with significant relationships between Industrial Arts and Occupational Therapy. This relationship necessarily excludes certain activities considered essential to complete therapeutic facilities, therefore in order to provide completeness in the scope of occupational therapy a listing of those media outside the range of this paper will be made. The area activities are considered in the same terminological setting as was indicated on the study:

1. Home economics
2. Horticulture and Annual Care
3. Macrame Netting
4. Decorative and Fine Arts
5. Children's Play Development Activities
6. Music
7. Typing
8. Conversation
Those areas necessitating more detailed descriptions and which are reflected to be essential treatment media for occupational therapy and within the teaching facilities of industrial arts, are as follows:

1. Ceramics
2. Plastics
3. Woodwork
4. Metalwork
5. Leatherwork
6. Graphic Arts
7. Upholstery and furniture refinishing
8. Fundamentals of electricity
9. Industrial conceptions
10. Jewelry and lapidary
11. Drawing and design

Personnel Factors. Administratively the work load of therapeutic personnel should adhere to the basic principle or purpose of occupational therapy "... to render effective service to patients" (51, p. 11). Logically, the patient load of a department will depend upon the number of qualified therapists, the diagnostic groups to be treated, accessibility of clinics to wards, facilities for servicing ward patients and the other types of medical coverage afforded each patient.

An average daily load for a therapist should be between 20 and 30 patients (51, p. 3). Willard and Spackman are more conservative in their estimates of therapists' workloads, indicating that a flat figure specifying a given number of treatments involves too many differentials. Their procedure is based upon the types of patients to be treated, the size and design of the institution, location of therapy department, and the administrative duties assigned to a
therapist. The estimate given here, considering delineated factors is 10 to 20 patients per therapist.

Administrative Tasks of Therapists. Although somewhat arbitrarily selected and separated from the consideration of organization and administration, it seems very necessary at least to indicate some of the types of things therapists must do in the way of clerical or routine tasks. In the survey of the literature it was found that these administrative tasks were most often mentioned:

1. Treatment Schedules. As a general rule, occupational therapy departments operate within the hospital routine which sets aside the morning hours for nursing care, medical rounds, X-ray appointments, and laboratory tests. Nine to eleven A. M. seems to be the main hours for occupational therapy treatment, with a like period from two to four P. M. in the afternoon.

2. Records. In the process of patient recovery there is considerable paper (administrative) work required. Regardless of the number and types of treatment records used, the following three seem most common to all occupational therapy department (81, p. 69): (a) the Referral or Prescription record which usually lists patient's name, age, case number, ward or room number, diagnosis, illness incurrence date, treatment recommended and results desired. Other data of time references also indicated are: (b) the daily attendance record, similar to the record book kept by a teacher to check
the progress of his students; however, it serves basically to denote total attendance or number of patients served by the occupational therapy department; and (c) The Progress Note. Here content as well as frequency of treatments are kept. Basically, progress notes should contain observations and comments on patient attitude, changes in conditions, and other similar matters.

Business records and annual reports, although common to very nearly all occupational therapy departments, are not generally handled by the practicing therapist. Such records as financial statements, budgetary items, equipment and supply inventories are handled by an appointed director or administrator.

Within this category fits the salary structure of the occupational therapists, ranging from $2800. per year to $7000., depending on experience and type of hiring institution. The American Occupational Therapy Association in its most recent report on personnel salaries list the following ranges and positions:

**Recommended Minimum Salary**

<table>
<thead>
<tr>
<th>Classifications</th>
<th>Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff -- no experience</td>
<td>$4400</td>
</tr>
<tr>
<td>Senior -- two years experience</td>
<td>5000</td>
</tr>
<tr>
<td>Director -- four years experience or more</td>
<td>6000</td>
</tr>
<tr>
<td>Coordinator -- or consultant</td>
<td>7000</td>
</tr>
</tbody>
</table>

**Existing Spread in Starting Salaries**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff</td>
<td>$4000-4500</td>
</tr>
<tr>
<td>Senior</td>
<td>4500-5300</td>
</tr>
<tr>
<td>Director</td>
<td>5500-7000</td>
</tr>
<tr>
<td>Coordinator</td>
<td>6000-10,000</td>
</tr>
</tbody>
</table>
PLEASE NOTE: Page 109 seems to be lacking in page numbering only.

University Microfilms, Inc.
Also, within this administrative responsibility falls the student clinical practice for those approved institutions meeting standards established by the American Medical Association (81, p. 71). Clinical practice as established necessitates close relationship between hospitals and schools, implying rather complex and complete recording systems. Particularly when it is understood that the major part of occupational therapy clinical practice is taken in separate hospitals which are affiliated with but not actually a part of the schools.

**Essential Problems of the Occupational Therapist**

**Evidences.** In the attempt to assemble evidence of essential problems, it was found that therapists throughout the United States agree upon certain fundamental issues that consummate within the realm of organization and administration—since broadly conceived many professional problems will fall within the scope of this pattern. As an example the modern day problem facing nearly all professional groups, that of properly educated personnel, is without doubt a major problem to administrators of occupational therapy in their attempt to organize individual departments properly and adequately.

Although great numbers of problems exist within the professional concepts of occupational therapy, as is the case in any active profession, the following are considered as the essential problems facing the professional occupational
therapist of today: (1) Identifying and interpreting distinctive characteristics; (2) developing a workable curriculum and certification plan to increase competencies dealing with the developing technology of society; (3) increasing the prestige of the occupational therapy profession; (4) instigation of graduate programs for the development of leadership qualities within the profession; and (5) refinement of a public relations program designed to emphasize the understanding of occupational therapy by interested citizens as well as professional people most directly concerned.

Hermeneutics is not the purpose of this phase of the study. Rather an attempt will be made to explain why the five essential problems were selected. Basically the selections were made from notes taken on the survey of historical and recent professional literature of occupational therapy. It was found that from the inception of the profession certain problems continually cropped up, not always in the same language but with like implications.

The earliest professional references constantly set down definitions and distinctive characteristics of occupational therapy. Dunton (24, p. 12), in 1918, one year after initial formulation of the profession, began the quest for concrete definitions of occupational therapy and how it could be characterized as an individual contribution to the medical world. He spoke of the values of occupations in his description of the various forms of treatment for the
insane at McLean Hospital as follows:

The importance of various forms of diversion, and especially of manual occupation, has been recognized from its (McLean Hospital) very beginning.

In the same work, Dunton (24, p. 14) notes a descriptive account of the Friends' Asylum for the Insane in 1813-1913, when Robert H. Chase said:

No feature in the treatment of the insane is more highly valued than occupation, systematically applied and judiciously carried out. Work is a law of our nature which demands expression in the insane no less than in the sane... It may be seen that from the beginning Friends' Asylum made intelligent and continuous effort to give the patients the benefit that comes from employment and rational diversion.

It is noted here that distinguishing characteristics of occupational therapy are pointed out in the expression of "systematically applied and judiciously carried out." In searching for proper definitions, Dunton (29-15) further amplifies the position of occupational therapy when he says:

... the value of work, occupation, diversional occupation, or whatever name may be applied to it, in helping the sick mind to recovery has been better recognized in recent years, and with this recognition has come a desire for a better understanding of how occupation aids and the best ways in which it may be used.

In more recent publications there appear numerous comments in the light of identification and interpretation. The Government Bulletin 203-2, (53, p. 1) specifically defines occupational therapy as

... the science of employing creative, industrial educational, and recreational activities in a restorative program for the sick, injured and disabled.
The concern of the therapist is with the patient and the process rather than with the finished product made by the patient. Therefore, the activities used must be sufficiently interesting to motivate the patient's active participation.

The bulletin (53, p. 1) further distinguishes occupational therapy by stressing that

... it is part of the larger program of rehabilitation, which is the restoration of the handicapped to the fullest physical, mental, social, and economic usefulness of which they are capable. Physical therapy, occupational therapy, medical social service, vocational training, and placement are all parts of the program of rehabilitation in the treatment of patients with mental disease, disabling illness, or physical injuries.

In the March-April issue of the 1958 American Journal of Occupational Therapy (29, p. 55), there appears an article from the University Hospital of the University of Michigan, in which the staffs of the two occupational therapy departments conducted a series of discussions centering around the problems confronting the profession as it attempts to keep pace with the advancing scientific innovations. It was their purpose to derive unique characteristics of occupational therapy in light of changing treatment methods and educational concepts. A conclusion reached by this group indicating a distinctive characteristic of the profession centered around the complexities of the therapist in that the felt

... that the specific role of the occupational therapist in team treatment should be to help obtain maximum integration of a patient's therapeutic activities into that patient's twenty-four hour day.
This article was concerned with other essential problems of the profession as well, for specific mention was made of the educational concept and a workable curriculum plan. Through their discussions they concluded that if occupational therapy is to maintain its effectiveness in meeting (29, p. 56) "... the rapidly increasing need for more occupational therapists with more specific skills, professional self-limitation would become a necessity." This group went on to outline a rather comprehensive educational plan as a "... panacea for the educational and professional ills. . . ."

Licht (66, p. 347) in the chapter of Modern Trends in Occupational Therapy in the volume Rehabilitation of the Handicapped, states:

Curricula already crowded must be extended; if necessary by an additional six months or year of undergraduate training. Courses which will make the therapist more valuable to the hospital, particularly the isolated hospital, must be introduced. . . . Education, vocational training, and work, by allowing the patient to progress toward important goals, are effective in aiding his medical cure because they change the situation, from one of conflict and frustration to a situation which provides some satisfaction.

The American Medical Association (46, p. 452) is concerned with the second essential problem of occupational therapy as listed in this paper, it is this association's feeling that "the occupational therapist must be trained professionally to carry out the physician's prescription to select and adapt activities which meet the patient's physical and psychologic needs."
The Office of Vocational Rehabilitation, Department of Health, Education and Welfare appreciates the problems of the profession concerning adequate educational facilities. Under the office of Vocational Rehabilitation since the passing of the 1954 Vocational Rehabilitation Act, funds have been made available for improving old programs and establishing new ones. Such a recently established program is in evidence in South Dakota. In addition to these funds, teaching grants are often made possible to regional occupational therapy associations. Funds have been granted to the American Occupational Therapy Association for workshops to evaluate occupational therapy education and to consider possible changes in the teaching program in line with modern rehabilitation concepts.

Some of the most recent information concerning the essential problem of a workable curriculum and certification plan to increase competencies appears in the January-February issue of the American Journal of Occupational Therapy (4, p. 41). The Council on Education of the National Office of the American Occupational Therapy Association reports that so many colleges and universities express themselves as interested in starting a program, that there is need for a policy to act as guide lines or criteria in helping to establish a program; and that these guide lines should be beyond those now stated in the Essentials of an Acceptable School of Occupational Therapy.
Miss Marguerite Abbott, from the Astley-Ainslie School of Occupational Therapy, Edinburgh, Scotland (1, p. 313), records the thought concerning the essential problem of effective curricula that "... the practicing occupational therapist should consider himself not only as a clinician but also as an educator, with the responsibility of keeping abreast of the ever-widening frontiers of our medical professional knowledge."

Within the pages of the American Medical Association's Handbook, Physical Medicine and Rehabilitation, there appears references (46, p. 477) to the thought and effort therapists have given to increasing the prestige of occupational therapy. For in order effectively to perform work leading to accomplishment of professional objectives, therapists visit industries, railroads, or other places where the patients had been employed prior to an accident, in order to observe men at work in the industrial settings.

The American Journal of Occupational Therapy has in nearly every issue some statement or article attempting to bring prestige to occupational therapy. The 1958 November-December (1, p. 289) issue of this organ is devoted almost exclusively to the subject. The opening article by one of the current professional leaders contains characteristic prestige questions; when she inquires: "Is occupational therapy still a simple, elementary discipline?" The second article of this same issue (4, p. 291) discusses the problem
of graduate education and sets out to establish direction for the establishment of a graduate program.

Although the fourth essential problem of the profession, that of a graduate program overlaps with the third, prestige gaining activities, the two are not so alike that they cannot be considered separately. Essential as prestige is, the instigation of a graduate program designed to develop leadership in the profession is even more far reaching. Most early references were not greatly concerned with a graduate program, but more with the undergraduate setting. The increasing demands on the profession have however caused major concern toward greater individual and professional competencies. Particularly of note in recent publications of the American Journal of Occupational Therapy is the November-December, 1958 issue (4) which is devoted almost entirely to examination of educational direction. This problem of graduate study for the occupational therapy department is even more essential when it is known that only four accredited schools of occupational therapy offer such a program.

Miss Wilma West, one of the outstanding leaders in the profession points this out when she describes existing and proposed graduate programs in occupational therapy (4, p. 291). Of the four existing she has this to say:

University of Southern California, Graduate School offering specialization in any one of the following six areas: physical disabilities, psychiatry, pediatrics, general medicine/surgery, prevocational evaluation and teaching.
New York University, School of Education, providing for emphasis in education, specific disability areas and guidance and counseling.

Western Michigan University, School of Graduate Studies, offering advanced courses in medical subjects, therapeutic media and administration.

San Jose State College, providing for preparation of teachers of occupational therapy in schools and colleges and administrators and supervisors of clinical occupational therapy departments.

A proposed graduate program implemented during the fall semester of the 1958-59 academic year at the University of Nebraska College of Medicine, is offering specialization in psychiatric occupational therapy. No reports are as yet available as to the number of students enrolled in this program. The others, however, have from one to 10 students enrolled, including several on a part-time basis.

Although the occupational therapy profession is a little over 40 years old, and still in the frontier stages of learning how to work with other people outside the profession, too little effort has been extended toward the area of public relations. Sporadic attempts have been made in recent years through the "team" effort to realize this aim. June Sokolov, Executive Director of the Hartford Rehabilitation Center, has written extensively on the subject; of particular note in an article published in the 1955 issue of the Proceedings of the Institute on Rehabilitation (57, p. 46) "Working As A Team."

Frederick A. Whitehouse, Director of Rehabilitation, American Heart Association (77, p. 143) emphasizes the
the "team-work" aspect and in a later article (77, p. 606) reiterates this emphasis by writing on "The Utilization of Human Resources." The 1955 Proceedings of the Institute on Rehabilitation Centers devotes over 18 pages by eleven different authors to the "Establishing of Relations."

Wilma West attempted a direct public relations approach to the Industrial Arts Teacher Education profession when in an article published by The Industrial Arts Teacher she invited this profession to look at occupational therapy from a career point of view. The public relations problem involves more than just causing people to understand and appreciate, it involves such other essential problems as liaison with other institutions of learning mandatory to effective recruitment, and liaison with governmental agencies upon which depends allocation of certain educational and research grants.

Summary

Occupational therapy is a part of the program called "rehabilitation." It is the science of employing creative, industrial, educational, and recreational activities to a program designed to aid in the recovery or rehabilitation of persons afflicted with a mental or physical disability. The major concern of the therapist is with the person being treated and not necessarily with the object or thing under construction. The activities selected, to carry out the physicians' prescription, must be selected
carefully in order to motivate patient interest.

The scope of occupational therapy involves a division of the therapeutic uses as (1) preventive, (2) diagnostic, (3) functional, and (4) remedial. Occupational therapy is further divided into the broader medical classifications of usage such as the psychological disabilities, and the physical disabilities. The psychological use of occupational therapy was the forerunner and basis upon which the profession was built. Within the last few years however the traditional role of occupational therapy has changed to meet the many areas of the physical disabilities.

The physical disabilities concept widened the already broad scope of occupational therapy to include work in the sheltered workshops, the community workshops, the Goodwill Industries, the homebound programs, and the curative workshops. Also included in this classification were the pre-vocational testing and counseling programs in which the therapist makes decisions as to a patient's physical readiness to return to competitive industry.

Organizationally and administratively the occupational therapist works in his variety of duties under the administrative head of a hospital or rehabilitative center. The therapist in addition receives orders from a number of physicians who supervise the treatment of the various patients in the occupational therapy program. The occupational therapy area is also generally subdivided into a
department with a registered therapist as chairman, whose primary responsibilities are: coordination, personnel assignment, acquisition of supplies, and public relations.

The physical layout of an occupational therapy department is established at a minimum of thirty-six square feet per patient treated. The physical facilities should be adequate to carry on the activities of the program, as those listed on pages 105-106 of this study.

Essential problems created by an active profession involved (1) the recruitment and education of qualified personnel, (2) identifying and interpreting distinctive characteristics of the profession, (3) developing a more workable curriculum and certification plan to increase competencies, (4) methods to increase the prestige of the occupational therapy profession, (5) establishment of graduate programs for leadership development, and (6) the refinement of public relations programs designed to emphasize the understanding by interested citizens of the occupational therapy program.
CHAPTER IV

PREPARATION OF THE THERAPIST

A Survey of Twenty-Seven Higher Education Programs for Occupational Therapy

The purpose of this chapter sets the stage for Chapter VI, and from this stage setting it is hoped that the following important factors will evolve: (1) give perspective for future action by industrial arts and occupational therapy educators; (2) provide a means to insights and understandings by both occupational therapy and industrial arts education; and (3) examine the educational patterns involving industrial arts educational activities at the various accredited schools of occupational therapy.

Incidental to the development of the chapter, certain definite implications for industrial arts education in the form of assumptions are made. These concern, of course, the occupational therapy centered courses that should logically and most effectively be handled by industrial arts education. From this there should develop foundations for a philosophy of industrial arts education in occupational therapy.

The methods by which it is hoped that the above-mentioned points are achieved is first a brief overview of
the educational program for occupational therapy. This to involve a look at the accredited schools of occupational therapy in the United States, an examination of the student qualifications and selection procedures for entrance into the schools, an examination of the general curriculum, the professional curriculum, and the field or practical experiences.

An Overview of the Schools

In Chapter II, the historical derivation of occupational therapy schools was traced from very early beginnings. However, it was not until 1933 that the Council on Medical Education and Hospitals of the American Medical Association, in cooperation with the American Occupational Therapy Association, established the essentials for an acceptable school of occupational therapy. These schools, (Table 2), are established in colleges or universities accredited by the Association of American Universities or the respective regional associations of colleges and secondary schools, or in medical schools approved by the American Medical Association. The occupational therapy schools themselves are inspected and approved by the Council on Medical Education and Hospitals of the American Medical Association.

The first schools approved in 1935 were located in Boston, Milwaukee, Philadelphia, and St. Louis. In 1939 the Kalamazoo School of Occupational Therapy was approved,
<table>
<thead>
<tr>
<th>Approval Year</th>
<th>Name and Location of School</th>
<th>Type of Course Degree Offered</th>
<th>Entrance Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1935</td>
<td>Boston School of Occupational Therapy, Boston, Massachusetts</td>
<td>B.S. in Education, B.S. in O.T.</td>
<td>Probationary period interview</td>
</tr>
<tr>
<td>1945</td>
<td>University of Buffalo, School of Medicine, Buffalo, New York</td>
<td>B.S. Major in O.T.</td>
<td>Public school stand</td>
</tr>
<tr>
<td>1950</td>
<td>Colorado A &amp; M, School of Home Economics, Fort Collins, Colo.*</td>
<td>B.S. Degree with certificate, combination O.T. with Ind. Arts or Home Economics</td>
<td>Projection tests, program at sophomore</td>
</tr>
<tr>
<td>1941</td>
<td>Columbia University, College of Physicians and Surgeons, New York City, New York</td>
<td>B.S. Degree</td>
<td>Selection Committee, personal interview</td>
</tr>
<tr>
<td>1943</td>
<td>University of Illinois, College of Medicine, Urbana, Illinois</td>
<td>B.S. Degree in O.T.</td>
<td>Personal interview, counseling program, observation first</td>
</tr>
<tr>
<td>1947</td>
<td>Iowa State University, College of Medicine and Liberal Arts, Iowa City, Iowa</td>
<td>B.A. in Liberal Arts with Certificate in O.T.</td>
<td>Letters of Recommendation, General</td>
</tr>
<tr>
<td>1939</td>
<td>Western Michigan College, School Occupational Therapy, Kalamazoo, Michigan</td>
<td>B.S. Degree in O.T.</td>
<td>General</td>
</tr>
<tr>
<td>1947</td>
<td>University of Kansas, School of Fine Arts, Lawrence, Kansas</td>
<td>B.S. Degree in O.T.</td>
<td>General, college requirements, personal interview</td>
</tr>
<tr>
<td>1941</td>
<td>Eastern Michigan College, Department of Special Education, Ypsilanti, Michigan</td>
<td>B.S. Degree, Major in O.T.</td>
<td>Personal interview</td>
</tr>
<tr>
<td>1944</td>
<td>Mills College, School of Home and Community Services, Oakland 13, California</td>
<td>B.A. Degree, Major in O.T.</td>
<td>School credentials, letters of recommendation</td>
</tr>
<tr>
<td>1935</td>
<td>Milwaukee Downer College, Special Departments, Milwaukee, Wisconsin</td>
<td>B.S. Degree, with Diploma in O.T.</td>
<td>Personal interview, more year, strong counseling program</td>
</tr>
<tr>
<td>1948</td>
<td>University of Minnesota, Department of Physical Medicine and Rehabilitation, Minneapolis, Minn.</td>
<td>B.S. Degree in O.T.</td>
<td>General college requirements, personal interview, sophomore year</td>
</tr>
<tr>
<td>1943</td>
<td>Mount Mary College, Division of Occupational Therapy, Milwaukee, Wisconsin</td>
<td>B.S. Degree with Certificate in O.T.</td>
<td>Personal interview, sophomore year</td>
</tr>
<tr>
<td>Degree, personal</td>
<td>Students</td>
<td>Required</td>
<td>Field</td>
</tr>
<tr>
<td>------------------</td>
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<td>----------</td>
<td>-------</td>
</tr>
<tr>
<td></td>
<td>x   x</td>
<td>136</td>
<td>10 mos.</td>
</tr>
<tr>
<td>x   x</td>
<td>137</td>
<td>9 mos.</td>
<td>Handcrafts</td>
</tr>
<tr>
<td>x   x</td>
<td>132</td>
<td>10 mos.</td>
<td>Woodwork</td>
</tr>
<tr>
<td>x   x</td>
<td>132</td>
<td>9 mos.</td>
<td>Metal</td>
</tr>
<tr>
<td>x   x</td>
<td>120</td>
<td>16 mos.</td>
<td>Ceramics</td>
</tr>
<tr>
<td>x   x</td>
<td>126</td>
<td>10 mos.</td>
<td>Ceramics</td>
</tr>
<tr>
<td>x   x</td>
<td>131</td>
<td>9 mos.</td>
<td>General Shop</td>
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<tr>
<td>x   x</td>
<td>124</td>
<td>12 mos.</td>
<td>Ceramics</td>
</tr>
<tr>
<td>x   x</td>
<td>124</td>
<td>9 mos.</td>
<td>Art Metal</td>
</tr>
<tr>
<td>x   x</td>
<td>124</td>
<td>11 mos.</td>
<td>Ceramics</td>
</tr>
<tr>
<td>x   x</td>
<td>130</td>
<td>9 mos.</td>
<td>Bookbinding</td>
</tr>
<tr>
<td>x   x</td>
<td>124</td>
<td>9 mos.</td>
<td>none except &quot;Techniques of O.T. &amp; Lab Instruction in Arts &amp; Skills&quot;</td>
</tr>
<tr>
<td>x   x</td>
<td>134</td>
<td>11 mos.</td>
<td>Ceramics</td>
</tr>
</tbody>
</table>

Graphic Arts | Metal | Jewelry | Woodworking
<table>
<thead>
<tr>
<th>Approval Year</th>
<th>Name and Location of School</th>
<th>Type of Course Degree Offered</th>
<th>Entrance Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1947</td>
<td>St. Catherine College, Department of Occupational Therapy, St. Paul, Minnesota</td>
<td>B.S. Degree in O.T.</td>
<td>General college</td>
</tr>
<tr>
<td></td>
<td>San Jose State College, Division of Liberal Arts, San Jose, Calif.</td>
<td>B.S. Degree with Certificate in O.T.</td>
<td>Personal interview, semester of atttendance</td>
</tr>
<tr>
<td>1944</td>
<td>University of Southern California College of Letters, Arts and Sciences, Los Angeles, Calif.</td>
<td>B.S. Degree with Certificate in O.T.</td>
<td>General university, personal evaluation</td>
</tr>
<tr>
<td></td>
<td>University of Texas, Medical Branch, Galveston, Texas</td>
<td>Advance certificate Baccalaureate degree in O.T.</td>
<td>Admissions, approved college</td>
</tr>
<tr>
<td>1947</td>
<td>Texas State College for Women School of Occupational Therapy Denton, Texas</td>
<td>B.S. or B.A. Degree with Major in O.T.</td>
<td>General college requirements</td>
</tr>
<tr>
<td>1938</td>
<td>Washington University School of Medicine St. Louis, Missouri</td>
<td>B.S. Degree in O.T.</td>
<td>Review of high school transcript, reference interview</td>
</tr>
<tr>
<td>1944</td>
<td>Wayne University, College of Liberal Arts, Detroit, Mich.</td>
<td>B.S. Degree in O.T.</td>
<td>University admission procedures, personal evaluation at sophomore year</td>
</tr>
<tr>
<td>1943</td>
<td>New York University School of Education New York City, New York</td>
<td>B.S. Degree with Certificate in O.T.</td>
<td>College entrance, graphical letters, interview</td>
</tr>
<tr>
<td>1944</td>
<td>The Ohio State University College of Education Columbus, Ohio</td>
<td>B.S. Degree in O.T.</td>
<td>University general requirements, personal interview during sophomore year</td>
</tr>
<tr>
<td>1935</td>
<td>University of Pennsylvania, School of Auxiliary Medical Sciences, Philadelphia, Pennsylvania</td>
<td>B.S. Degree in O.T.</td>
<td>Those of the Office of Admissions, University of Pennsylvania</td>
</tr>
<tr>
<td>1947</td>
<td>College of Puget Sound, School of Medicine, Tacoma, Washington</td>
<td>B.S. Degree in O.T.</td>
<td>Loosely structured, varies according to apparent needs</td>
</tr>
<tr>
<td>1942</td>
<td>Richmond Professional Institute the College of William and Mary - School of Fine Arts, Richmond, Virginia</td>
<td>B.S. Degree in O.T.</td>
<td>General college requirements, personal interview</td>
</tr>
<tr>
<td>1944</td>
<td>University of Wisconsin College of Education, Madison, Wisconsin</td>
<td>B.S. Degree in O.T.</td>
<td>General university requirements</td>
</tr>
<tr>
<td>1955</td>
<td>University of North Dakota College of Science, Literature and Arts, Grand Forks, North Dakota</td>
<td>B.S. Degree, Major in O.T.</td>
<td>General university requirements</td>
</tr>
<tr>
<td>Requirements</td>
<td>Students</td>
<td>Required Sem. Hours</td>
<td>Field Exp. Time</td>
</tr>
<tr>
<td>----------------------</td>
<td>----------</td>
<td>-------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>view first attendance</td>
<td>x</td>
<td>135</td>
<td>9 mos.</td>
</tr>
<tr>
<td>City requirement</td>
<td>x</td>
<td>124</td>
<td>9 mos.</td>
</tr>
<tr>
<td>require--</td>
<td>x</td>
<td>125</td>
<td>9 mos.</td>
</tr>
<tr>
<td>school trancactions, personal</td>
<td>x</td>
<td>128</td>
<td>10 mos.</td>
</tr>
<tr>
<td>session procedures observation sophomore</td>
<td>x</td>
<td>128</td>
<td>10 mos.</td>
</tr>
<tr>
<td>personal</td>
<td>x</td>
<td>130</td>
<td>10 mos.</td>
</tr>
<tr>
<td>general admission personal sophomore</td>
<td>x</td>
<td>130</td>
<td>10 mos.</td>
</tr>
<tr>
<td>office of</td>
<td>x</td>
<td>123</td>
<td>10 mos.</td>
</tr>
<tr>
<td>required</td>
<td>x</td>
<td>123</td>
<td>10 mos.</td>
</tr>
<tr>
<td>require-- inter--</td>
<td>x</td>
<td>124</td>
<td>10 mos.</td>
</tr>
<tr>
<td>require--</td>
<td>x</td>
<td>124</td>
<td>10 mos.</td>
</tr>
<tr>
<td>require--</td>
<td>x</td>
<td>125</td>
<td>9 mos.</td>
</tr>
</tbody>
</table>
making a total of five such schools until 1942, when the
demands of war accelerated the acceptance and establishment
of schools equipped and staffed to educate occupational
therapists. The present thirty schools are operated on a
somewhat different basis than those of thirty years ago,
for as Miss Marjorie Fish, (81-24), past Executive Director
of the American Occupational Therapy Association says,
"... the educational field preparing students to practice
occupational therapy presents an interesting pattern because
of the rapid growth of the profession and the philosophical
change of the total educational pattern." She believes that
a good share of this change is due to the recently accepted
concept of total rehabilitation, emphasizing rehabilitation
as more than just mental. The rapid growth, the physical
aspects of occupational therapy and the social and voca-
tional factors of the total educational picture which stress
a combined program of studies in the liberal arts with the
theoretical and technical subjects of a specialization com-
prise the essentials of education for occupational therapy.
The broad facilities available within university and college
centers for the enrichment of professional education and the
resulting affiliation of specialization in higher education
makes possible the granting of academic and professional
degrees recognized as a part of the professional person's
equipment. In essence Miss Fish is reiterating the
statement by the National Commission on Teacher Education and Professional Standards (25, p. 9) who stated that:
"Professional education is based upon the demands encountered in a vocational position . . . and that professional education is designed to produce competence."

The occupational therapist's point of view strongly supports "the producers of competence position" for a tremendous amount of work has been done in building standards, guides, educational programs, and special courses designed along lines of specialization. At present, as Carlotta Welles, (77, p. 299) points out, occupational therapy has no specialization, no specialized education, and no type of certification for specialization, but these are points of cognizance and are a part of the occupational therapist's philosophy.

Further evidence of this drive for producers of competence can be seen by the continuous emphasis on this objective in current issues of the American Journal of Occupational Therapy. In a most recent issue (60, p. 299), Miss Mary Reilly, member of the executive committee of the American Occupational Therapy Association, points out:

The first and most persistent force that shapes a curriculum is practice. Practice has always demanded that its procedures be represented directly in the curriculum. When practice or empiricism is the dominant influence, great blocks of time are committed to factual knowledge and the how-to-do-techniques . . . .
The occupational therapy curriculum is now approaching the 50th year of responding to a strongly demanding practice. We have committed great blocks of time to factual knowledge in the sciences and the crafts. We know that knowledge in these important and practical areas must increase if we are to maintain the working comprehension that practice demands.

She hastens to explain, however, that although the profession is an empirical one, it is empirical only to the point that, "... the curriculum is built from the constellation of conceptual understandings that support practice." Therefore, even though it might appear that the program is technical in nature and that the students emerging from such a program are trainees, they are in essence the product of a profession educating its students to develop the skills of the practice. For, as Miss Reilly says: "A characteristic of a mature profession is its pride in and its vigorous use of its media" (60, p. 298).

This theory of professional education of the occupational therapy educational centers can be further supported by an examination of the programs offered through the twenty-seven universities, colleges and schools of occupational therapy. Although twenty-eight schools were contacted, one school (The University of New Hampshire) failed to respond to the request that permission be granted for inclusion in the study. Therefore only twenty-seven schools are reported upon.

Examination of Table 1 reveals that the usual
educational preparation period for the OTR (Occupational Therapist Registered) is five years beyond high school, and that these college courses of five years lead to a Bachelor of Science degree and certification in Occupational Therapy. Sixteen schools also give 17 to 18 month certificate courses which are open to college graduates, or in some instances, to registered nurses or persons with similar qualifications. Three schools offer three-year courses which require one to two years of college as prerequisite training. All schools require a minimum of nine months clinical practice in hospitals in which there are well-established occupational therapy departments staffed and equipped to provide practical field experiences suitable to the high standards of the profession. The Council on Medical Education and Hospitals of the American Medical Association and the American Occupational Therapy Association establish the essentials of such programs.

The survey of the twenty-seven institutions offering educational experience in occupational therapy also revealed that such endeavors were carried on in a rather wide distribution of administrative divisions within universities or colleges. Three of these areas of occupational therapy were affiliated with schools or colleges of Education; two with Fine Arts; six listing Schools of Occupational Therapy; six were affiliated with a school or college of Medicine;
one with the school of Home Economics; four with the College of Liberal Arts; one with a Department of Special Education; one in the School of Home and Community Service; two within the Department of Physical Medicine and Rehabilitation; one in the School of Auxiliary Medical Services; and one in the College of Science Literature and Arts.

**Student Qualifications and Selection Procedures**

Although widely diversified in organizational structure, the qualification and selection procedures were in essence the same for each of the twenty-eight schools surveyed, most generally confined to such word descriptions as; that of the Boston School Catalog of Occupational Therapy:

Applicants for admission must be between the ages of nineteen and thirty-five years. Both men and women are admitted to professional courses, depending upon individual qualifications. Demands made on the physical endurance and emotional stamina of the therapist require a record of good health. Applicants must be graduates of an approved high school or equivalent.

Fifteen of the surveyed institutions required personal interviews of their occupational therapy students, usually during the second year on campus. All indicated close personal and individual contact with students, particularly in the first two years, when students were obtaining that phase of their education most often called general education.
General Education

An examination of Table II will show that entrance requirements for prospective students of occupational therapy usually include a high school diploma. High school credits most desirable are those most often called general education. No attempt is here made to give significant meaning to the term "General Education," nor is an attempt being made to define it. Rather the pattern as established by the twenty-seven schools of occupational therapy is noted. All schools except those offering only the advanced standing certificates in occupational therapy suggest that the first two years of preparation be pre-occupational therapy or pre-professional, and involve subjects classified as general education. Specifically these subjects are: English, biological sciences, modern languages, speech, sociology, psychology, chemistry and physics. Within the curriculum requirements of the twenty-seven colleges and universities surveyed, a mathematics requirement in either the first two years or the last two years is found in only two. Nine schools listed a foreign language requirement with one giving the students a choice of foreign languages or history. Seven schools listed history as a pre-professional requirement, and two schools listed political science as a requirement.
Summarily the basic academic courses required in the accredited schools of occupational therapy include

- **English** - 12 to 16 semester hours.
- Biology and/or Zoology - 6 to 12 semester hours.
- Chemistry and/or Physics - 6 to 8 semester hours.
- Psychology - 6 to 14 semester hours, with one school listing educational psychology courses.
- Sociology - 3 to 6 semester hours.

**Professional Education**

In essence professional education is that part of a student's experience which subjects him to a certain well-established pattern of courses designed around the acceptable principles of methodology, theory, professional attitudes and practical skills. This phase of the occupational therapy student's educational experience, it was found, most always takes place in the third and fourth years of the program, which is the more specialized part. Occupational therapy is a part of the medical sciences, large blocks of study time are devoted to those subjects dealing with physical and mental disabilities; that is, the study of the human body and its functions, the mental, social, and economic aspects of everyday living. The teaching aspect of occupational therapy is also considered, for teaching is one of the duties of the therapists. The Government Medical Services Series Bulletin No. 203-2 (53, p. 25) emphasizes this phase of the student's professional education when it
states: "It [occupational therapy] is also a teaching occupation, as the patient is continually taught the methods and skill needed for his improvement and recovery."

One of the twenty-seven schools surveyed specifically listed educational theory and methods courses as a part of the professional preparation. Closely allied to the specific mention of professional education courses, the survey revealed that nearly all schools offered study in social work and psychology of a nature to emphasize the close relationship between the patient and the therapists, or the service aspect of the therapist's work.

**Skill Activities**

An integral and well-established part of any professional curriculum is its techniques of application. Reilly (60, p. 297) determines this phase of the student's preparation:

The area of concern which would appear to be of special interest to us is 'work' or, if we choose to call it by its more generic term 'activity'.... the roles that are of concern to us might be those that man assumes in the spheres of occupation and recreation. The life satisfactions found in these spheres can be disrupted by disease and injury and when they are profoundly disrupted, man has great need to have them restored through professional help. Restoration of life satisfactions sought for in the spheres of occupation and recreation requires organized knowledge in the following behavioral areas: reflex state, motor skill state, achievement level, patterns of interest, learning and personality structure. It is to be expected that such
behavioral knowledge will be represented in the curriculum and patterned to fit the special needs of occupational therapy.

Within the curriculum descriptions of the various colleges, it was found that from as few as 9 units in activities to as many as 21 units of credit was received. Two schools listed no specific activities, but described their activities phase as Occupational Therapy Methods and Materials or Techniques of Occupational Therapy and Laboratory Instruction.

Generally the following activities were listed as a phase of the third and fourth years of a student's college curriculum: (Table 1)

<table>
<thead>
<tr>
<th>Art-Design</th>
<th>Jewelry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bookbinding</td>
<td>Leatherwork</td>
</tr>
<tr>
<td>Ceramics</td>
<td>Metals</td>
</tr>
<tr>
<td>Drawing, instrument</td>
<td>Photography</td>
</tr>
<tr>
<td>General Crafts</td>
<td>Plastics</td>
</tr>
<tr>
<td>Graphic Arts</td>
<td>Woodcarving</td>
</tr>
<tr>
<td>Industrial Survey</td>
<td>Woodworking</td>
</tr>
</tbody>
</table>

It was indicated by course description in seven of the schools that the departments of industrial arts and occupational therapy cooperated in teaching the skill areas. All other schools handled the activities either within the occupational department, or in the Fine Arts Department.

This evidence is without doubt effected by the organizational structures and available facilities of the institutions supporting the occupational therapy programs. Those schools organized within the College of Medicine were
noticeably strong in the science, and the liberal arts courses, with a weakness displayed in the industrial arts activities.

**Field Experience**

In addition to the academic education of the occupational therapist, a minimum of 9 months of actual on-the-job hospital practice is required. These clinical situations are approved by the Council on Medical Education and Hospitals of the American Medical Association, in cooperation with the American Occupational Therapy Association.

The hospitals selected may be in any part of the United States, and the Director of Occupational Therapy generally selects the affiliated institution carefully in consultation with its medical director. Clinical affiliations are arranged by the schools to include experiences in children's, orthopedic, general, mental, and tuberculosis hospitals. Some institutions offer special types of training for students, such as treatment of children suffering from rheumatic fever or cerebral palsy or of blind patients. In New York City students served one month of their clinical affiliations in the New York Home for Dependants.

The nine month's field practice by students is broken down by the "Essentials of an Acceptable School of
Occupational Therapy (49) to include experience of specific duration in the following way:

- Psychiatric Conditions - not less than 12 weeks
- Physical Disabilities - not less than 8 weeks
- Tuberculosis - not less than 4 to 8 weeks
- Pediatrics - not less than 4 to 8 weeks
- General Medicine and Surgery - not less than 4 to 8 weeks

(Other than Physical disabilities)

A recent "Curriculum Study" by the American Occupational Therapy Association, National Office (Appendix D) indicated that students practicing in the above mentioned areas spent an average of 933 clock hours teaching therapeutic activities. These activities and their significance are illustrated in Table 2. It must be pointed out that the activities appearing in the above table are limited to the scope of this study and do not include the total listing of therapeutic activities utilized in the student affiliation centers of occupational therapy. For a complete listing of these activities see Appendix D.

Also there is a deviation from the established breakdown of affiliation specialities of tuberculosis, psychiatry, general medicine and surgery, physical disabilities and pediatrics, since in the questionnaire returns to the Survey Committee, certain areas were lumped together, therefore necessitating a listing of four disability areas rather than five.

The preparation of the occupational therapists can
then, according to the "minimum essentials for a profession" be broken down into

1) preparation in the dedication to service;
2) a specialized approach to service superimposed upon a base of broad general education;
3) a student selection and recruitment program;
4) a recognition of the principle of an organized association to maintain standards and a sound procedure; and
5) a continual program of research to probe into the realm of professional improvement. Note Appendix 4, on publications.

Summary

The educational aspects of the occupational therapy profession has expanded over the past fifty years from a training situation of three to five month duration to an educational endeavor involving four years formal education and ten months clinical affiliation in thirty United States institutions of higher education. These institutions accredited by both regional accreditation associations and the American Medical Association are graduating over five hundred students per year. The American Occupational Therapy Association, official organization for the promotion of the profession, maintains a register of therapists which qualifies personnel on the basis of a national examination. Over 3,000 occupational therapists are now registered by this organization, which also maintains an Education Office for the conducting of an educational research program.

Required courses of education as established by the
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Required courses of education as established by the
### TABLE 2

**Therapeutic Activities* Utilized by Occupational Therapy Student Affiliation Centers**

Disability Areas and Number of Participating Centers

<table>
<thead>
<tr>
<th>Activities</th>
<th>General Medical and Surgical</th>
<th>Tuberculosis</th>
<th>Neurological and Orthopedic</th>
<th>Psychiatry</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Order of Frequency uses 7/1/56 to 6/30/57</td>
<td>Order of Frequency uses 7/1/56 to 6/30/57</td>
<td>Order of Frequency uses 7/1/56 to 6/30/57</td>
<td>Order of Frequency uses 7/1/56 to 6/30/57</td>
</tr>
<tr>
<td>Ceramics</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Educational</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Industrial</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Leather</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Metal-Jewelry</td>
<td>8</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Photography</td>
<td>5</td>
<td>5</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Plastics</td>
<td>7</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Pre-Vocational</td>
<td>12</td>
<td>1</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Printing</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Woodworking</td>
<td>43</td>
<td>24</td>
<td>191</td>
<td>53</td>
</tr>
</tbody>
</table>

*Statistical data taken from tables of Activities Utilized in Student Affiliation Centers. Curriculum Study conducted by the National Office, American Occupational Therapy Association.
"Minimum Essentials for an Acceptable School of Occupational Therapy" vary in length and content according to the previous educational and experience qualifications with which a student enters the program. For the secondary school graduate a five year course generally leads to a B.S or B.A. with either a major in occupational therapy or a certificate of occupational therapy. The student with one or more years of college education or equivalent professional experience in related fields as art, nursing, industrial arts, social work, or psychology may complete the required experiences in a three year diploma course. College graduates with the same subject areas just mentioned may complete all requirements in approximately eighteen months.

Minimum standards require thirty semester hours of theoretical experience, in biologic and social studies, selected clinical subjects, and the theory of occupational therapy; thirty semester hours of technical experience in the area of fine and industrial arts; and not less than thirty-six weeks of field or practical experience in orthopedic tuberculosis, psychiatric and children's hospitals. The student graduating from a course of this broad scope has a basic general preparation and a wide variety of skill areas.
CHAPTER V

NATURE OF INDUSTRIAL ARTS TEACHER EDUCATION

Definition a Historical Derivation

We are living in an era when industrial and technological development has a tendency to outstrip the educational institutions and social understandings. With this very great expansion has come some unusual opportunities for an expanded and extended industrial arts program. The degree of expansion and extension is dependent upon the alertness and imagination displayed toward such potentialities.

The educational ideal in a free society is education for all; that is the opportunity for each individual to develop to the limit of his abilities. The President's Commission on Higher Education said: (83, p. 9) "The first goal in education for a democracy is the full, rounded, and continuing development of the person. . . . To liberate and perfect the intrinsic powers of every citizen is the central purpose of democracy, and its furtherance of individual self-realization is its greatest glory. . . ."

Occupational therapy is also primarily concerned with the educative process of the individual (81, p. 11).
This was noted by the writer in the scope of occupational therapy where it was stated:

In determining the scope of occupational therapy, the types of human problems and the range of activities that might be helpful in these problems must be considered. The numberless procedures that may be useful therapeutically make the field boundless except as it is limited by the need to direct the undertaking specifically toward the solution of the problems of the individual.

It is the intent of the writer to so develop this chapter that (1) the parallelisms existing within the professions of industrial arts and occupational therapy are recognized; (2) the definition of industrial arts may be briefly examined; and (3) the breadth of technical interests and abilities of those engaged in industrial arts can be identified.

**Historical Derivation.** The history of life is the unfolding story of how man has supplied his needs and how he has learned to do it more proficiently until the whole system of methods and customs may reasonably be called civilization. When the genus homo was singled out of all organic creatures to travel a road closed to all others, 50,000 or more years ago, the road of active, non-controlled adaptation, he learned to stand erect, to use his intellect, and to use his hands, not only to grasp, but to make tools with which to shape his environmental factors. He possessed a vocal apparatus of unparalleled plasticity and was endowed with a physical strength of greatness. Here began man's
career as a great earth changer. He was the Prometheus who thrust his hand into the heavens to seize divine power; who, not satisfied with what nature willingly offered, coaxed her to give more and even improved upon her work. Thus, man emancipated himself from the limitations of passive adaptation, and began the conquest of controls which hold other creatures in bondage.

This brief explanation is obviously not an exhaustive treatment of the historical background of man, but rather is suggestive of highlights to further and deeper forces that give meaning and significance to the appearance of industrial education within the all-pervasive social heritage of knowledge and experience.

Historically, industrial education had its philosophic beginnings as early as 2000 B.C. (68, p. 2). There is documentary evidence available indicating that the idea of "practical" or "utilitarian" educational bents were very important aspects of the educational picture (58, p. 4). The Prospectus For Industrial Arts of the State Department of Education for Ohio states that Plato's Republic, and the writings of Aristotle formed the bases for the present understandings of industrial arts education and its place in civilization. Martin Luther (1483-1546) was one of the first to advise that education must enhance the realities of life. Luther, as quoted by Bennet (9, p. 31) said:

My opinion is that we must send the boys and
girls to school one or two hours a day, and then have them learn a trade at home for the rest of the time. It is desirable that these two occupations march side by side.

Rabelais (1483-1553), a French novelist, wanted children to gain a wide background in handicrafts. Through the efforts of these two men, Luther in Germany, and Rabelais in France, England became aware that the old traditional education with its affixations of static rumblings lacked the depth necessary to meet the needs of an advancing economic and cultural society. Bacon, Hartlib, Locke, Milton, Maxon, Mulcaster and Petty set forth literature which clearly defined the industrial arts activities ramifications to education. Mulcaster (1531-1611) emphasized the importance of drawing for consumer values. Bacon (1561-1626), in his contributions of how people learn, pointed out that wise judgments could be reached only in proportion to how well a person understood the nature of things that make up life. Petty advocated a workhouse for children where they might learn knowledges of how to earn a living, as well as reading and writing. It is interesting to note that Petty also would have established still a second type of school which would teach tradesmen. It was Petty's (9, p. 45) reasoning that if such an education were offered to the people, it would

1. Cause the people to be less liable to artificers.

2. Help the people to become more industrious.
3. Enable the people to do better work, through the process of better education, than the common run of man.

4. Encourage experimentation and the ability to do work with less cost and more care than would be possible with others doing the work for them.

5. Enrich the arts through such enlightening experiences.

6. Encourage people to become experts in a given area.

7. Teach profitable use of leisure time.

Jean Jacques Rousseau (1712-1778) lighted the way to an era where the idea of methods was important as opposed to subject domination in education. Rousseau said (56, p. 2-40)

"Education is obtained from three sources: Nature, Men, and Things . . . children should be allowed complete freedom of movement from the minute of their birth . . . they should be educated through direct experience, and not solely from books . . . they should be trained to use their hands and produce useful articles."

While the establishment of the "object" method of teaching was being recommended by Pestalozzi, a great industrial revolution was going on in Europe (1775). Young children were enslaved in the swirling eddies of industry causing conditions which provoked eliminating actions in the form of legislation and compulsory education laws. When these compulsory education laws became effective, and adolescents began to withdraw from the industries, there arose
a dire need for skilled and scientifically minded people. To compensate this need, the mechanics institutes, and lyceums were introduced. Through the influence of these movements, the people of Europe and America gradually became aware of the need for a more technological training (58, p. 49-50).

Although the manual training movement had its roots deep down in the educational philosophy of Comenius, Rousseau, Pestalozzi, and Froebel, the immediate impetus to this development in the United States stemmed from the admiration and imagination of the American Public with his Russian exhibition of trade exercises. Phases of the Russian system permeated the industrial arts programs of America and evidence of its impact can still be found today. Discussing this system, Friese (27-12) indicated that it

... was a system of fundamental tool instruction based upon the application of the methods of formal discipline or transfer of training, to give instruction in handwork. It was wholly vocational in its objective. It was characterized by an analysis of the trade to secure the fundamentals, by organization of subject matter and methods of instruction. Mental power and individual efficiency were striven for. Instruction was given through a system of models, many of which were abstract in their application and of no intrinsic worth.

So developed the three rather distinct periods of professional growth. The "manual training" period so named by Runkle and Woodward (1879) emphasized hand skills, chiefly in woods, utilizing a series of abstract exercises. During the period of 1894, Bennet (10, p. 40) used the term
"manual arts" to describe his program where more thought was given to making useful articles, although still strongly advocating hand skill. In 1904, to satisfy a need for a type of education that would help all the people live more intelligently in a predominantly industrial society, Richards, Bonser, Mossman (14, p. 453) and others proposed a broader concept of "manual arts" in the form of "industrial arts." It was a contention of Richards at this time that educational doctrines were rapidly leaving behind the purely disciplinary thoughts of manual training, and accepting the scope of education, which is nothing short of the elements of the industries fundamental to modern civilization.

Bonser (14, p. 454) was even more emphatic in his belief that industrial arts is more than the study of a particular area when he said: "The largest problems are those of developing an appreciative understanding of industry as it is at the present time; realizing its social problems and cultivating intelligent judgment and appreciation in the selection and use of industrial products." Since industrial arts is generally more associated with industry and technology than some other subjects, and because its very foundations rest upon the resulting processes and products, it may be assumed that industrial arts is limited to these phases. Such is not the case, however, for as the complexities of modern cultures became even greater, the spheres of industrial arts also broadened. It is broadened to the
point that the interest in activity provided by the program creates additional motivation for the acquisition of knowledge and skills fundamental to social settings, play experiences, personal and seasonal interests, and the challenge of environment. Industrial arts is the study of the work of mankind. It is a study of man's efforts to satisfy his physical needs, by acquiring skills in the use of measurement and numbers, the sciences, language arts, methods of research, recording and communicating.

Scope and Objectives

Industrial arts as a curriculum area in the public schools of America has been defined many times by many men; some noted leaders in the field have set down definitions: Bonser (14, p. 2), one of the most widely quoted, says it is "... a study of the changes made by man in the forms of materials to increase their value, and of the problems of life related to these changes." Wilber (80, p. 2) proposed that industrial arts should be defined as: "Those phases of general education which deal with industry--its organization, materials, occupations, processes, and products--and with the problems resulting from the industrial and technological nature of society."

The American Industrial Arts Association (74) in 1947 proposed a pattern of industrial arts education that
would involve six distinct phases explaining the meaning and place of industrial arts:

1. **Functionally**, Industrial Arts as a school subject in this society is concerned with providing experiences that will help persons of all ages and both sexes to profit by the technology, because all are involved as consumers, many as producers, and there are countless recreational opportunities for all.

   Included also in the functionality of the program should be the aid given to and use made of it by the atypical, the rehabilitative, the chronically ill and by geriatrics.

2. **In scope**, the emphasis at childhood levels is in providing the means for integrated activity programs; at early adolescent levels in an orientation program concerning the technology; at later adolescent levels in elements of the technical program and a sound basis for a possible industrial-vocational program; at collegiate levels in technological studies and activities of consumption, production, and recreation in the core program, and elements of technical training in the terminal program; and at adult levels in recreational and consumer activities for all, along with elements of the technical as required.

3. **Content** is derived from the technology and not by job or trade analysis from the commoner village trades such as those of the carpenter, the blacksmith, the cabinet maker, and so on. Now, the subject matter classifications are conceived as including:
   
   a. **Power**: tidal, solar, atomic, electrical, muscular, hydraulic, combustion;
   
   b. **Construction**: housing, public works, industrial, national defense, . . . ;
   
   c. **Transportation**: land, sea and air;
   
   d. **Communication**: graphic arts, electrical and other media;
   
   e. **Manufacturing**: includes the basic industrial methods of changing raw materials into finished products such as foods, textiles, ceramics, metals, woods, plastics, and leathers,
similarly but broader in concept and application than has been developed in the so-called 'general' shop of the past thirty years.

f. Personnel management: including line and staff as in American business and industry, and labor as well as management.

4. Methods involve a full gamut including: work experience only as a means, field study, planning, research, personnel and physical organization, illustrative aids, conferences, creative expression, . . . .

5. Physical settings as regards equipment and facilities must echo the principal elements of the technology; its development and uses of power, transportation, construction including housing and home furnishings, communication even including the use of such specialized techniques as radar, and the basic types of manufacture.

6. Historically, Industrial Arts is as old as parental training for survival among the primitives, but it is intrinsically general or educational rather than vocational because it is a core subject, and not necessarily directed at employment, any more than the study of English composition is expected to result in a career of journalism. Many other subjects such as science, art, language, music and certainly the social sciences, have long found Industrial Arts to be a valuable ally.

While the above definition of functions and scope of industrial arts is directed toward the junior and senior high schools, it must be considered that students in these schools are the people who grow up to become the citizens who run the communities and who have the accidents leading to disablement, the congenital disabilities, and later in life the problems of geriatrics.

Industrial arts will, if properly organized, provide something more than a set of skills plus such items of information as are necessary to make these skills become
effective in the hands of the acquirer. Industrial arts
provides opportunity for growth in a manner to stimulate,
and to inspire the intellectual potentialities which reside
in the practical activities of everyday life. These oppor­
tunities constitute a social organization able to make re­
adjustments as they may be required. The plasticity of the
social organization should not, however, be so plaitable as
to include debilitation of the organization, for as in the
remarks from Plato's, Republic (56, p. 72):

... the beginning is the most important part of
any work, especially in the case of a young and
tender thing; for that is the time at which the
character is being formed, and the desired impres­
sion is more readily taken.

... Shall we just carelessly allow children to
hear any casual tales which may be devised by casual
persons, and to receive into their minds ideas for
the most part the very opposite of those which we
should wish them to have when they are grown up?

The task of industrial arts, as Boyd H. Bode
(12, p. 9) stated in an address to some 200 members of
EPSILON PI TAU, is making the subject matter a gateway to
philosophy of life in an industrial society. Its function
is to prepare people to deal, not with the special problems
parceled out in our society to the members of the various
occupations and professions, but with such problems as the
domestic and foreign policies, political leadership, indi­
vidual relations with the physical universe, and the pro­
blesms of everyday living. It does not overlook differences
in talent, interests, and purpose; nor does it attempt to
form everyone in a single mold. It encourages respect for the inventive genius and tolerance for variations in opinion, while at the same time it rests upon the principle that deviations in thought or act must be based upon understandings, established by conclusive fact.

**Industrial Arts Teacher Education**

In many countries of the world the control of what colleges and universities will be permitted to teach, and the standards by which they will teach these permissibles, is vested in a central control agency in the form of either a dictator or some other governmental control. The central government of the United States exercises no such authority. The system of education in the United States is the function of the 49 states and their local governments, and even this is limited in most instances to chartering of colleges and universities. The autonomy invested in the institutions of higher education is one of the first principles of a good educational program.

The principle of autonomy is likewise the first principle of industrial arts education. It is in respect the principle from which all other fundamental principles of industrial arts stem. The principle of autonomy implies a definite purpose for existence, which in turn signifies a teaching personnel of professional standing, and adequate physical facilities.
There are various ways to determine the principles of industrial arts education. Warner (classroom lecture notes by writer) approaches the problem of principles in the form of postulates. The thinking here is that industrial arts education should be approached from (1) biological, (2) economic, (3) political, (4) cultural, and (5) historical. Olson (52-113) concludes that the principles of industrial arts education are defined in several specific functions, such as (1) orientation function, (2) technical function, (3) avocational function, and (4) consumer function. Towers, (7-131) lists eight or ten specific principles concerning the purposes, the staff, the physical facilities, the student personnel services, the student practices in teaching, and the professional and public relations.

These men, each in his way, presented well-organized thoughts in describing principles of industrial education, and from this thinking the writer has selected four major areas that are considered to convey the principles of industrial arts for purposes of this study. They are (1) Autonomy in Industrial Arts Education, (2) A purpose for Existence, (3) Teaching Personnel of Professional Standing, and (4) Adequate Physical Facilities.

**Autonomy in Industrial Arts Education.** A principle of this type was put into effect by the national system of accreditation. A system to help the officials of institutions
and the average citizen to judge the quality of educational programs offered in the nation. The ability to look at its own profession and suggest and solicit improvement was recognized by W. Earl Armstrong, Director of the National Council for Accreditation of Teacher Education, when he was instrumental in establishing a National Committee on Accreditation for Industrial Arts Teacher Education. Industrial arts education should be autonomous, but harmonious to the policy structures of the supporting educational institution. This should not be interpreted to mean that industrial arts education "Stands Alone," it is imperative to state that adequate preparation of students in industrial arts education is something a department can not do alone, any more than a State can stand by itself.

**Purposes.** Several purposes of the program as stated by Olson (50-113) were adapted to this study: (1) Orientation, in which experiences are gained which will help the student to become better oriented in an industrial society. He may do this by exploring many types of tools, materials, processes, products, and occupations. In the exploratory processes certain skills are acquired which is a primary means of promoting learning; (2) Technical purpose, indicates that industrial arts education experiences should provide as many opportunities as possible for the student to define an interest and pursue this interest to an acceptable degree of competence. The opportunity, for example,
should be provided for a student to investigate the advanced stages of any one of the woodworking industries, as: cabinet making, boat building, furniture making, or construction. This same opportunity would exist in any of the other areas offered, the graphic arts, or the study of occupational possibilities to certain related problems of industrial arts education; (3) Avocationally, industrial arts education provides opportunity to cultivate a wide variety of useful, and enduring leisure time interests and activities. As a result of these experiences such activities as, archery, leatherwork, woodcarving, stone collecting, enameling, and countless other hobbies would be developed; (4) Consumer Literacy, is a primary outcome of industrial arts education experiences. The individual can develop intelligent understandings concerning the selection and use of the products of industry. He becomes involved in studies and experiences covering a variety of problems, ranging from the production of raw materials, through the processes and problems of their manufacture and distribution to the customer; (5) Culturally, industrial arts contributes to an individuals' sense of design, appreciation of materials, and their uses. It means, that a student will learn to know the various architectural styles. He will become aware of the various furniture designs and periods of development, in the fineness of ceramic items and glassware, and in
mechanical design. Cultural development in industrial arts education helps a student grasp the meaning of his material inheritance.

**Teaching Personnel.** The professional personnel involved in the practice of teaching will for the most part determine the quality of the program. Edward Towers, (68-134) in citing the President's Commission on Higher Education, listed a number of qualities that should be inherent in a teaching faculty. His list includes (1) sound scholarship, (2) professional competence, (3) a clear concept of the role of higher education in society, (4) a broad humanistic understanding, (5) a lively curiosity, (6) a sincere interest in research, (7) an insight into motivation, and (8) a sympathetic, intelligent understanding of young people.

The American Council on Industrial Arts Teacher Education, in the 1955, report of *Superior Practices in Industrial Arts Teacher Education,* (70, p. 29) makes a similar statement although, somewhat more specific:

The professional responsibility of industrial arts education is to help students learn effective ways of channeling their available energy. To do this one must be familiar with the technological culture in which he lives; and he must be able to function or pattern his energy in ways which are acceptable to society. It is equally important that the learned patterns for expending one's energy be satisfying to the person.

John A. Whitesel (79, p. 73), writing for the Council
on Industrial Arts Teacher Education, believes that the teacher of industrial arts education

should have a good understanding of the nature and needs of the human being and of his development; he should be familiar with a sound philosophy of education as well as modern practices in teaching; he should understand the significance of life needs as a basis for deriving teaching goals; and he should understand the role of industrial arts as a contributing area of the entire educational program.

This principle of industrial arts education seems clearly defined through the roles of the professions' service, and encouraged competence of its teaching personnel. Professional services and contributions are a part of the activity of on-campus and off-campus help to groups in understanding the mission of industrial arts education. It is a chance for the profession to collect information and gain assistance to be applied toward program improvement.

Adequate Physical Facilities. This final principle involves the many facets of planning, equipping, supplying and maintaining a physical structure in existence, or one in the process of construction. Considerations should be given to all phases of construction in order to provide maximum flexibility. If flexibility of plant arrangement is not built in, then innovations must be planned to create this flexibility. Without flexibility industrial arts education loses a good deal of its primary value, that is, attention to the individual.

Mechanical facilities should be of sufficient quality
to promote the purposes and activities of the program. Supporting evidence of these facts may be had by a tour of the recently constructed secondary schools in the surrounding Ohio communities, which will illustrate the existence of large, well lighted, well ventilated laboratories, filled with students working with fine equipment. The California State Colleges are most impressive in their proliferation of new industrial arts education buildings and equipment.

**Breadth of Technical Interests and Abilities**

There has been a growing pressure toward greater professionalization for the industrial arts teacher. The demand for higher competence on the part of newly certified teachers is brought on mainly by the extreme variety and complexity of the society in which the teacher works. William Clark Trow (70, p. 119) lists four attributes of a profession: "professional knowledge, research sources, professional techniques and professional judgment." These professionalizations may be best illustrated by the listing of certain activities as carried on by the professional organizations of industrial arts.

The American Industrial Arts Association is representative of the fine work carried on by the leaders in the fields. During each annual convention held in a different geographical section of the United States, the program carries selective activity titles (18, p. 5) "Preparing
Industrial Arts Teachers to Meet the Needs of the Exceptional Learner; "Activities in Industrial Arts Teacher Education to Develop Competence in Challenging and Extending the Deviant"; "Evaluating and Improving Industrial Arts Teacher Education Facilities"; "United States Office of Educational Symposium on Industrial Education Safety"; "What Can the Industrial Arts Profession Do to Meet the Increased Demands for More Technicians and Scientists?"; "Agencies Now Working With the Atypical and What They Do."

A partial listing of positions and types of work accomplished by graduates of industrial arts teacher education programs as established by college placement bureaus in various schools should indicate the breadth of interests and abilities carried on by industrial arts education:

1. Automobile sales and service
2. General construction contract work
3. Planning and production liaison
4. Electronic sales and service
5. Small boat shipyards
6. Hardware sales and purchasing
7. Heavy machinery sales
8. Plant purchasing
9. Machine tool sales
10. Foremen and supervisors in industry
11. Technical writing
12. Manufacturing and business
13. Veterans Administration manual arts therapy
14. Draftsmen by architectural and mechanical
15. Industrial training
16. International education consultants
17. Teaching—elementary through college.
Summary

Historically industrial arts education evolved from a vocational preparation setting to its present non-vocational general education concept in which several professional areas make use of its stock of useful and practical activities. Industrial arts activities are, in general, exploratory in nature and continue to be exploratory until pupils require more specialized training in industrial vocational education. For all pupils, both boys and girls, the curriculum offers orientation to an industrial environment, occupational information, opportunity for the development of consumer knowledges and skills related to industry and industrial products, and a variety of leisure and hobby pursuits to meet the particular interests.

The broad, practical background and the actual experience in industrial areas, plus the theoretical understanding gained from formal teacher education make it possible for industrial arts education personnel to meet the demands of a free industrial society in an effective way.
CHAPTER VI

INDUSTRIAL ARTS ACTIVITIES IN OCCUPATIONAL THERAPY

In chapter I, it was pointed out that the registered occupational therapist and the teacher of industrial arts both gained similar technical skills as a part of their formal educational preparation. The concern of the writer at this point is to establish a method to identify those technical skills in industrial arts of value to occupational therapy. The method selected was a questionnaire, organized around eleven pre-determined activity areas (Appendix B). The key for the final selection of activity areas to be included in the questionnaire was the 1952 report on "Treatment Media" issued by the national office, American Occupational Therapy Association (Appendix A). This report was a survey of clinical affiliations to occupational therapy schools. It asked for types of activities being utilized in their treatment programs. A similar technique was used for this study, except the writer selected practicing occupational therapists as judges and used the occupational therapists degree granting institutions as a base for selection.
Questionnaire Format

The organizational pattern of the data gathering instrument was that of specific requests for facts about the eleven predetermined treatment media. The survey instrument was divided into five parts: the Introductory letter, Facts about the questionnaire, Part I; Description of the treatment media, Part II; Treatment media considerations, Part III; and Part IV, General opinions (Appendix B). The introductory letter merely stated why a questionnaire was called for, where the study was being conducted, and an expression of appreciation to the therapist for the time taken to return Part III completed. Part I was an explanation to the therapist practitioner as to why he had been selected, the purpose of Part III, and how it was organized. Major reason for Part I was the establishment of a better means of communication, particularly in the light of the many terminological variations in the two professions involved. Part II was an attempt to standardize the language of the activities by suggestions of specifics in each area. These suggested specifics, or actual things done in each area, were for the most part taken directly from the 1952 Final Report of the National Committee, of the American Occupational Therapy Association, on "Treatment Media." Part III of the questionnaire contained eleven sub-parts organized into a check sheet which requested the
occupational therapists to answer each specific question by checking the appropriate space under an activity heading. Sub-part I, Part III of the check sheet inquired about facts related to the therapists' undergraduate educational experiences. This information was composed of ten specific questions related to skills received, where they were received, and by whom. An eleventh question requested the therapists' opinions on the degree of skill that an effective therapist should attain in each of the eleven treatment media. The degree of skill was indicated by an inverse numeral rating system with the number one as high and five as low. Part IV consisted of four general opinion questions. Question one in Part IV inquired whether the eleven treatment media mentioned in the study were representative of those practiced in occupational therapy. The second question in this section was designed to find out how much skill each therapist should have in relation to finished products. The third question was concerned with the occupational therapists' educational qualifications to do vocational testing and counseling. The last question in Part IV requested information relative to teaching theory, that is, Should occupational therapists receive some teaching theory?

The questionnaire method of gathering data has certain limitations. First, non-respondents to a questionnaire frequently have less favorable data to report than the
respondents. Fifty-five percent of the 324 practicing registered occupational therapist in the United States, who graduated between the years of 1952 through 1957, from one of the twenty-seven schools included in this study, returned the questionnaire. Another of the recognized weaknesses of the questionnaire was the varied subjective interpretations which respondents gave certain of the inquiries. As an example, teaching theory was interpreted to mean the "clinical affiliation" that is required of all therapists. Others believed that it was "on the job training" that gave them this experience. However, in the preparation of the questionnaire, the imperfections of language as a means of communication were carefully weighed and all possible effort within the capabilities of the writer was extended to convey instructions and ideas clearly.

Response of the Registered Occupational Therapists

Analysis of the 185 responses impressed the writer with the fine professional attitude displayed by the personnel practicing occupational therapy. Forty of those who answered spent a considerable amount of time writing out in detail explanations to answers in the questionnaire. Many expressed a sincere desire to be informed of the final results.

Figure 3 shows that 100 percent of the respondents received some experience in woodworking and leather work.
Proportionately high was ceramics with 97 percent, drawing and design with 93 percent, and metalwork with 88 percent. Least experience was in the area of electricity, received by less than one percent of the 185 occupational therapists. Close upon electricity fell the area of upholstery and furniture refinishing with approximately one percent having had this experience. There was a 16 percent acknowledgment of experience in industrial conceptions. Graphic arts was taught to some 81 percent, and 77 percent received instruction in jewelry and lapidary skills.

Figure 4 indicates a rather low response. This was perhaps due to the critical nature of the question and secondly to the individual therapists' lack of sufficient evidence. Many believed they knew too few of their colleagues to make a judgment. The question was originally intended to cite specific examples of follow up on the 1952 Treatment Media Study, Appendix B, but was dropped in view of insufficient response. It is significant to note, however, that a fairly representative percentage indicated weakness in the areas of upholstery and furniture refinishing, 51 percent, industrial conceptions 53 percent, and in the fundamentals of electricity, 55 percent. In connection with this question one therapist remarked that 1956 was a year when most graduates received least experience.

Figure 5 shows that the major item taught by the occupational therapy departments was leatherwork, with
Figure 3. The treatment media experiences received in undergraduate study at schools of occupational therapy. N=185, number of reporting therapists.
Figure 4. Skill deficiencies of Registered Occupational Therapists since 1952. N = 185, number of reporting therapists.
about 62 percent of the therapists receiving instruction here. This indicates that about 38 percent of all therapists reporting had received their educational background, in this treatment media, in some department other than occupational therapy. Table 1, Chapter IV, shows that approximately seven of the twenty-seven schools reporting utilized industrial arts departments for acquisition of knowledge in the skills; the remainder were taught by fine arts or occupational therapy departments.

Figure 6 presents evidence that 52 percent of the reporting occupational therapists received their educational experience in ceramics outside the occupational therapy department, 33 percent in plastics, 70 percent woodworking, 56 percent in metalwork, 38 percent in leatherwork, 50 percent in graphic arts, 65 percent in jewelry and lapidary, and 62 percent in drawing and design. Very little experience was reported in other areas.

Figure 7 illustrates the ideal background preparation of an occupational therapist. It was, as several therapists indicated, in line with present curriculum theory because as one therapist put it: "The occupational therapist should use all media--at present I have a patient who is a bookbinder, and we use bookbinding, although I know nothing about it." Another comments:

Occupational Therapists can't learn all crafts proficiently in school or on affiliation. Furthermore
Figure 5. Treatment media taught in the department of occupational therapy. N = 185, number of reporting therapists.
Figure 6. Treatment media that was taught in departments other than occupational therapy. N = 185, number of reporting therapists.
Figure 7. Treatment media recommended as ideal background preparation for occupational therapy students. $N=185$, number of reporting therapists.
it is not necessary. It is necessary in our work to become efficient as "step by step" teachers on several crafts depending upon which area we are working.

There was a note running through all answers that ideal preparation meant more than highly advanced skills in each area. It meant a broad and varied educational experience in as many treatment media as possible. One-hundred-seventy-five of the 185 reporting occupational therapists believed that ceramics is ideal background, with 91 percent wanting woodwork, 70 percent plastics, 80 percent metalwork, 90 percent leatherwork, with 70 percent voting for graphic arts. It was believed by 41 percent that upholstery and furniture refinishing was desirable with 40 percent choosing the fundamentals of electricity. There were 60 percent who indicated jewelry and lapidary experience as good background and 88 percent showed interest in drawing and design.

This connotation of a broadly skilled person able to cope with almost any situation causes the writer to support the philosophy of Corlatta Wells, Division Editor, of the American Occupational Therapy Association Journal. In a recent article she introduced what this writer considers a strong case for specialization. It was her contention that occupational therapy has, in this period of scientific innovations and constantly increasing bodies of organized knowledge, failed to tuck in its collective skirt sufficiently to cover the necessities of the profession. She
pointed out that professions of comparable status have accepted the philosophy of specialities. In so doing, these professions have made available advanced educational possibilities, and expected their personnel to function with highly specialized competence. Some occupational therapists on the other hand (note comments under discussion of figure 11) indicate that competence in a skill is "frustrating." Some said that the therapist who was too skilled might lose patience with those who were receiving the instruction.

Miss Welles (75, p. 290) believed that

... The development of specialization as a concept and as a part of our educational philosophy and system will greatly increase the value of occupational therapy. It will enable employers to build a staff with specific qualifications for particular positions. It will guide universities in the development of curricula designed to meet the needs of the field and to qualify graduates for particular types of work. It will assist individuals in planning and carrying out their own plans for professional growth as well as increase their worth to their employers.

This belief was supported by another of the leaders in occupational therapy, Mary Reilly (60, p. 297), who, speaking about the concept of "treating the whole man," said that such a concept

... implies that we are, or could, developing competencies to treat all the needs of man. This might include the multifaceted spheres of the physical, psychological, social and economic, not to mention the spiritual. No other profession I know of has such an all comprehensive hunting license ... The area of concern which would appear to be of special interest to us is "work" or, if we choose to call it by its more generic term "activity".
Although the broadness of ideal preparation as indicated by the therapists is highly desirable, certain limitations should be recognized. These limitations relative to this study and in the light of current curricula practices in the schools of occupational therapy would entail specialization in five specific areas: (1) ceramics, (2) woodworking, (3) metalwork, (4) leatherwork, and (5) drawing and design. The illustrations of Figures 7 and 8 point out that, although, the therapists believe that all eleven of the treatment media mentioned in this study are essential, the schools of occupational therapy are not giving them the necessary experiences. It would be well, perhaps, for the schools to offer more variety in treatment media. This would then give the students a choice of specialties in the treatment media areas, as well as a specialty in a specific area of occupational therapy.

The sixth question on the questionnaire asked the therapists which treatment media areas were represented most in their treatment program. It was aimed at an attempt to reflect those areas most utilized by the therapist in their daily work. In Figure 8, Part A it will be noted that, although negligible percentages are registered for most areas, there was someone using all eleven of the skill areas mentioned in the study. Leather work seems to have attained the greatest use since 60 percent reported it as a skill most often used in their patient treatment programs.
Woodworking ranked second with a 50 percent, and ceramics running a slow third at 30 percent. The remaining indications are insignificant.

Figure 8. Parts B and C show an attempt to point out those subject areas in which occupational therapy might reap the greatest benefits from an industrial arts education course. Questions seven and eight were asked, and the therapists in their professional zeal to get a point across made several significant comments, relative to who should perform the actual teaching of skill areas for the occupational therapy student. One therapist says:

An ideal set up to questions 7 and 8 would be a combination of teaching of the industrial arts and occupational therapy programs. The industrial arts to give a good solid background in the subject field and the last few weeks devoted to applying these facts to the therapy programs.

Another therapist put it this way:

As an undergraduate I was enrolled in a woodworking class, but the entire term was spent dwelling on design; my husband had to teach me the proper use and care of tools! As students we were subjected to long repetitious lectures on "theory" which gave me no knowledge whatsoever. Because each years schedule was jammed with such important sounding items (the occupational therapist theory aspect) the practical aspects (the occupational therapist's daily trade) were crowded completely off the agenda. The courses I have marked as taught outside the occupational therapy department were handled by art professors, concerned only with the aesthetic and not with problems of unit construction or tools of the trade. I certainly feel that industrial arts instructors are desperately needed in O.T. schools--my only thought--why wasn't this idea pushed sooner?
Figure 8. Composite of questions 6, 7 and 8 on the Questionnaire. N = 185, number of reporting therapists.
A third therapist comments: "Point well taken--let the people who know do the teaching." A fourth therapist emphatically states: "No occupational therapist that I know of can possibly teach the basic material in these courses as well as an industrial arts teacher."

Other comments relative to questions seven and eight

I see no reason why the arts and crafts skills should not be taught entirely outside the occupational therapy department itself. The occupational therapy department's chief job in this area is to relate and adapt these skills to the specific medical and psychiatric needs of patients. But the occupational therapy department could well be consulted by the industrial arts teaching staff on special emphasis that would benefit the occupational therapy student.

An Ames, Iowa, therapist remarks:

It is my feeling that only the industrial arts instructor or specialist should teach the basic skills due to their more thorough knowledge of the activity. Then, I feel, the occupational therapy instructor should correlate the skill and the therapeutic use of it so that the student occupational therapist can really see the full purpose of the activities.

A Portland, Oregon, therapist points out:

Specific skill in any of these media could be taught by anyone so qualified in industrial arts--it has been my experience that such persons lack background themselves in their own fields and this proves disappointing when classes are taught more on a high school level and not on a college level.

A 1954 graduate says: "In my experience, industrial arts people have no idea of the therapeutic use of whatever they are teaching. Therefore, occupational therapists should
instruct in all possible crafts." An eastern university graduate believes:

I had my basic woodworking in industrial arts, which was an excellent course. I contend, however, that much value would be derived by bringing it within the jurisdiction of the occupational therapy department, because of its very wide use in physical disabilities. An occupational therapist skilled in woodworking, would be able to do the correlation of techniques to disabilities better than a non-medically oriented person could.

Lastly one of the male registered occupational therapists has this to say about who should teach certain treatment media: "... such activities as ceramics, graphic arts and design should be taught by the art department, because these are creative activities in the strict sense of the word."

These reflective comments carry serious implications for both industrial arts and occupational therapy and are listed in Chapter VII. The over-all-view of the two questions is presented in Figure 8, Parts B and C. Figure 8, Part B, shows that 60 percent of the reporting therapists believe that leather work should be taught in the occupational therapy department; and 50 percent feel the same for ceramics, while 40 percent want woodworking as an occupational therapy taught subject. Thirty percent want jewelry and lapidary taught in the occupational therapy department with 30 percent indicating that plastics, drawing and design should also be there. There was slightly over 30 percent reporting in favor of metalwork directed by an occupational
therapist, while 30 percent want graphic arts in this category. Those interested in teaching industrial conception is reflected by about 20 percent, while upholstery, furniture refinishing and the fundamentals of electricity attract the least attention, with about 10 percent each, as subjects to be taught by occupational therapy departments.

A comparison of the two Parts B and C, of Figure 8, indicates that all but two of the eleven treatment media areas deemed essential to effective occupational therapy (see Figure 12, p. 187) should be taught by industrial arts education. Leather work and ceramics seem to be the two areas that most therapists favored as the teaching prerogative of occupational therapy.

In view of the findings in Figure 8, Parts B and C, and the physical facilities available, plus the qualified personnel to teach the area of concern to the occupational therapist that of "activity," industrial arts education seems well suited to this task. Industrial arts education taught courses would in the writer's opinion broaden the outlook for occupational therapists. The concerns of industrial occupations would take the place of the "craft stigma" often associated with occupational therapists. Material considerations and practical design would be emphasized on the basis of individual interests and needs. Expertness in craftsmanship would be pointed out to show a therapist what the finished product should look like. Practical
applications of running a shop situation would help to broaden the therapists flexibility as an administrator.

In Figure 9 the general consensus of those responding seemed to be that occupational therapists were adequately prepared, without need for further skills. Evidence was noted however of considerable variations in the statements as to what preparation in skills really meant. This conflict of statements concerning the question of adequate preparation for a therapist was also discovered by the national committee in 1952, when their treatment media study was made. (Appendix B).

A 1954 graduate in essence believed that all an occupational therapist must have in preparation is an "interpersonal relationship." She says:

... it has been my experience that the most important media is the interpersonal relationships. Each year that I work in occupational therapy I find myself using less and less in the craft areas.

Another emphasized that basic fundamentals in crafts are what an occupational therapist needs and expresses it in this way:

My feelings are that occupational therapists should be familiar with procedures to be taught and their therapeutic value, but I see no need for the therapist to be an accomplished craftsman. With the basic fundamentals learned at school, further knowledge can be gained from books.

Vocational and rehabilitative skills were stressed by one therapist when she said:

As for what we need in the way of instruction, I feel far too much emphasis is placed on piddling
Figure 9. Treatment media in which occupational therapists need additional skills. N = 185, number of reporting therapists.
and not nearly enough emphasis is placed on the vocational and rehabilitation problems of the patient.

However, in a statement from an Eastern University graduate there is the belief that "... activities are merely our 'in' with our patients, not the tools of the trade--these tools are human relationships--we are much more than just a teacher of skills". Leaders in the field do not fully agree with this point of view, for in a recent issue of the American Journal of Occupational Therapy (60-298), Mary Reilly, Doctoral Candidate, University of California at Los Angeles, made this point:

... A characteristic of a mature profession is its pride in and its vigorous use of its media. The concepts from which we view our media need desperately to be broadened. If we are to establish a rational basis for occupational therapy, we must speculate on the meaning of work activity in our society and in the personality structure of man.

In light of current teaching practice another reporting therapist believed that undue time was spent learning how to run heavy equipment. It was her opinion that:

"... perhaps we should have a little more practice on handling and care of the hand tools, which we now use all the time." From another therapist came the statement: "I find that most therapists who consider themselves deficient in a particular area will develop it." In the same vein, one says:

... These skills do not represent the core of the problem. I feel that the use of psychology, and general medical knowledge plus the therapists' own
personality is more important. An occupational therapist with any enterprise picks up a lot of her skills, "on the job"!

A therapist working in a psychiatric situation found that

... we do not have enough training to be of real value to the doctors. Doctors are not interested in crafts—they are merely a medium through which we obtain our goals. What we need is theories and methods of group therapy, and the psychology of human behavior.

In contrast to the above statement another therapist indicated a need for greater and better application of skills to the direct subject matter of therapeutic treatments, that is: "Not enough stress is put on muscles, functions, and the application of therapy using the learned techniques of the skills." There were several straight and to the point comments as: "Registered occupational therapists need more skills PERIOD!", and "More trial and error needed in school learning and actual teaching techniques."

Alice C. Jantzen, (38, P. 318) Fellow of the National Foundation for Infantile Paralysis, 1955-57, in a recent article published her views concerning the use of treatment media. Miss Jantzen said:

The occupational therapist uses as his therapeutic media a wide variety of activities and occupational skills. Included in these are shop techniques, various textile skills, homemaking skills, recreational activities and occupational arts and crafts of various types. Since these activities form the basic treatment techniques in occupational therapy, it is essential that each therapist have sufficient training in each of these skills so that he is able to relate them to the patient as an individual and to his particular medical problems and, through the medium of these activities, help the patient to
return to health. Occupational therapy exists as a specialized medical profession only because of these specialized "tools" of treatment, and without them the profession's reason for being ceases to exist.

Figure 10 shows the responses by the therapists to the question on suitability of the eleven treatment media areas for use in recreational therapy, but the many questions concerning proper identification of the term and the many remarks about variation in program uses of recreational therapy caused the writer to conclude that insufficient instruction had been given to this item. The figure illustrates however, that over 50 percent of the reporting therapists used ceramics and leather work in their recreational therapy programs. About 48 percent utilized jewelry and lapidary skills in their programs, while 45 percent used drawing and design. Woodworking, plastics, metalwork, and graphic arts were not used as often, but showed considerable use in that 30 percent used woodworking and graphic arts, and about 28 percent used plastics and metalwork. Note here also that while upholstery and furniture refinishing had consistently received very low scores throughout the rating system, it was used as a recreational therapy media by 25 percent of the reporting therapists.

Data gained from Figure 11 is in answer to the question concerning the degree of skill that an effective occupational therapist should gain. The purpose of the question was to establish possible guide lines of utilization
Figure 10. Treatment media most appropriate for utilization as recreational therapy. N = 185, number of reporting therapists.
Figure 11. The degree of skill that an effective occupational therapist should attain in each of the treatment media. Numbers to left of the chart are in inverse order with 835, as the lowest rating, and 162, as the highest rating.
for the eleven stated treatment media areas for industrial arts education. There was a similarity to the over-all pattern, that is, there were high ratings in leatherwork, ceramics, and woodworking. There were several remarks indicating that the eleven areas did not represent all the treatment media used in occupational therapy. The omission of weaving was considered very important by the therapists. In fact, one therapist warned: "In listing activities you omitted many areas dear to the occupational therapist--the needle skills, sewing, embroidery, weaving, and knitting are skills widely used."

In organizing Figure 12 to show the degree of skill that an occupational therapist should attain in each area, a relative value was assigned to each of the eleven skill areas. An inverse numerical rating system of one to five was used. The number "1" represented the highest rating and number "5" showed the lowest values. Numbers "2", "3", and "4" were indicies of values between the high and low, so that had all 185 respondents checked ceramics with the number "1" the highest value, a total score of 185 would have been the result. Conversely, had they all rated ceramics with a "5" a lowest value of 925 would appear on the graph. However, since only 167 therapists rated the activities, this figure (167 x 1) represents the best rating, and 835 (167 x 5) the low.
Figure 12. General Opinions.
Statement of Questions
1. Are the selected skill areas representative of experiences essential to effective occupational therapy?
2. Should occupational therapists be able to turn out a finished product before attempting to instruct a patient?
3. Should a therapist attempt vocational counseling with the present background of educational experience?
4. Do you believe that occupational therapists should receive some teaching theory?
The chart shows that woodworking with a 322 score is the area in which the occupational therapist should attain the highest skills. The fundamentals of electricity, with a rating of 56.4 was considered least needed in the attainment of professional skills.

**General Opinions**

Opinions are usually valuable in an open discussion but when limited to a "yes" or "no" answer, often will not reveal the true feeling of the person giving the opinion. Figure 12 offers such a possibility. The material presented in this figure is in response to the four general opinion questions in which information was asked for; (1) Are the eleven treatment media areas selected, representative of experiences essential to effective occupational therapy? (2) Should occupational therapists be able to turn out a finished product before attempting to instruct a patient? (3) Should a therapist attempt to do vocational counseling with the present background of educational experiences? (4) Do you believe that occupational therapists should receive some teaching theory? These questions were answered by checking either a "yes" or a "no." Cognizant of this limitation it is felt however, that certain valuable data are contributed to the purpose of this study. Note for example, the comments listed in connection with the fourth question of Part IV.
The first therapist to reply to the question, Should all registered occupational therapists receive some teaching theory?, stated: "I thought they all were--however, some exposures to educational theory classes seem far removed from the working world as I have met it." Others made the following remarks or statements: ". . . at least some of the psychology." One therapist thought anyone who was well taught could emulate the teaching techniques and, therefore, would not need theory if ". . . they themselves have been well taught, and are aware of this. Teaching theory is unnecessary and, as given in the many education departments is a big waste of time to anyone." In other cases the therapists believed that teaching theory was being disseminated in the departments of occupational therapy, and so stated that theory was not needed in more quantity than was presently received, and the occupational therapy department should handle this area. It is a specialized type of teaching. I would shudder to see the occupational therapy curriculum bogged down with the "methods" courses which in some parts of the country are strangling the teacher education curriculum.

In a completely opposite point of view another therapist believed that no attempt was made to relate the scientific knowledge gained to the use of this information. She said:

The last reference to last question in Part IV I cannot emphasize strongly enough. Even as an undergraduate I could see no correlation being made between our learning a skill and methods of passing out knowledge to another. Most of my electives went into teacher training, a move I'll NEVER REGRET!
The analysis of answers presented by the reporting therapists indicates a rather decisive affirmative picture in favor of therapists receiving some selected educational theory. In the light of the immediate comments and those received in response to questions seven and eight and reported in Figure 8 Parts B and C, certain basic professional skill courses should be organized in such a manner that the techniques of how to do the media will be unified through the theory of instruction. The writer feels that a method of this type would make it possible for the student to master the skill area as he learns how to teach.

Relatively few remarks were made in relation to Question one on Part IV of the questionnaire. It was in most respects either a matter of considering the professional skill areas a part of the essential treatment media, or not a part. Figure 12 graphically portrays that there were 139, or over 70 percent, of the registered occupational therapists who positively believed that these eleven treatment media areas were representative of an effective program. Thirty-eight, or 20 percent, of the therapists said, "no," and eight made no reply.

Question two, inquiring into the registered occupational therapists' ability to turn out a finished product, revealed that 70 percent of the reporting therapists answered, "yes," with less than 20 percent indicating a "no"
answer. Seven therapists declined to reply. Relevant comments to this question follow:

1. "A perfectionist gets frustrated by poor work of patients."

2. "We do not work with patients for a 'beautiful or well made product,' but for what it will do for that patient emotionally and physically. I think the occupational therapist should know, however, what a good 'end product' should be."

3. "... in my field of working with chronic psychiatric patients low skills alone are necessary. Too much talent would just frustrate you."

4. "Many times when a therapist is too skilled she doesn't have as good an understanding of the patients' problems with a new craft."

Answers to question three concerning qualifications of registered occupational therapists to do vocational counseling with current educational background presented a positive picture in a negative way on the chart of Figure 14. That is, about 81 percent of the people reported that the therapists should not attempt to do vocational counseling. About .08 percent felt that vocational counseling was being carried on successfully. Eight therapists refused to answer. Some comments seem worthy of mention:

1. "The occupational therapist is equipped to test certain areas of work abilities and to work with a vocational
192

counselor—remember we are being taught the 'TEAM APPROACH'—
we seldom have the time or training to cover the entire

gamit of the patients' needs."

2. "What is pre-vocational evaluation but the first
step in vocational counseling."

Question four, Part IV received 80 percent affir-

mative answers in reply to the belief that registered occupa-
tional therapists should receive some teaching theory, and

a negative report of 10 percent, with eight failing to indi-
cate either way.

Summary

It was found through examination of facts presented

by 185 registered occupational therapists, who graduated

from twenty-seven universities and colleges in the United
States, that all received experience in three or more treat-
ment media. These treatment media were pre-determined by

analysis of activities considered essential to effective

occupational therapy. The 1952 final report on treatment
media, by The American Occupational Therapy Association was

the primary key for this selection. The treatment media
selected were ceramics, drawing and design, fundamentals of
electricity, graphic arts, industrial conceptions, jewelry
and lapidary, leatherwork, metalwork, plastics, upholstery
and furniture refinishing, and woodworking. These were
found to be representative of educational experiences
essential to effective occupational therapy, see Figure 3. Strong evidence pointed to the fact that all treatment media except two were taught by someone other than a qualified occupational therapist. It was the consensus of opinion that industrial arts education staff members were most qualified to teach all treatment media areas mentioned except leatherwork and ceramics. Nearly all therapists reporting felt they were adequately prepared in treatment media knowledge. If some doubt existed as to personal qualifications it was stated that such deficiencies could and usually were made up, "on the job," or by making special personal effort to gain the necessary information. A large majority of the reporting registered therapists felt that "teaching theory" was essential to their practice.
CHAPTER VII

SUMMARY AND CONCLUSIONS

This study was undertaken in an effort to ascertain the contributions that industrial arts education can make to the education of occupational therapy students. Further amplification of the major purpose of the investigation indicates an instrument to promote commonly understood facts as regards the mutual concern of occupational therapy and industrial arts education. Scope of the investigation was limited to twenty-seven colleges and universities in the United States offering a degree in occupational therapy. A detailed examination of the curricula of each of these schools was made to establish what types and how many industrial arts education activity subjects were being utilized. In conjunction with this survey a final report to the national office of the American Occupational Therapy Association called "Treatment Media" was used to establish the content of the data-gathering instrument. The questionnaire, containing fifteen major questions, was distributed nationwide to 321 registered occupational therapists. Twelve registered occupational therapists who were graduates of each of the 27 schools, over a six year span, beginning in 1952, received the questionnaire.
Historically, it was found that in occupational therapy and industrial arts, the use of skill activities can be traced back to very early recordings. The formal use of industrial arts as an educational subject and its emergence as a profession occurred about 100 years ago, and that of occupational therapy approximately 40 years ago. Industrial arts education evolved from a vocational preparation setting to its present non-vocational general educational concept in which several professional areas make use of its stock of useful and practical activities. Occupational therapy likewise started its professional life in the realm of work-day life as "reconstruction aids," then to the art of nursing and now to that of teacher, or as those in the profession prefer to call it, therapist.

Educationally, industrial arts education is geared to prepare professional teachers to help carry on the ever enlarging sphere of school responsibilities. It does this through established programs in the institutions of higher education of the nation. Industrial arts education is distinguished by its unique activity aspects of an exploratory nature, which provide students with practical experiences of an industrial nature. Occupational therapy is a medically oriented professional preparation. It is abundantly endowed with science subject matter, but also includes experiences in the practical aspects of occupations. In addition,
the therapists' role as a teacher of patients, certain methods and procedures of teaching are usually a part of every occupational therapy curriculum.

Chapter IV, Preparation of the Therapists, revealed that the average therapist studied in an institution of higher education for a period of not less than four years. During these four years the therapist spent not less than 39 semester hours in the study of theoretical subjects, i.e., biological sciences, social sciences, theory of occupational therapy, and general medical subjects of neurology, orthopedics, and psychiatry. He also spends not less than 25 semester hours in the study of "treatment media" or skill activities. The remaining 60 semester hours of the usual 124 semester hours required for the Bachelor of Science degree is spent in general preparation. After having earned the Bachelor of Science degree the therapist must then take an additional 9 months of "clinical affiliation" at an accepted medical center.

The nature of industrial arts education offered evidence that occupational therapy treatment media were basically the same as some of the skills required of an industrial arts teacher. The basic preparation as teachers of practical occupational activities was also similar. In addition, through written comments from therapists and through the survey of school catalogues it was found that
industrial arts education personnel often take additional work in the area of occupational therapy to become registered occupational therapists.

Response to the questionnaire by 185 therapists or 55 percent of the total number contacted illustrated an over-all-view of the following:

1. The treatment media skills most often received in undergraduate experiences throughout the 27 schools surveyed were: ceramics, woodworking, metalwork, leatherwork, jewelry, lapidary, graphic arts, drawing and design.

2. In the way of skill deficiencies since 1952, little was noted by practicing therapists, but those who did make comments indicated the areas of industrial conceptions, fundamentals of electricity, upholstery and furniture refinishing as areas needing additional work.

3. Most occupational therapists felt that the area of leatherwork should be taught by an occupational therapist in the department. Furthermore they indicated this subject was taught most frequently by the occupational therapy departments. All other areas were considered areas to be taught by the most qualified.

4. Over 50 percent of all therapists questioned concluded that industrial arts education should handle the teaching of all treatment media areas except leatherwork.

5. The majority of reports indicated that all treatment media areas mentioned should be included as ideal
background preparation. Those most often checked were: ceramics, plastics, metalwork, woodwork, industrial conceptions, jewelry, lapidary, drawing and design.

6. Ceramics, woodworking, and leatherwork were basically the most used treatment media in all patient treatment programs.

7. Generally it was considered by the therapists that their current preparation in most treatment media was adequate, inasmuch as very few felt that they needed additional skills to carry on their work. There was however, a feeling that the greatest skills should be developed in ceramics, woodworking and leatherwork.

Conclusions

Implications for Industrial Arts. In Figure 12, Chapter VI, it was reported that 80 percent of the therapists believed that all eleven of the treatment media areas were representative of an effective occupational therapy program. This implies that a therapist should receive some experience along these lines in his formal education. Also shown, Figure 8, Part C, was the report that industrial arts education should teach all these media areas, except ceramics and leatherwork.

The current industrial arts teaching practices, as recognized by the investigator, does not offer educational
possibilities that would involve all the skills deemed necessary to occupational therapy by this study; nor are most industrial arts educational facilities adequate to conduct a program of this nature. It is the conclusion of the writer, therefore, that if industrial arts educational faculties are going to meet their professional obligations, (1) they should adapt the instructional programs to occupational therapy students' needs. Adapt, as indicated here refers to an intensified instructional program, stressing the basic foundations of instructional methods and skills involved. This might be accomplished through the commonly thought of "general shop" approach. A limited course of this nature is offered at the Ohio State University, where the students receive experience proportionate to the physical facilities. Where facilities are lacking they should be provided. It is further suggested that the adaptive process, (2) include an instructional technique in which occupational therapy students receive instruction on how to demonstrate and present the knowledge and skills acquired. The San Diego State College Industrial Arts Department employs a student demonstration technique, in which given phases of course content are assigned to the students of a class. The instructor explains what his ideas are relative to a good demonstration, good procedure to use in making presentation, how to use notes, and suggests various methods
of preparing instructional materials. In addition, the instructor explains the use of the tape-recorder, used as an aid for the student, before and during the student presentation. Also explained is the use of a check sheet or evaluation sheet, prepared by the instructor in advance, which is passed out to all members of the class who then evaluate their peers.

On page 181 there appears a comment by a practicing therapist that more practice in handling and care of hand tools should be emphasized. Page 174 includes a second comment to this effect. The occupational therapy professional literature is filled with the necessity of knowing how to use and care for hand tools proficiently. Observations of occupational therapy programs and interviews with practicing therapists by the investigator again found emphasis on this point. The therapeutic nature of occupational therapy precludes the thought of not using hand tool skills. Consideration of these statements implies that industrial arts education personnel involved in the education of occupational therapists place more emphasis on the development of hand tool use and care. In so doing, a greater degree of craftsmanship could reasonably be expected of the students. Figure 13, illustrates that therapists should attain a greater level of skill in several of the treatment media areas mentioned. Intention is not
to produce artisans, but to attain sufficient skill so that an acceptable finished product may result, note Figure 12, Question 2. It can be seen here that over 80 percent of the study sampling indicated that a therapist should be able to accomplish a finished product before attempting to instruct a patient.

Craftsmanship might readily be realized by encouraging occupational therapy students to undertake simple projects with a relatively short completion time. This technique would also contribute to a broader range of skills, as advocated by Mary Reilley (60, p. 289). The encouragement of students to undertake simple construction objects would provide possible avenues to student construction and experimentation with special adaptive equipment utilized in their therapeutic programs. In other words, make it possible through sound instructional procedures for the students to develop their own class projects. Such a plan would in itself provide a strong incentive for learning by relating the learning processes to the students' special interests.

The broad scope of occupational therapy activities, the many people of all walks of life treated in its programs and the individual opinions of therapists all tend to illustrate the concept of broadening the experiences of the occupational therapy students. This is ably stated by
Mary Reilly (60, p. 298), and the writer believes it bears directly on this point:

... A characteristic of a mature profession is its pride in and its vigorous use of its media. The concepts from which we view our media need desperately to be broadened. If we are to establish a rational basis for occupational therapy, we must speculate on the meaning of work activity in our society ... .

Figure 7, in which therapists attest to the desire for a wider preparation, presents a somewhat limited picture of the total program. When the technical information that is a part of each of the skill areas is also acquired, the therapist begins to assume a broadened view of the media. In conjunction with each of these skill areas there lies also the potential of consumer literacy. The student receives a learned appreciation of materials, from the raw products through the manufacturing processes, to the distribution of the finished product to the consumer. The student learns to fit materials to a design along with certain consumer literacy skills of good mechanics. It follows, therefore, (5) that special emphasis should be placed upon the locations of supply houses and the types of supplies stocked, that would be of interest to a therapist on the job. A comprehensive note book or file would be useful in this respect for the student.

A sixth (6) point of implication indicates that students of occupational therapy should be encouraged to read.
observe, and evaluate various types of industrial management plans. The literature of the profession emphasizes the pre-vocational testing responsibility of the therapist, but little pre-job experience is availed to the student. Selected and guided study of occupations, through the types of factories, mills and manufacturing concerns that supply the therapist with patients would be beneficial. Accomplishment of such activity by industrial arts education faculties could take place through conducted tours, informational visual aids, and by using special lecturers. Special emphasis should be given to the class organization, utilizing a student personnel management plan similar to that found in occupational therapy centers, or rehabilitation centers, or industrial centers. A student would then be able to share in the planning of course activities, in the management of personnel and in the maintaining of equipment.

In the seventh (7) implication effort should be made to point out the avocational interests and possibilities that are presented in industrial arts educational activities. Chapter III, makes repeated references to the increasing geriatric population of the United States, and the necessity for rehabilitation. The severely disabled and the congenital deformities are other rehabilitative problems that would benefit from the avocational interests that could be conveyed through the industrial arts educational
programs for occupational therapy students. The implication for industrial arts education lies in pointing out these possibilities, and aiding the student in acquisition of basic skills involved.

Industrial arts educational personnel should (8) make a concerted effort to avail the services and knowledges of the specialities at their disposal, to the students in departments of occupational therapy where and when feasible. Such services should proffered, and an active interest taken in the proceedings of the occupational therapy departments. Industrial arts educational personnel should (9) instigate procedures in the formulation of a joint national committee to act on matters of interest to occupational therapy.

The formulation of such a committee might possibly be established through the American Occupational Therapy Association and the American Council on Industrial Arts Teacher Education. The functions of this committee would be primarily communication, but might involve consultancies and active participation in statement of policy matters.

There is additional planning needed in point (10) to establish a course of study offered by industrial arts for occupational therapy students. The course should involve the eleven treatment media areas mentioned in this investigation and involve not less than 12 semester hours of
college credit. The skills and methods procedures should be integrated, this would, as certain therapists mentioned, give the student basic skills in both presentation and manual ability.

**Implications for Occupational Therapy.** On the basis of data collected, the following indices of action seem pertinent to occupational therapy. Table 1 revealed a dissimilarity of preparation in the treatment media areas for occupational therapy students. Figures 5 and 6, also imply inconsistencies in student preparation for the therapist, as does the several comments relative to the use of "interpersonal relationships" rather than the use of treatment media areas. The above beliefs and the conception that a therapist should have low skill abilities in order to ward off personal frustrations in their instructional programs cause the writer to believe (1) that a more consistent development of the practical "tools of the trade" approach in the basic preparation of the occupational therapy students is needed. It might in some respect require increased emphasis on this important phase of the actual practice. It might require specialization in several of the treatment media activities rather than an attempt at a "jack-of-all-trades" approach. It should (2) require a more critical selection of skills and a re-evaluation of the interpersonal relationship methods of treatment.
Attention should be directed to (3) a more complete understanding of "teaching theory" and the important relationships it has to occupational therapy. In its definite role as an area of special teaching, the schools should be alert to the special aid that can be given by leading educational specialists. Figure 14 illustrates the importance of teaching theory, showing that over 80 percent of the therapists questioned indicated that teaching theory should be a part of the therapists' experiences.

A final point (4) shows that attention should be directed by the occupational therapy profession toward the development of a national liaison committee to act through the American Occupational Therapy Association and with the American Council on Industrial Arts Teacher Education. Such a committee could operate much in the same manner as the Ohio State University inter-university advisory committee on occupational therapy. This committee is composed of members and deans of the Department of Education, Department of Physical Education and a medical representative of the Ohio State University. Active participation in the American Industrial Arts Association activities by the practicing therapists should be encouraged.

Implications for Further Research. The complexities of American society are profoundly affecting the individuals that make up this society. Individuals strive to understand these complexities, but in the last half century organized
knowledge has moved forward so rapidly that it is no longer possible for a single individual to be fully competent in even one branch of this fund of knowledge. Research however, is a method of enlightenment which would aid an individual to come closer to understanding this fund of knowledge. Occupational therapy has in this sense the responsibility to search out facts relevant to implications of this study, as does industrial arts education. It is in light of this thought that the following suggestions for further research are submitted.

1. An evaluation needs to be made of the industrial arts education program specifically in respect to improved learning situations which involve skill techniques, teaching methods and procedures. That is, techniques of how to do the media should be unified through the theory of instruction.

2. A complete study should be made of the Colorado State University Plan of undergraduate education for occupational therapy students. Colorado State offers an educational pattern for occupational therapy students involving three majors. A straight major in occupational therapy, a combination home economics and occupational therapy or a combination industrial arts and occupational therapy. The uniqueness of the approach and the cooperative effort of areas mentioned, seem pertinent to further effort in the
improvement of industrial arts and occupational therapy relationships.

3. There is a need for more interdisciplinary research in the areas of industrial arts education and occupational therapy. Twenty-one of the twenty-seven schools surveyed are of university standing and would, therefore, indicate easy access to the interdisciplinary approach. An example might be: "Suitable Projects for Occupational Therapy Students in Adaptive Appliances."

4. There is a need within the occupational therapy profession to define specifically this profession—to establish definite limitations of the profession—to determine absolute concepts of individual specialities through perhaps a type of specialization certification.

5. There is a need for a comprehensive unit of instruction, in industrial arts education, to involve the treatment media areas deemed essential by this study.

6. Studies need to be developed in each of the treatment media areas to implement activities and to provide up-to-date procedures in the utilization of these activities.

7. Special attention and research should be conducted toward awarding advanced degrees to occupational therapists in Industrial Arts Education.
APPENDIXES
APPENDIX A

Final Report on the Treatment Media Study
American Occupational Therapy Association National Office

1. Study B, Supplement to Analysis of Activities
2. Study C, The Analysis of Chart I of the Questionnaire
3. Study E, Present Preparation of Students
4. Study F, General Suggestions for Occupational Therapy Curriculum
APPENDIX A

FINAL REPORT ON THE TREATMENT MEDIA STUDY
Milwaukee, Wis. August 1952

As recommended in the preliminary report to the Education Committee, March 1952, a more intense study was made of the returned questionnaires. The detailed analysis was carried out by Mrs. Catherine Carlisle Seidl, OTR, and offers the composite thought of many representative therapists throughout the country. This will help to conclude the range of skills or techniques to be recommended for the Occupational Therapy curriculum.

The final report follows:

Questionnaires were sent to 55 institutions, requesting that one be filled out for each separate unit of the occupational therapist department. The list of clinical centers was selected to represent the major types of occupational therapy programs and geographic areas. The list was balanced so that, by estimate, the study would represent the following diagnostic range:

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychiatric</td>
<td>24</td>
</tr>
<tr>
<td>Orthopedic</td>
<td>24</td>
</tr>
<tr>
<td>Pediatric</td>
<td>17</td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>17</td>
</tr>
<tr>
<td>General Medicine &amp; Surgery</td>
<td>17</td>
</tr>
</tbody>
</table>

A response was received from 52 institutions, or 94.55% of the group. A total of 95 questionnaires was returned.

It was apparent that a great deal of careful thought was put into answering the questionnaires. The following table shows the distribution.
STUDY B

SUPPLEMENT TO ANALYSIS OF ACTIVITIES

Study of the questionnaires revealed that clinical programs would use the following activities to greater extent if occupational therapists were better skilled in their use.

Figures at the right indicate the frequency with which each was mentioned. Related items are grouped.

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decorative and Fine Art</td>
<td>27</td>
</tr>
<tr>
<td>Applied design, Drawing, Painting, Graphics, Silk Screen and Block Printing, Stenciling.</td>
<td></td>
</tr>
<tr>
<td>Recreation</td>
<td>21</td>
</tr>
<tr>
<td>Games, Parties, Sports, Hobbies, Discussion Groups, Dramatics, Music.</td>
<td></td>
</tr>
<tr>
<td>Prevocational Activities</td>
<td>20</td>
</tr>
<tr>
<td>Power Wood Work, Drafting, Blueprint Reading, Mechanics, Sub-Agembly, Office Machines, Radio Repair.</td>
<td></td>
</tr>
<tr>
<td>Metal Work and Jewelry</td>
<td>14</td>
</tr>
<tr>
<td>Ceramics</td>
<td>8</td>
</tr>
<tr>
<td>Printing</td>
<td>8</td>
</tr>
<tr>
<td>Gardening and Nature Studies</td>
<td>7</td>
</tr>
<tr>
<td>Educational Activities</td>
<td>6</td>
</tr>
<tr>
<td>Teaching Techniques, Library Service</td>
<td></td>
</tr>
<tr>
<td>Child Play and Story Telling</td>
<td>5</td>
</tr>
<tr>
<td>Home Economics, Home Making</td>
<td>5</td>
</tr>
<tr>
<td>Adapted Equipment for Self-care and Muscle Function</td>
<td>5</td>
</tr>
<tr>
<td>Plastics</td>
<td>5</td>
</tr>
</tbody>
</table>
STUDY 3 (continued)

Photography

Others

Basketry, Beadwork, Bookbinding,
Chip Carving, Cord Weaving,
Flytying, Leather Carving,
Photo Coloring, Tatting, Upholstery and Furniture Refinishing.

Speech correction, Group
Psychotherapy, Muscle Testing,
Crutch Walking.
STUDY C
(The analysis of Chart I of the questionnaire)

Study C gives the detailed processes of each item appearing in Study A. These listings are a composite of the clinical therapists' thought, and are arranged in sequence according to the frequency of notation. The items do not comprise a course outline but would be helpful in arranging one.

WOODWORK AND PLASTICS:
- designing; cutting, sawing; sanding, filing; finishing, joining, painting; turning on lathe; machine maintenance; carving; bicycle saw and adaptations; machine tools; assembling; hand-tools; screwing; blueprint reading; drilling; simple construction and projects; woodburning; mechanical drawing; model building; lining boxes; whittling; forming and shaping; molding; decorative processes; polishing.

SEWING AND NEEDLEWORK:
- dressmaking—pattern layout, cutting, suitable materials, simple hemming; machine sewing, care of machine; hand sewing; stuffed toys; hemstitching; huck toweling; quilting; patchwork; applique; feltcraft; embroidery—fancy; Swedish darning, tapestry.

WEAVING:
- 4-harness weaving; 2-harness weaving; warping—reel, board and sectional; adaptation for physical disabilities; threading and tying-up; designs, patterns, materials, colors; mechanics of loom adjustment; drafting patterns; use of table and floor loom; finishing projects; repairing threads; instruction procedures; finger weaving on upright loom.

LEATHERWORK:
- lacing; tooling; cutting; carving; punching; braiding; stippling; skiving; burning; glueing; assembling; preparation and transferring patterns; link belts; use of various kinds of leathers.

RECREATIONS AND RELIGION:
- games, puzzles; parties, movies (suitable); square dancing; organized sports; walks; carnivals; cards; ballroom dancing; picnics and barbecues; stage and puppet plays; remedial games; group singing; rhythm band; refreshments; church services; bedside and ambulant recreation; participation in all plans.
STUDY C (continued)

DECORATIVE AND FINE ART:
- printing, drawing, stenciling; use of crayons and paint; fingerpainting; transferring designs; cutting and pasting; folding, assembling; cardboard construction; textile decoration; harmony of color; sketching; painting on assorted surfaces; lettering; posters; self-expression; silk screen; various painting mediums.

SELF-HELP, A.D.L., AND AMPUTEE TRAINING:
- feeding; dressing; general hygiene; devise adaptations; one-handed shoe and tie-tying; writing; button boards, Montessori boards; combing hair; walking and gait training; toilet training; in and out of wheelchair and bed; climbing stairs and street car; speech; typing; give self-confidence; adjust crutches; standing activities; stump toughening; fitting with temporary cuff; housekeeping techniques; sling supports.

MINOR CRAFTS (a grouping of all minor activities taken from other headings):
- knitting—read patterns, all stitches; shellcraft; colonial matting; crocheting; tatting; braid weave; batik; paper mache; paper construction; linoleum carving; basketry; fly-tying; architectural layout; beadwork; bookbinding; novelty construction; loopers; plastic lace; hairpin lace; leather novelties; sequin work; Weave-it; Oriental knot; hooked rugs; rake knitting; wheel weaving.

EDUCATIONAL AND LIBRARY ACTIVITIES:
- use of book cart, selection and distribution of books; develop interest in good reading; classification and cataloging of book; planning literary discussions; use of State Library facilities; educational program 5th to 12th grade; high school, university and vocational classes; obtain reference material, etc., for patient; knowledge of popular books; book repair; explanation and information, movies; typing; refer to Education Department.

CERAMICS:
- preparation and wedging of clay, coloring and glazing; potter's wheel, coil and slab methods; press molds; slip casting; firing; free form and figures, modeling and pinch method; assembling and construction; use of different types of equipment and materials; making molds; sanding; simple projects; sgraffitto; making jewelry.
STUDY C (continued)

INDUSTRIAL AND WORK THERAPY:

- progress notes; patient cards; home instruction correspondence; printing forms; construct equipment; newspaper work; repair furniture; cleaning; dusting; make hospital furniture; maintain and improve clinic; kitchen and dining room duties; canteen and laundry service; sweeping; mopping; window cleaning; upholstering—all steps; painting; farm and dairy duties; supervise and instruct work group patients; sewing for hospital; assist on wards.

CHILDREN'S PLAY, DEVELOPMENTAL ACTIVITIES:

- educational toys; paper construction; peg and ring toys; remedial games; table tennis; shuffleboard; darts; bowling; checkers; table hockey; musical shoulder wheel; sand box; sewing cards; for grasp, release, reach, prehension, coordination; blocks; puzzles; pounding, pushing; coloring and painting; free play; parties; crafts; puppets; stage scenery and story; imitative play.

METAL:

- metal tooling; piercing and chasing; soldering; cutting and sawing; forming; finishing; etching; wire jewelry; planishing; polishing; copper foil tooling—all processes; hammering; filing, shaping; enameling; care and use of tools; stone setting; annealing; use of different metals; stone polishing; selecting pattern.

PREVOCATIONAL TRAINING AND TEST PROCEDURES:

- shoe repair, hand and power tools; typing; photography; sign-poster work—principles of design, layout, material; carpentry; printing; painting; advise patient of job situation in hospital which most nearly meets his physical and psychological needs; discuss problems about future job; dressmaking; arithmetic; writing, reading; improve work habits; observe for vocational aptitudes; movies; cooking and baking; drafting; braille; observation of work habits; hand skills; interest; perseverance; teach to systematize work; analyze physical demands of job, also physical condition of patient; simulate job situation; power tools for job.

PRINTING:

- hand and foot press; typesetting; preparation of paper; inking; padding; cleaning; sorting type; adaptation of presses; terminology.
CONVERSATION:
for short-time patient; establish rapport; knowledge of latest news; answer all questions about patient not requiring medical opinion; offer sympathetic understanding and friendship to patient.

MUSIC:
group singing; lessons; appreciation and listening; rhythm groups and orchestra; record library; singing games; clapping hands; toy instruments; painting to music; pounding piano; suggest opportunities for announcing and directing programs.

GARDENING AND ANIMAL CARE:
preparation of soil and seeds; planting and cultivating; seeding, weeding, cutting lawn; cutting, arranging flowers; indoor cultivating; watering; raising flowers and vegetables; harvesting; disposing of produce; spading; landscaping; greenhouse and arboretum; terrarium; canary, fish, snails.

TYPING:
teach typing and handwriting; techniques; instruction; speed and dictation.

PHOTOGRAPHY:
taking, developing, enlarging pictures; oil colors.

HOME ECONOMICS:
washing and ironing; foods class.
STUDY E

PRESENT PREPARATION OF STUDENTS

The response on the present preparation of students showed such variation and conflicting statements, it was impossible to find any common pattern of thought. This probably indicates there is great variation in the preparation students receive from the various schools, and variation among the students from any given school.

Certain factors tried to stand out, but even these were often parried. In general, it seemed to be stated that students were fairly well prepared according to current standards. However, the following constructive comments should be helpful. They were taken from the questionnaires from headings under which they appear.

Crafts

Most adequate preparation was in weaving, woodwork, ceramics and leather.
Students do not realize full adaptability of crafts.
Design should be strengthened.
Techniques vary greatly, need flexibility.
Students need experience in preparation and planning for materials.
Students need to know more simple process crafts; more easy crafts for children.
Lack of ability in fine arts, finger painting and general sewing was often mentioned.
Students are insufficiently aware of how to upgrade crafts.
Students need better respect for tools and their care.

Activities of Daily Living

Students are generally ill prepared in this type of activity.
Some clinical directors feel this should be accomplished in clinical training.
Few students have understanding or imagination for the development of assistive equipment.
Students must have greater realization of precautions necessary when handling patients with severe physical handicaps.
STUDY E (continued)

Many have no understanding of amputees or exposure to their problems.
Students need good understanding of child development to handle feeding and dressing training, etc., with handicapped children.

Prevocational Activities

Preparation is generally inadequate.
Some students have an understanding, but no practical experience.
There is a widespread lack of understanding.
Increased knowledge of job analysis would be very helpful.
There is a general lack of knowledge in printing and use of office machines.
All students do not know how to type themselves.
This is a great advantage.

Activities for Children

Preparation is most widely deficient in this area.
Students need to understand the fundamental techniques of child's play and their relation to the developmental levels of the child.
Some students are surprised that this is expected of them.
Students need experience with "normal" children.
This is sometimes available in clinical training.
Students need better background for the selection and use of toys.
An increased range of simple craft procedures is needed for children—paper construction is good.
Students have a limited understanding of parents and the occupational therapist's relation to them as a therapeutic factor.
It is important to be able to enter a child's conversation.

Recreation

Preparation varies from good to poor.
Some are reluctant to accept this as occupational therapy.
Application of recreation to treatment aims is not good.
Students lack leadership ability in a group.
There is a need to simplify and adapt recreational procedures for maximum occupational therapy value. Remedial quality of games can be high, needs imagination.
Students generally lack understanding.
Students are unable to give instructions well.
Understanding of children's needs is required.
GENERAL SUGGESTIONS FOR OCCUPATIONAL THERAPY CURRICULUM

(Analysis of Chart IV on Questionnaire and General Comments Throughout)

Many statements and comments were studied, charted and boiled down into the following points. These should be significant as they represent a breadth of clinical thought.

Selection and Teaching of Techniques or Skills
1. Concentrate on thorough knowledge of a few major crafts and condensed information on a range of minor crafts. (See Activities Analysis)
   a. Develop sense and application of good basic design, thorough knowledge of fundamental techniques and appropriate finishing of articles.
   b. Teach students to follow printed instructions more efficiently to encourage acquiring additional skills after graduation.
   c. Emphasize theory of occupational therapy in craft processes (adaptations to meet therapeutic needs, systematized procedures as testing techniques, etc.)
   d. Select range of minor crafts to replace antiquated crafts with those in modern demand requiring simple processes.

2. Offer greater emphasis on analysis and performance of activities of daily living.

3. Offer increased understanding of the techniques of children's play, use of toys and appropriate crafts for children.

4. Emphasize practical range of recreational activities (See Activities Analysis).

5. Stress theory and possible practice of pre-vocational activities and hospital industry in their relation to formal job performance in employment.

6. Require practical typing proficiency.
Development of Student Skill in Teaching

Comments came from all areas of occupational therapy and all parts of the country, indicating a marked need.

Suggestions were made as follows:

1. Develop students' feeling of security in a few special craft processes.
2. Teach analysis and sequence of these processes for presentation.
3. Emphasize careful preparation before presentation as a teaching technique.
4. Develop descriptive terms and ease of speech for clarity in presenting material.
5. Practice teaching craft processes while still in school.
6. Apply teaching techniques to new processes without practice.

Strengthening Theory of Occupational Therapy by Increased Factual Knowledge

Increase emphasis on the following:

1. Fundamental factors on which to analyze crafts or activities for therapeutic use in each diagnostic area.
2. Dynamics of behavior, value of individual and group performance, its therapeutic use.
3. Child development, children's needs and pediatric aims in occupational therapy.
4. Functional knowledge of anatomy, kinesiology and neurology.
5. Fundamentals of splint construction, equipment adaptation and bicycle saw analysis.
6. How to observe.

Crystallization of Students' General Concept

Achieving mature performance is related to the attainment of understanding and concept. The questionnaire indicates certain points of special focus for developing good concept by improved understanding of the following:

1. The need for creative thinking in professional life.
2. The flexibility of adaptive techniques to meet therapeutic needs.
3. The acceptance of present limitations in occupational therapy programs with continued practical effort to reach idealistic goals.
4. The application of the principles of good interpersonal performance in constructive dealing with all professional personnel.
5. The realization of community resources and responsibilities.
6. The recognition of financial limits and value of economical planning.
7. The value of accurate, meaningful wording in both spoken and written expression.
8. The true worth of time and its careful use.
9. The vast extent of material yet to be learned, and each one's need to increase his own holdings.
10. The practical and constructive value of self-reliance.
APPENDIX B

Letters and Questionnaire

1. Letter of Request to Schools of Occupational Therapy
2. Introductory Letter to Registered Occupational Therapist
3. Instruction Sheet Concerning Questionnaire
4. List and Description of Treatment Media
5. The Questionnaire
An attempt is being made through a doctoral dissertation to study the relationship of Industrial Arts Education to Occupational Therapy. The idea for the study developed from my experience as an instructor of industrial arts subjects for students majoring in occupational therapy here at The Ohio State University.

Apropos to the similarities of the educational requirements that students must meet in both industrial arts and occupational therapy, a review of the various college and university curricula seems essential and is proposed as one phase of the research. The review should include the 29 institutions accredited by the Council on Medical Education and Hospitals of the American Medical Association.

Permission is requested to include your institution in the dissertation. It would be extremely helpful and would contribute completeness to the dissertation to receive a statement with the following information:

1. Curriculum requirements and course of study leading to qualifications for registration as a therapist, and to a baccalaureate degree.
2. Student selection procedures employed.
3. The general, professional, and technical educational requirements.
4. The required field experiences.

Your interest and cooperation is appreciated. A collection of data from all sources, for immediate compilation and assembly, is now in process. In view of the proceeding, your kind indulgence to the May 30, 1957, deadline is solicited.

Sincerely yours,

Don W. Thiel
Instructor
Dear Therapist:

An attempt is being made through a doctoral dissertation, at the Ohio State University, to study the relationship of industrial arts education to occupational therapy. Apropos to the similarities of the educational requirements that students must meet in both professions, this questionnaire is a very important phase of the study, contributing data which should help to establish a more effective utilization of potential talent.

The purposes and organization of the questionnaire are stated in the fact sheet. It is my hope that this letter will remind you that our professions are essential enough to warrant continual effort in the attempt to suscitate improvement. If you do feel that improvement is a goal of a profession I request entreatingly that you spend the next 10 minutes filling out the short questionnaire, inserting it in the franked envelope and dropping it in a postal box.

Your kind indulgence to the April and May goal of return is sincerely requested.

Until a better way to express my personal appreciation shows up, please accept my thanks.

Very sincerely yours,

Don W. Thiel
Assistant Professor
Department of Industrial Arts
San Diego State College
INDUSTRIAL ARTS IN OCCUPATIONAL THERAPY
A STUDY AND PROJECTION OF ITS RELATIONSHIP TO THE ACTIVITIES OF
PRESERVED TREATMENT IN PHYSICAL AND PSYCHIATRIC DISABILITIES

JURY QUESTIONNAIRE TO THE O.T.R.'s
IN THE UNITED STATES

APPROVED BY:
THE COLLEGE OF EDUCATION
THE OHIO STATE UNIVERSITY
COLUMBUS 10, OHIO

PART I ABOUT THIS QUESTIONNAIRE

TO THE PRACTITIONER. IT IS THE THESIS OF THIS QUESTIONNAIRE THAT THE FIELD OF
PRACTICE IS THE MAJOR INFLUENCE UPON OCCUPATIONAL THERAPY UNDERGRADUATE CURRICULUM
AND ANY CHANGES GOOD OR BAD WILL COME FROM THIS GROUP.

INSPIRATION TO RELEGATE TIME AND EFFORT TO THIS STUDY, NATIONAL IN SCOPE WAS
CREATED BY A PROFOUND RESPECT OF THE PERSONNEL CARRYING OUT THE AIMS OF THEIR PRO-
FESSION. FURTHER INTEREST WAS GENERATED BY THE QUALITY OF STUDENTS STUDYING TO BE -
COME REGISTERED THERAPISTS AT THE OHIO STATE UNIVERSITY, AND BY THE ENTHUSIASM OF
PRACTICING THERAPISTS TO COOPERATE IN THE ENDEAVOR TO BRIDGE THE GAP OF NESCIENCE
THAT EXISTS WITHIN THEIR PROFESSION AND BY THOSE IN IMMEDIATE ALLIED FIELDS WHO
SHOULD KNOW AND BE CONCERNED.

AS A REGISTERED OCCUPATIONAL THERAPIST, HAVING GRADUATED FROM AN ACCREDITED
SCHOOL OF OCCUPATIONAL THERAPY, YOUR JUDGEMENT IS SOLICITED IN FILLING OUT
THIS SHORT QUESTIONNAIRE. I HAVE SET ASIDE THE MONTHS OF APRIL, AND MAY TO
COMPLETE THIS PHASE OF THE STUDY, OBVIOUSLY THE EARLIER THE BETTER.

THE PURPOSES. THE QUESTIONNAIRE HAS THESE PURPOSES: (1) TO SUPPLY FOLLOW-UP
DATA OF THE NATIONAL COMMITTEE'S REPORT OF 1952, ON TREATMENT MEDIA STUDY; (2) TO
ASCERTAIN THE CONTRIBUTIONS THAT INDUSTRIAL ARTS TEACHER EDUCATION CAN BRING TO THE
OCCUPATIONAL THERAPY PROFESSION; AND (3) TO SUPPLY FACTS IN DETERMINING TO WHAT DE-
GREE EDUCATIONAL DEPARTMENTS OF OCCUPATIONAL THERAPY MIGHT UTILIZE THE FACILITIES
OFFERED BY THE DEPARTMENTS OF INDUSTRIAL ARTS TEACHER EDUCATION.

ORGANIZATION OF THE QUESTIONNAIRE. THROUGH PERSONAL TEACHING EXPERIENCE AND
FROM FOUR YEARS OF INTENSIVE SURVEY RESEARCH OF THE PROFESSIONAL LITERATURE IN THE
AREA OF OCCUPATIONAL THERAPY, IT IS KNOWN THAT LARGE BLOCKS OF UNDERGRADUATE STUDY
TIME IS DEVOTED TO THE ACQUISITION OF KNOWLEDGE AND SKILL IN THERAPEUTIC MEDIA OFTEN
AND VARIOUSLY CALLED: ARTS AND CRAFTS, CRAFTS, OCCUPATIONS, WORK THERAPY, PRE-VOCAT-
TIONAL SKILLS, RECREATIONAL SKILLS, AND OTHERS.

THE NATIONAL COMMITTEE'S FINAL REPORT ON TREATMENT MEDIA STUDY DEVOTES SPECIFIC
SECTIONS TO GENERAL DESCRIPTIONS OF SPECIAL THERAPEUTICALLY NECESSARY SKILLS. REFER-
ENCE IS MADE TO: (1) STUDY 'C'; (2) STUDY 'E'; AND (3) STUDY 'F' OF THIS REPORT.

AN ANALYSIS OF CURRENT CATALOG DESCRIPTIONS AND PERSONAL COMMUNIQUES FROM DE-
PARTMENTAL DIRECTORS OF THE ACCREDITED OCCUPATIONAL THERAPY SCHOOLS IN THE U.S. ALSO
HELPED TO DETERMINE LISTINGS OF ACTIVITIES WARRANTING CONSIDERATION IN BENEFITS TO
BE GAINED FROM EDUCATIONAL ENDEAVORS FOR PROSPECTIVE OTR'S. THE LISTING OF SKILLS
ARE ESPECIALLY ADAPTABLE TO INDUSTRIAL ARTS TEACHER EDUCATION.

IT MUST BE POINTED OUT THAT THE USE OF THE TERM 'ACTIVITIES' CONSTITUTES MORE
THAN THINGS TO BE DONE. IMPLIED WITHIN EACH OF THESE AREAS ARE SUGGESTIONS INFINITE
IN THEIR VALUE OF TECHNICAL KNOWLEDGE, UNDERSTANDINGS OF INDUSTRIES INVOLVED, AND
THE ASSIMILATION OF VARIED MANUAL SKILLS. IT MUST ALSO BE POINTED OUT THAT ALTHOUGH
THE TERMINOLOGY EMPLOYED WITHIN THE TWO PROFESSIONS IN QUESTION DIFFER CONSIDERABLY
AN ATTEMPT HAS BEEN MADE TO UNIVERSALIZE THE ACTIVITIES BY SUGGESTIONS OF SPECIFICS
IN EACH. THESE ACTIVITIES AND SPECIFICS ARE LISTED ON THE NEXT PAGE. PART II.
PART II ACTIVITIES

CERAMICS

Ceramic processes and materials, how and who makes it, wedging, modeling, sculpture, pinch bowl, coil construction, slab construction, spouts, covers and handles, potter's wheel, press molds, slip casting, making molds, ceramic jewelry, care of and use of equipment, use of glazes, how to fire, making a living in ceramics.

DRAWING & DESIGN

Mechanical drafting, use and care of instruments, blue print reading, plan sketching estimating of size and proportion, use of free hand isometrics, principles of design as: harmony, practicability, material considerations, balance, point of emphasis and division of space, elements in the application of outline enrichment using curved lines, color balance, lettering free hand, sign painting, brush (air) lettering composition and layout.

FUNDAMENTALS OF ELECTRICITY

The industry and its people, uses of electricity, types of electrical power and the application, high and low voltage, ohms law, magnetic principles, storage cells and uses, conductors, insulators, watts, kilowatts, simple circuits, circuit defects, safety, electricity of heating and the appliances, principles of amateur radio.

GRAPHIC ARTS

Scope of the industry, type setting, composing, use of presses, papers, inks, cleaning and sorting type, tying type forms, imposing, and locking press forms, proofing paper cutting, bindery work, lithography, silkscreen process, linoleum-block, woodprints, graphic design, photography as: still exposures, developing, enlarging and composition, finishing prints, chemicals and paper; making movies, 8mm and 16mm.

INDUSTRIAL CONCEPTIONS

Special applications to 'industrial and work therapy', also to 'pre-vocational testing and training procedures', occupational information, personnel organizations, construction equipment and its personnel demands, common industrial settings, storage and shipping problems, considerations necessary to establish a manufacturing plant, understanding of equipment requirements in big industry.

JEWELRY & LAPIARY

Tools, equipment, and materials, terminology, use of jewels precious, semi-precious, stone cutting, sawing, grinding, drilling and tumbling, polishing, types of settings and their applications, design and its application, shaping and casting, soldering, hard and soft.

LEATHERWORK

Leather making, kinds of leather tools, equipment, various designs, planning, layout, cutting, transfer of design, preparation for tooling and carving, surface tooling, carving, modeling, stippling, stamping, beveling, embossing, skiving, trimming, stitching, lacing, braiding, setting eyelets, snaps, rivets, maintaining and sharpening tools, cleaning and finishing leather.

METALWORK

The industries and people, equipment and tools, design, layout, shaping, cutting, forming, filing, bending, flaring, folding, grooving, etching, spinning, raising, brazing, casting, tooling, chasing, engraving, planishing, drilling, dyeing, punching, riveting, tapping and threading, polishing, cleaning, painting, anodizing, enameling, and its materials as: types of enamel, design, applications, firing, by kiln, blow-torch, suggestions for new uses of enamels, deep-bowl work, types of metal used, counter-enameling, earning a living by enameling.
PLASTICS
THE USES OF AND PEOPLE WHO WORK WITH IT, TOOLS, AND EQUIPMENT. HAND AND MACHINE OPERATIONS. JIGS, ATTACHMENTS, MATERIALS, SUPPLIES, AND HOW TO USE THEM AS: (FORMING AND SHAPING, SAWING, TURNING, BENDING, INLAY WORK, JOINTING JOINING, DRILLING, SMOOTHING POLISHING, INTERNAL CARVING, DYE AND COLOR WORK). PROJECTS AND SUGGESTIONS.

UPHOLSTERY & FURNITURE REFINISHING
TOOLS, MATERIALS, AND WHO USES THEM. FABRICS, STUFFING. MAKING A ROLLED EDGE, SPRING-TYING, PLACING WEBBING, SLIP TACKING, SEWING FABRICS, WELTING, QUILTING. REMOVING OLD FINISHES. SCRAPING. NEW TECHNIQUES. USES OF VARIOUS WOOD COLORS. STAINING WITH OILS, WATER, AND SPIRITS. RESTAINING. TOUCH-UP AND SURFACE COVERS.

WOODWORK
UTILIZATION OF WOODS. HOW TO PURCHASE AND IDENTIFY. COMMON HAND TOOLS TERMINOLOGY. JOINERY, DESIGN, CARVING (FIGURE, FLAT). DECORATIVE PROCEDURES. USE OF MACHINES AS: (SKILL SAW, TABLE SAW, RADIAL ARM SAW, BAND SAW, JIG SAW, SURFACER, JOINTER, DRILL PRESS, MORTISING, LATHE, SHAPER, SANDER, ROUTER, POWER PLANE, GRINDER, AND OTHER EQUIPMENT COMMON TO WOODWORK). FINISHING. SCRAPING. SANDING. USE OF VARIOUS FINISHING MATERIALS. CARE AND MAINTENANCE OF MACHINES. ORDERING SUPPLIES AND EQUIPMENT.
PART III  TREATMENT MEDIA CONSIDERATIONS

A. CERAMICS  G. UPHOLSTERY & FURNITURE REFINISHING  
B. PLASTICS  H. FUNDAMENTALS OF ELECTRICITY  
C. WOODWORK  I. INDUSTRIAL CONCEPTIONS  
D. METALWORK  J. JEWELRY & LAPIDARY  
E. LEATHERWORK  K. DRAWING & DESIGN  
F. GRAPHIC ARTS

NOTE: Place a check mark in the space under the skill area

- What skill experiences did you receive in the school of undergraduate OT? A B C D E F G H I J K
- Your professional experiences have indicated that OTR’s graduating since 1952 have shown deficiencies in what skills?
- What areas were taught by the occupational therapy department in your undergraduate experiences?
- Which were taught by someone outside the occupational therapy department?
- Which do you recommend as ideal background preparation for OTR’s?
- What area represents the greatest number of patient experiences in your treatment program?
- What selected areas should the occupational therapy department undertake to teach?
- Which might be more effectively handled by teacher education in industrial arts?
- In which do you feel the OTR needs more skill experiences?
- Which area represents the use of recreation in therapy?
- What degree of skill should an effective OTR attain in each of the areas? Place a number 1-5 in the space below each area.

PART IV  GENERAL OPINIONS

- Are these selected skills representative of experiences essential to effective occupational therapy? YES NO
- Should OTR’s be able to turn out a finished product before attempting to instruct a patient? YES NO
- Should a therapist attempt vocational counseling with the present background of educational experiences? YES NO
- Do you believe that OTR’s should receive some teaching theory? YES NO
APPENDIX C

Occupational Therapy Publications
APPENDIX C

OCCUPATIONAL THERAPY PUBLICATIONS

American Occupational Therapy Association

Professional

1. Administrative Practices and Personnel Policies. Covers duties of therapists and related personnel; professional development; workload, salaries, etc.


3. Objectives and Functions of Occupational Therapy. Defines treatment objectives, procedures and functions of occupational therapy for each of the major diagnostic areas served.


5. Occupational Therapy in General Medicine and Surgery.


Technical


24. Hundreds of Treatment Technique Articles published for the major part in the AJOT.
Educational


29. Career Inventory.

30. How to Become an Occupational Therapist.

31. List of Approved Schools of Occupational Therapy.

32. Suggested Pre-Professional Curriculum Guide for Prospective Occupational Therapy Students.

33. AOTA: What It Is, What It Does, How It Works.

34. What is Occupational Therapy?

35. Careers in Service to the Handicapped. Information for guidance specialists on several professions.


37. Your Future in Occupational Therapy.

38. Opportunities in Occupational Therapy.

Note: Each publication mentioned in this listing may be obtained by writing: American Occupational Therapy Association, 250 West 57th Street, New York 19, New York.
APPENDIX D

Academic Curriculum Survey--Therapeutic Activities
Therapeutic Activities Classified in Accordance with
Student Affiliation Centers Activity Survey
The American Occupational Therapy Association

1. Clock hours of time devoted to activity areas

2. Key for breakdown of therapeutic activities
## APPENDIX D

### ACADEMIC CURRICULUM SURVEY - THERAPEUTIC ACTIVITIES
(Therapeutic Activities classified in accordance with SAC Activity Survey)

<table>
<thead>
<tr>
<th>Therapeutic Activity</th>
<th>No. of Schools</th>
<th>CLOCK HOURS</th>
<th>% of Total Clock Hours Devoted to TA*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Total Number</td>
<td>Average Number</td>
</tr>
<tr>
<td>Creative Arts</td>
<td>21 (2 others didn't give hours)</td>
<td>3521</td>
<td>167.7</td>
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<tr>
<td>Weaving</td>
<td>23 (2 gave no info.)</td>
<td>2382</td>
<td>103.6</td>
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<tr>
<td>Woodworking</td>
<td>22</td>
<td>2211</td>
<td>100.5</td>
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<tr>
<td>Ceramics</td>
<td>21</td>
<td>2071</td>
<td>98.6</td>
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<tr>
<td>Minor Crafts</td>
<td>17 (others mentioned specific crafts)</td>
<td>1365</td>
<td>80.3</td>
</tr>
<tr>
<td>Needlecraft (1/2 is Clothing Construction)</td>
<td>22 (1 gave no info.)</td>
<td>1739</td>
<td>79.0</td>
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<tr>
<td>Metal - Jewelry</td>
<td>21</td>
<td>1581</td>
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<tr>
<td>Recreational</td>
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<td>Printing</td>
<td>11</td>
<td>562</td>
<td>51.1</td>
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<td>Leather</td>
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<td>901</td>
<td>41.0</td>
</tr>
<tr>
<td>Plastics</td>
<td>13</td>
<td>369</td>
<td>28.4</td>
</tr>
<tr>
<td>Reedwork</td>
<td>10</td>
<td>208</td>
<td>20.8</td>
</tr>
<tr>
<td>Prevocational</td>
<td>8</td>
<td>160</td>
<td>20.0</td>
</tr>
</tbody>
</table>
ACADEMIC CURRICULUM SURVEY - THERAPEUTIC ACTIVITIES (continued)

<table>
<thead>
<tr>
<th>Therapeutic Activity</th>
<th>No. of Schools</th>
<th>CLOCK HOURS</th>
<th>% of Total Clock Hours Devoted to TA*</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.D.L.</td>
<td>20</td>
<td>237</td>
<td>11.9</td>
</tr>
<tr>
<td>Gardening</td>
<td>2</td>
<td>60</td>
<td>-</td>
</tr>
<tr>
<td>Industrial</td>
<td>1</td>
<td>59</td>
<td>-</td>
</tr>
<tr>
<td>Photography</td>
<td>1</td>
<td>45</td>
<td>-</td>
</tr>
<tr>
<td>Office Practices</td>
<td>3</td>
<td>10</td>
<td>-</td>
</tr>
<tr>
<td>Educational Activities</td>
<td></td>
<td>Hours devoted to these areas were tabulated as part of Orientation, IV.F, Scope</td>
<td></td>
</tr>
<tr>
<td>Group Activities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nature Activities</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total Clock Hours** - An average of 933 clock hours are devoted to the teaching of therapeutic activities.

*Therapeutic Activities.*
KEY FOR BREAKDOWN OF THERAPEUTIC ACTIVITIES


ACTIVITIES OF DAILY LIVING

Ironing, exercises, feeding, smoking, cooking, grooming, dressing, buttoning, writing, lacing shoes, bow-tying, hygiene and toileting, in-and-out of bed, pegboard, balance, washing dishes, sweeping, taking braces on and off, form boards, verbal communication, handenss testing, wheelchair propulsion, use of splints and slings, use of special equipment, homemaking, testing ADL, speech, telephone, stairs, walking, driving, Braille.

CREATIVE ARTS

Drawing and painting, number pictures, ball point paints, oils, sketching, free-hand, watercolor, crayons, lettering, textiles, finger painting, drafting, commercial art, pastels, tempera, tracing, enlarging, pattern making.

CERAMICS

Molds, glazing, modeling, wedging, shaping, polishing, slip casting, kneading, construction, coil, slab, decoration, wheel throwing, roll pinching, sculpture, firing.

EDUCATIONAL ACTIVITIES

Educational homemaking, craft, foods, correspondence, electrical wiring, music, arithmetic, pre-school.

GARDENING

Horticulture, flower arrangement, flower shows.

GROUP ACTIVITIES

Rhythm band, group discussions, group projects, patient journals, band, county fair.

INDUSTRIAL

Care of plants, cleaning, winding yarns, sorting supplies, maintaining greenhouse, kitchen, laundry,
grounds, barbering, radio assembly and repair, band instrument repair, patient helper, rag preparation.

LEATHER

Lacing, assembly, tooling, link belts, carving, light processes, stamping, finishing, punching, cutting, braiding, designing, gloves, stippling.

METAL - JEWELRY

Simple assembly, gluing stones, wire construction, filing, metalwork, lapidary, metal soldering, metal tooling, metal hammering, metal enameling, metal polishing, metal etching, tin craft, spinning.

MINOR CRAFTS

Chenille, gimp braiding and knotting, yarn animals, cord knotting, fly tying, plastic flowers, hooked rugs, beading, stenciling, models Mitchell lace bags, applicator stick projects, moccasin kits, wood fiber flowers, cork, silk screen, shellcraft, paper crafts, knotted rugs, picture framing, toycraft, hi-fi kits, braided rugs, netting, match stick decoration, block printing, parquetry, sculpstone, soap carving, mosaic tile, bookbinding, winding, cord wrapping, rubber molds, mat making, dyeing.

NATURE STUDY

Pet care, tropical fish, care and breeding, bird care, plant care, nature study.

EDLECRAFTS

Crocheting, embroidery, simple sewing, felt work, huck weaving, garment construction and machines, knitting, bobbin and hairpin lace, needlepoint, petit point, Weave-It, spool knitting, rake knitting, tatting, millinery, sewing cards, Bargello, net darning, tufted rugs, pattern making, hem-stitching.

OFFICE PRACTICE

Secretarial, clerical, typing filing, mimeographing, listing, phone answering.
PHOTOGRAPHY

Photography, tinting.

PLASTICS

Laminating, assembling, cutting, sanding, filing, buffing, etching, modeling.

PREVOCATIONAL

Prevocational, work therapy, assembly work, banding, packing, sewing machine, industrial leather, industrial jewelry, upholstery, heavy labor, cashier, maintenance work, plumbing, house painting, longshoreman, laundry, waiting table, plastering, gravel pit, hoisting, wheel barrow, lifting and carrying.

PRINTING

Setting type, hand press, foot press.

RECREATION

Games, puppets, recreation, music, play, preparation for parties, TV and movies, dancing, library reading, story telling, records, walks, collecting, seasonal decorations, toys, bean bag, pegboard, puzzles, marbles, sandbox, conversation, finger play, drama.

REEDWORK

Caning, basketry.

WEAVING

Colonial mats, loopers, braids, paper, table loom, floor loom, Speed-O-Weave, 2-harness, 4-harness, frame hemstitching, winding warp, dressing loom, finger, card, inkle, cardboard, wall loom.

WOODWORKING

Chip carving, burning, sanding, carving, finishing, power tools, simple construction, layout, decoration, cutting, repair, hand tools, cabinet making, treadle and bicycle tools, whittling.
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AUTOBIOGRAPHY

I, DONALD W. THIEL, was born in Scottsbluff, Nebraska, on May 20, 1923. I received my elementary education in the public schools of Bayard, Nebraska, and my secondary education in the Garden County High School of Oshkosh, Nebraska.

In 1943 I was called into the Armed Services of the United States, where I spent two and one-half years in training and combat, Pacific Theater of Operations. Upon discharge from the Army Air Force in 1945, I began my undergraduate work at the University of Nebraska, graduating in January of 1949, with the Bachelor of Science Degree. Graduate work on the Master of Science Degree was started at the Stout State College in 1951, and concluded in 1953.

My career as an industrial arts teacher began at the Belboa High School in Belboa, Panama, Canal Zone, in September 1950. I taught in this capacity for one year, after which I accepted a position as principal of the Lewellen High School, Lewellen, Nebraska. After serving in this capacity for two years, I accepted a position of industrial arts teacher and coach at the Omaha Technical High School, Omaha, Nebraska, where I taught for two years. In the Fall Quarter of 1954, I was appointed to the position of instructor in the Department of Education, The Ohio State University. During the next three years as instructor I
completed all general requirements for the degree Doctor of Philosophy. In September 1957 I accepted a position as Assistant Professor of Industrial Arts Education at the San Diego State College, San Diego, California. During the ensuing years I collected and compiled data for this dissertation.