THE RECREATIONAL FUNCTION OF INDUSTRIAL ARTS EDUCATION

An Analysis of Position, Potential and Direction

DISSERTATION

Presented in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy in the
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By

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Adviser
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This study concerns an increasingly vital problem not only for society, but for all those who live in an increasingly complex technology. It seeks to resolve the ever increasing problem of leisure, not only by the schools, and especially by industrial arts, but by all of the elements of the community involved.

The writer's major professional interests and experiences lie in both industrial arts education and in the recreational movement, so it was natural for him to undertake this study, and especially because of the leaders in these fields who could be drawn upon for counsel, namely, Dr. William E. Warner, of the former field and Dr. W. C. Batchelor of the latter, not to mention the resources of the Ohio Department of Natural Resources and its director, Colonel Herbert B. Eagon. The development of the study is felt to be very timely and should serve as a stimulus to a whole series of studies that should follow, as please see the list in Chapter VIII.

Grateful acknowledgment is made not only to the experienced perspective of his advisors, but to Dr. Delmar W. Olson of the Stanford University staff of ICA in the Philippines, and to Dr. Earl W. Anderson, Chairman of the Department of Education, for their encouragement and support.
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CHAPTER I
INTRODUCTION

The responsibility of guiding those who seek an education requires that the growing need for education in recreation be well understood. Industrial arts education has long included recreation as one of its stated objectives, but little has appeared in its literature which defines this function. In order for a profession to move intelligently toward serving its functions, each must be carefully and continually studied. The effort recorded here represents a study of one function of industrial arts education, the recreational function. It can be said, therefore, that the purpose of this study is to establish and spell out a position for industrial arts in recreation.

Procedure and Method

The effort to fulfill the stated purpose was broken down into the following major tasks:

1. To develop a concept of recreation by the industrial arts profession
2. To define recreation in contemporary life
3. To define industrial arts education
4. To clarify the roles of recreation and industrial arts education, and to make a comparative study of these

5. To substantiate the hypothesis that industrial arts is involved in many of man's recreational activities

6. To determine if industrial arts is involved to such an extent as to demand that education in recreation become a more carefully planned part of industrial arts education

7. To determine and define the potential for expanding industrial arts education in recreation

8. To record those points which offer direction for the expansion of industrial arts education in recreation

9. To draw off the implications of expanding industrial arts education in recreation, as well as the conclusions possible at this point

The first four tasks outlined above form what can be called the first division of this study. This was built on a fact-finding effort centered in documentary research. The facts revealed were arranged in such manner as to make possible a comparative study of the two efforts, and at the same time to offer a suitable background for the procedures used to accomplish the aims of the second division of this study.

The second division of this study, treating on the next three tasks mentioned above, was developed in the main by a process of analysis. This analysis was made of facts revealed by further search as well as those revealed in the previous division. One device used in this effort required the development of criteria for measuring the
facts which pictured man's recreational activities, for the involvement of industrial arts. The device was developed by studying the postulates basic to industrial arts education previously summarized. These were refined and condensed, forming the measuring instrument. This was used to obtain support for the hypothesis which proposes that industrial arts activities are involved in man's recreational activities. Another purpose of this analysis was to reveal content and direction for expanding industrial arts education in recreation.

The recording of the evidence giving further definition to the directions possible for expanding industrial arts education in recreation, made up the approach used in the third division of the study. The noting of the implications observed and the conclusions reached, served as the means for completing the study.

Definitions and Limitations

A basic concept indicating the existence of opportunities for recreational experiences both in work and leisure, is developed and recorded here. Since industrial arts has long been concerned with improving the adjustment of the technician to his work, and even though this study sharpens the definition, the major effort recorded here has been directed toward defining the possibilities for improving the contributions of industrial arts education to the recreation of the individual during his educational and non-earning activities.

Though there are many areas of the school's curriculum that share the responsibility of contributing to education in recreation, this function of industrial arts will be dealt with here.
It is realized that recreation is but one function of industrial arts education. Though this thesis is centered on improving this function, such a concentration does not mean that it should take precedence over other important functions of a full program.

The definition of recreation as re-creation immediately limits this study to those efforts which are of positive value to the individual. It is for the purpose of contributing to the positive forces in living that this study is made.

Much material is included here which may at first appear to have little bearing on the study topic, however, recognizing that what is work to one person can be recreation to another, justifies its inclusion.

**Basic Assumptions**

Consideration of the following statements is basic to an understanding of the development of the study recorded here. These were used as touchstones from which direction was established and maintained in this study.

1. The need and opportunity for recreation are forced upon the average American as never before.

2. Recreational needs and opportunities will continue to increase as man increases the development of power.

3. Since there exists a need for recreation and if education is concerned with the whole man, then education must be concerned with recreation.
4. Education must aid in improving the quality of free-time activities as well as the earning abilities of the individual.

5. Technology has not only freed man for recreational activity, but has also given him many products to be used in this fashion. Industrial arts, as one area of education designed to interpret industry and its influence on life, is in a unique position to offer guidance in putting to positive use his free time and the recreational products.

6. Recreational resources exist everywhere. The need lies in a planned effort to reveal these resources to people and to guide them in the development of their ability to use them.

7. What people do with their free time is of social importance.

At this point the need for a definition of recreational effort becomes apparent. Likewise a definition of industrial arts education appears necessary before ways can be found for expanding education in recreation as a function of this area. These definitions follow as Chapters II, III, and IV. The focal point of the study is the analysis for potential and direction. This is developed in great part from the findings and definitions recorded earlier in this study and justifies the expansion of education in recreation as a function of industrial arts. It also defines content and direction for this expansion.
CHAPTER II
CONCEPT OF RECREATION

Every person must have an opportunity to express his drives in order to gain and maintain balanced living. These drives or urges, conscious or hidden, must be intelligently guided toward expression through real and worthwhile experiences. Only in this way will man make the most of the God-given opportunity of life. He must be capable of sensing opportunities for placing himself outside of the moment, to free himself, and grow through more complete expression. This experience can be called re-creation - a dominant need of man. If satisfied, this gives him a fresh outlook, a relaxation of inner pressures, freedom, and a zest for living. This can be met regardless of what the conscious occupation of the moment may be. It can come about either during work or leisure.

A brief look at man's basic make-up appears necessary for picturing a concept of recreation. This in turn points up what must be done, or, as herein titled, "recreation as a responsibility." Together, these aspects of the topic make up a concept of recreation, and are summarized here as a third part of this chapter.
Recreation - A Basic Human Need

Biological Aspects. The forces at play upon an individual today are such that inner pressures are increased tremendously. It is a fact that the machine has relieved man of the toil in his effort to produce a good living. According to America's Needs and Resources, as summarized by Dewhurst and Associates (24, p. 1116),* in 1850 the human work-output was 1.3 billions of horsepower hours as compared to 6.4 billions in 1950. The technical energy-output, on the other hand, was 3.6 billions in 1850, but which increased to 664.7 billions of horsepower hours in 1950. To produce an increasingly better living, man now depends on technical energy, of which there was produced more than 184 times as much in 1950 as in 1850. On the other hand, human energy-output has increased only five times as much. Though this tremendous increase in technical energy-output has relieved the demand upon man as a source of energy, it has not been entirely to his advantage. This development has gone beyond the relief from toil and, in many cases, has limited his bodily motions to where few muscles are properly exercised. Man, in order to remain in healthful balance, needs to complement his usual daily movements by participating in experiences involving exercise of these unused muscles. Industry recognizes this need and is providing facilities and making them available to employees and their families. An example of this is the acreage developed by

*The first number in the parenthesis indicates the number of the reference listed in the bibliography. This form will be used throughout this report.
the North American Aviation Corporation of Columbus, Ohio, as a park for the enjoyment of outdoor living by its workers. The individual recognizes this need and as a result is more selective in his recreational activities.

The relief from toil offered the worker of today, many times limits the opportunity for the expenditure of energy in proper amounts. Man by nature must burn large amounts of energy. The person restricted in this way during work will be found tense. He will select activities of a more vigorous nature during his leisure. Slavson, in his book titled, *Recreation and the Total Personality* (65, p. 34), expresses this need as one of "movement." He writes: "Biologists have observed the fact that man is structurally organized for movement." He goes on to relate that movement, in a vigorous sense, no longer is required for life's essentials or for escape, as in the distant past. To quote further from Slavson (65, p. 39): "City life and congested neighborhoods, sedentary occupations in offices and factories, repress the impulse for movement and pursuit; and the unconscious response to these repressed needs are a set of recreational activities that involve movement." Evidence of this can be seen in the number of people enjoying boating, camping, hiking, horseback riding, and various playground activities.

Man expresses through his recreation, as well as in other ways, a natural tendency to grow, to improve himself physically, to set a high value on bodily skill and performance. Such types of recreation have long dominated the recreation movement. The inclusion of this effort in education is witness to the value placed here.
This tendency for man to improve his way of living is also shown by the number of leisure hours various members of a family spend in bettering their home environment. According to the November, 1951, issue of the Business Service Bulletin of the U. S. Department of Commerce (73, p. 5), the home workman buys 75 per cent of the painting and decorating industry's products. This recreational pursuit, and others like it, is an expression of man's desire to build, to construct, to make things. A professional person can lose himself quickly during his leisure and find balance in the pleasure of constructing a piece of furniture or a simple ladle from a flat strip of silver.

This urge to construct might be pictured also as an urge for expression. This in itself is sufficiently important to be given emphasis here. The deadening effect of technological power replacing manpower presents a problem of how to offer the worker opportunities for expression. This lack of demand for thinking and action on the job, along with the pressing opportunities for sheer amusement and passive entertainment during leisure hours, tends to nullify this urge toward participation or self-expression. Nash, in his Philosophy of Recreation and Leisure (46, p. 119), gives the following interpretation of this situation:

While lolling on the beach, going to a movie to forget your troubles, attending a college football Roman holiday, and laughing with a comedian have a small place in a day's program, there is a limit to their value. Because a little may be good, more is not better. The danger is that people will be content to putter and never bestir themselves to creative effort. Hence they withdraw, avoid challenges, and step out of life's stream.
The person most enjoyed by others is one who is busy "doing." This person appears to others as experiencing and accomplishing things in life which make a true contribution to all within their influence. This person will be found making a collection of stones, building equipment and preparing for a family canoe trip, making a garden, fixing a storm door, developing pictures, working in clay, making furniture; or engaging in one of many other like activities. Here the person finds bodily action of his own choice, at his own pace. Here tensions are relaxed and frustrations forgotten. Here opportunities for free expression are dominant. Greater balance within the individual is attained.

The physiological and psychological aspects of recreation as a basic need are not to be separated. In the book entitled *Leisure*, by Lundberg, Komarouisky, and McInerny (193, p. 13), the statement is made, "The sociological conditionings of an organism are as truly a part of its biological nature (response capacities), as any other adjustment mechanisms, including the so-called inherent ones." The human being lives and expresses drives rooted in both the physical and the emotional condition of the individual. The nature of man is such that all of him needs activity. And as aptly stated by Slavson in his *Recreation and the Total Personality* (65, p. 10):

Thus recreation can serve a number of purposes to suit one's mood, to utilize available excess energy, or to drain off emotional pressure. Some of the services of recreation to the individual may be classified as those that serve as complementary experiences, as having compensatory values, as serving to discharge aggression, as patterns for regression, as escape from reality, as satisfying *social* hunger, and as resources for solitude.
On consideration it becomes evident that recreation serves to make up for the lack of wholeness in the various efforts in which man becomes involved.

**Psychological Aspects.** To maintain a balance in face of all the forces at play in living today, attention must be given by every person to himself, to the inner self and the drives and urges appearing there. Mankind must be taught to understand himself and his potentials for a rich and full life through recreation. The psychological drives and urges represent a definite force which cannot be overlooked. Their expression in some form is inevitable. Guided expression through recreational activities selected to fit the individual and his needs appears to be the proper answer. As pointed out by Slavson (65, p. 25): "There is no single factor more importantly involved in total health - that is, the physical, intellectual, and emotional health of the individual and the community - than attitudes toward self." Before one can properly participate in self-guidance, in the selection of the proper experiences to balance living, he must know himself.

The joy of recreation must come from within a person. One has only to free himself to give this joy a passage to come forth. Joy cannot be brought to a person; one does not remain in a state of waiting for others to give him happiness. Jacks, in his book, *Education Through Recreation*, (36, p. 43), suggests:

> We misunderstand it when we think of man as though he were an empty receptacle, waiting to be filled up with happiness from sources outside himself. Since the world began, no human being was ever made happy by having happiness poured into him from outside, or ever will be to the world's end. The happiness that man's
nature demands is impossible until the creative part of him is awakened, until his skill-hunger is satisfied. Man's happiness, the happiness for which he was created, comes from within himself. Till then, and till his happiness begins to well up from within through this self-active, creative life, man is living on a starvation diet; he is devitalized; he is in low condition; he is wanting in mind and in body.

The true value of recreation begins to come when one senses the satisfaction of becoming better balanced within. Possibly the greatest joys are private, appearing only momentarily at first, and developing into long draughts of pleasant living as one injects himself into the unfolding experience.

It has been stated in previous paragraphs that man needs to free himself in order to enjoy the satisfactions of creative expression. Some further discussion of the obstacles inhibiting individual freedom appears in order.

It cannot be said that the person is free who has a job demanding great amounts of self-assertion, yet who is unable to counter-balance this during leisure with complementary recreation. Freedom can be limited in many ways. Can the person be considered free whose environment is extremely confining? This, in a time of automation's youth, often means little physical activity on the job as well as little demand for thinking. The concentration of population around industrial centers also extends confinement into the home environment. There is definite need in this situation for education in recreation, as well as for a variety of recreational opportunities. As an aspect of recreation, the person found in this situation will seek to extend himself beyond his environment in spite of the obstacles. This is but
a natural urge for balance. "From birth the human organism manifests an active impulse to growth; this is, to extension, differentiation and integration both within itself and in relation to the milieu."

So state Abt and Bellak in their writing, Projective Psychology (1, p. 47).

It cannot be said that a person is free if the drives within him are not vented or nullified. Though one would like to believe otherwise, not all drives are toward constructive or beneficial ends. Sadistic drives are present and according to psychologists, are sublimated in such experiences as hunting, fishing, collecting insects, taxidermy; and getting in on the kill comes even in bridge, chess and the like. Many of these recreational experiences are entered into by many, of course, without a need for satisfying such a drive. This drive, so vented in recreational activities, frees the person for dynamic balanced living.

Aggression as a drive appears in every individual from time to time and therefore must be directed. Concerning this, Slavson in his Recreation and the Total Personality states (65, p. 38):

'Man like all animals, is fundamentally aggressive. Aggressiveness is a basic law, a necessity of life without which animals could not survive. In some animals, aggression is unrestrained. In man, it is regulated and controlled; otherwise social life would not be possible. Beginning with the nursery and through later stages of development, the child’s aggressions are curbed or redirected. He is guided at first to substitute games for biting, scratching, and hitting or throwing. Later, serious activity takes the place of these games. Thus, various throwing and catching games are introduced. As the child grows older, these sublimated aggressions take on the form of exploration - such as taking his toys apart - and may become scientific curiosity, social
leadership, invention, and other forms of exploratory-aggressive activity.

Here is a picture of balance, against dominant and easily misguided urge. Any one of the sublimating activities suggested can be called recreation; for recreation is accomplished when the satisfaction of greater balance is felt.

Another urge of man served by recreation is the desire to regress. Frequently a person will recognize the freedom enjoyed by a child. The child expresses his emotions freely and does not accumulate them. As one gets older, emotions tend to become restricted. Tensions, and unbalance result. To "let go" periodically will restore balance. This craving for the freedom of childhood can be guided toward advantageous action to many. Youth group leadership offers many opportunities for recreational activities of a regressive nature. The successful leader enjoys getting with the group and sharing. Gratifying this urge in this way serves a need of the individual and of society.

What has thus far been given here supports the statement that the recreational experiences in which an individual is found participating, represent the expression of unconscious drives and physical and emotional pressures. These experiences indicate the individual's attempt to gain greater balance in living. The success of these experiences is based in great part on the proper interpretation of self and on adequate self-direction by the individual of his recreational activity, beginning with selection continuing through action, and emerging finally into resulting change.
The Sociological Aspects. The changes which have taken place in America in the recent past have been such that every aspect of life has been affected. This country has moved from being predominantly agrarian in nature to being industrial. Many changes have stemmed from this movement alone. As pointed out in a survey of America's Needs and Resources by Dewhurst (24, p. 346), "American workers today put in an average of forty hours a week on the job. The five-day week is now almost universal. Vacations with pay are an established custom. Old-age insurance and pension plans permit more of the aged to retire." It becomes obvious that leisure as a product of the machine is here to stay. Dewhurst goes on to say, "Man's survival today no longer depends on endless toil. Machines, while turning out untold commodities and appliances for his comfort and convenience, have also yielded him leisure hours undreamed of even fifty years ago." The activities in which man becomes involved during his leisure are closely tied in with the general economic condition of the country. As Hutchinson, in his Principles of Recreation, puts it (35, p. 55), "The multibillion-dollar economy under which the United States functions has an effect upon the pecuniary aspects of leisure activity." The closeness of the relation of the economic aspect of leisure to the very important social adjustments of individuals and society emphasizes the necessity for an understanding of these two, the economic and the sociological. An understanding of both aspects is needed in order to gain a more complete concept of leisure.
The Economic Aspects. The machine, in recent years, has made man a heavier consumer. Increased consumption occurs during both work and leisure. Greater control of power through the machine, makes it possible for a worker to process more in less time. For this the worker is rewarded with higher take-home pay than ever before. And in spite of the lowering in the value of the dollar, Americans find the purchasing power necessary for many products of industry not even in existence in the past, and for many more, once considered luxuries. Americans today, as compared even with the recent past, have both more money to spend and more time to spend it. (See Table 2, p. 38.)

Tremendous markets are created because of the interests and activities pursued during the leisure of the citizens of today's technology, as stated by Dewhurst (24, p. 346):

Recreation is recognized as necessary to individual and community well-being. Supplying the means to it is the job of hosts of federal, state and local officials, businessmen, promotion men, actors, musicians, artists, thousands of men, women, boys and girls who work in public and private places of amusement. Recreation is big business; it is an important item in the budget - both public and private.

The importance of recreation to the citizen of today is more vividly seen when the figures of expenditure are considered. Taken from a tabulation offered in the 1956 Statistical Abstract of the United States (72, p. 297), the figures related below showing dollar expenditures for recreation are quite revealing. In 1929, $4.3 million were spent for recreation. In 1940, it was $3.7 billion, and in 1954, it was $12.2 billion. Actually, these figures represent an
expression difficult to define clearly. Expenditures for items which overlap into other areas were not included even though they can be considered recreational in nature. Brightbill and Meyer, in their book titled Recreation: Text and Readings (11, p. 36), state, "There is no way of accurately estimating how much is spent each year for recreation in America. Estimates depend on the items included."

For example, the consumption of food and of liquor, soft drinks, tobacco, candy, gum; certain articles of attire, such as bathing suits and sport clothes; also a great part of motoring costs; many educational efforts, and some religious activities, might be recreational in nature, yet none are included in the figures mentioned because of the difficulty of drawing the line. The figures related above are based on an estimate of the United States Department of Commerce as total consumption expenditures for strictly recreational goods and services. This total of the expenditures for recreation would be greatly increased if, for example, the following figures from America's Needs and Resources, a Dewhurst survey (24, p. 347), were included. The 1950 expenditure for vacation travel is conservatively estimated at 12 billion dollars, 8.1 for liquor, 4.4 for tobacco, and 5 for sport clothes, candy, soft drinks and chewing gum; a possible total of 40 billion dollars.

Even though the tabulation of expenditures does not include the above-mentioned items, actually it does cover a wide variety of goods, services, and organized activities representing expenditures of individuals and government. The total of between 10 and 11 billion dollars in 1950 represents, for the most part, government spending for
operation, maintenance, and expansion of parks, playgrounds and other public recreational services. Individuals spend money on sports, such as golf, tennis, swimming, skating, billiards, bowling, the spectator sports of football, baseball, horse racing, automobile racing, hockey and the like. The stage, motion pictures, amusement parks, circuses, also draw upon the individual's purse. Dues of social clubs and organizations of various kinds are included in the expenditures for recreation.

Goods of various kinds make up a part of the total. These include radios, television sets, record players, musical instruments, toys and games, sports supplies, hobby tools and materials, and a great portion of books, magazines and newspapers. This summation shows quite clearly that the effort to supply Americans with their recreational needs is of definite economic significance.

A reading of the findings listed in the U. S. Census of Manufacturers (71, p. 39B-4) and the U. S. Census of Business (70, p. 2-21) reveals that the effort to serve America's recreational needs has grown to big business proportions. These figures show that in 1954, more than 500,000 workers were engaged in the manufacture and distribution of recreational products. In addition, the 1954 Census of Business showed that more than 434,000 persons were employed in commercial amusement establishments, numbering over 73,000; reporting receipts of 4.3 billion dollars, and paying over 1.2 billion dollars in salaries and wages. If government employees are added, it becomes obvious that more than a million workers gain their livelihood from
the field of recreation. And this does not include operators of motels and automobile service stations or others who profit from the tourist trade.

Sociological Aspects. The facts related above make up a picture of the dynamic nature of the economic aspect of recreation, and also give some indication of the sociological implications. The individual's economic status greatly influences the kind and the amount of recreation in which he participates. That recreation is getting more consideration is proven by the figures just related which show the gain in the past decade.

Gradually, the importance of giving attention and planned organization to man's expression of his need for recreation has been recognized by various institutions within society. As pointed out by Slavson in his book Recreation and the Total Personality (65, p. 18), "Society has been slow to realize the damaging results of the pressures of a complex, concentrated population, bored with the specialization. Only after all too widespread breakdown of the personalities of many young people and adults has action been apparent."

Recreation, in the form of consciously organized group effort, was not always so badly needed as it is now. The make-up alone of communities in earlier times offered many opportunities for wholesome recreation. Large families and large home areas, for example, were conducive to more balanced growth and living. From large home areas suitable for tree-house construction and space for youth-constructed bunkhouses, there is evidence in the do-it-yourself movement that
Americans are developing indoor and outdoor game areas and making available the tools and materials for the wheeled creations of the young inventor. This do-it-yourself movement is dealt with more fully in Chapter III, page 51.

Today the challenge of leisure, or "threat" as labeled by Cutten (23) in his writing, The Threat of Leisure, involves the state and federal governments, educators, social workers, recreation leaders and psychiatrists. As shown in Table 1 below, taken from Dewhurst's America's Needs and Resources (24, p. 371), government expenditures for recreation were quite small in the year 1913, amounting to $49 million dollars. At the end of the fiscal year 1950, they had increased to $103 million. This indicates a definite movement toward proper action being taken and responsibility being assumed by a major division of the social structure.

Table 1
Government Expenditures for Recreation, Fiscal Years Ending 1913, 1932, and 1950 in Millions

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<tr>
<th>Division</th>
<th>1913</th>
<th>1932</th>
<th>1950</th>
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<tbody>
<tr>
<td>Local</td>
<td>$45</td>
<td>$181</td>
<td>$327</td>
</tr>
<tr>
<td>State</td>
<td>3</td>
<td>24</td>
<td>52</td>
</tr>
<tr>
<td>Federal</td>
<td>1</td>
<td>15</td>
<td>24</td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
<td>220</td>
<td>403</td>
</tr>
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The expenditure of each of the three levels of government indicate that each is becoming increasingly concerned with the challenge of leisure. As indicated in the above table, the federal government spent 24 times as much in 1950 as in 1913. The state government, using the same years for comparison, spent a little more than 17 times as much, and the local government over seven times that of 1913. These figures reveal that all levels of government are attempting to do more toward meeting recreational needs. The fact that federal and state governments, increased their expenditures much faster than the local, raises the question as to the why of this development. Hutchinson, in his Principles of Recreation (35, p. 56), suggests three possible answers:

(1) The local government's source of income does not keep up with local demands; (2) More people are attending national parks than ever before (see Chapter III, p. 55); (3) The mobility of the population varies the demand from a purely local one. These last two points will be dealt with in some detail in the next chapter. Concerning the first item about local income and demand; an observation should be made here to indicate more clearly, local expenditures as related to those of other levels of government. Referring once again to Table 1, it will be noted that for the year 1950, of the total expenditure of all levels of government for recreation, the federal government's expenditure amounted to approximately six per cent, the state government's about 13 per cent, and the local 81 per cent. Where the previously noted figures indicated a trend toward more spending throughout government, with the federal government increasing its spending the
fastest, it is shown that local government is yet assuming most of the responsibility.

The picture of the social aspect of recreation would not be complete without narrowing this scrutiny down to where the individual appears in proper perspective. Actually, recreation is an individual thing, occurring only within the individual. As mentioned earlier, "self" is the key to recreation. The importance of self-understanding and of self-expression cannot be over-emphasized. This concept of self, when accepted by an individual, has its greatest contribution to make to living. This supports the premise that both the individual and the group must be considered in the development of recreational practices. Otherwise, one or the other may suffer. The individual may find a kind of recreation seemingly beneficial to him yet detrimental to the group. Group-planned recreation must likewise consider recreation from the standpoint of agreed-upon objectives selected by the group. Even so, these objectives must be centered on the individual, or recreation will not take place. Recreation planned in this manner will have a greater balancing effect against the pressures within the individual, as well as adjustment and balance in the relation of the individuals, one to another and to environmental conditions.

Concerning the need for careful consideration of the social aspect of recreation, Hutchinson (35, p. 75) suggests "Recreation as both a social force and an experience for community groups deserves careful planning of certain phases of the program such as organization, leadership, and achievement." Hutchinson places the importance of
recreation as a group experience above that for the individual (35, p. 64). In the development of recreation the lack of social planning has in many instances increased the complexity of such problems as segregation, cultural recreation lag, recreational financing, indiscriminate alcoholic practices, and gambling. On the other hand, too little effort is expended toward providing suitable activities in which the family group may participate. Finally, directed effort to provide for the leisure needs of oldsters had lagged. Recreation as a responsibility to be met through planned effort on the part of public organizations will be dealt with later in this study. It is sufficient to say here that it can be seen as a basic human need of ever increasing importance.

A Counter-Balance in Living. The several aspects of recreation as a basic human need thus far outlined involve certain forces at play upon the individual. These influence his expressions, experience, and living. The resulting reaction of an individual to these forces can bring about balance within the individual and to those within the reach of his influence. Their value must be weighed in view of their good to the individual and to society. Recognizing the pressures at play upon living today, in both the realm of work and leisure, it becomes obvious that there is need for constant study, not only of the pressures themselves, but also of a counter-balancing force and technique. It is here proposed that planned and guided attention to a program of education in recreation, designed to meet the needs of the individual as he lives within the group and under the forces therein, be given definite attention.
Recreation - A Responsibility

Man has long made a careful study of the technical aspects of his efforts to gain more power. He has for some time recognized the necessity of study, - better to control the political and economic aspects of living, - the social sciences. Unlike many areas of the world, Americans felt that progress depended upon the degree of responsibility assumed by people toward work. Early citizens were quite emphatic in their position as to the value of work, and were equally set against leisure.

As conditions have fostered and then focused attention resulting in improving the technical, political, and economic aspects of life, conditions now demand a closer look at leisure which requires an attitude of equal responsibility toward its proper existence.

Lessons from the Past. The challenge of leisure can be sensed in the words of Nash in his book Philosophy of Recreation and Leisure (46, p. 20). He states, "To use leisure intelligently and profitably is a final test of a civilization. No great one has yet developed leisure on a large scale as a social pattern and lived." Where leisure predominated in past civilizations, it was based on human slavery. Today technological power is the slave which provides ever increasing amounts of leisure.

As man applied himself and improved his tools, he found his living improved and more leisure. He found it easier to gain the necessities by the use of improved tools. This has been the incentive for constant effort toward technological progress. He found, even in primitive
times, that leisure gave him time to improve his surroundings, to
develop his tools, and to express himself. Cutten, in his book, The
Threat of Leisure (23, p. 2), states, "In fact civilizations were the
product of leisure." And of the past, Neumeyer in their Leisure and
Recreation (52, p. 15) point out that many lasting expressions of value
were developed largely during the periods in which there was a group
with time free from labor to create. As stated by the Neumeyers (52,
p. 16), "Art, music, dancing, sculpture, painting, personal adornment,
religion, mythology, magic medicine, language, writing, social organ-
ization, law, games and dramatic activities, science, and many other
aspects of culture date to the leisure of peoples."

The position is held here that even though some of the leisure
of the past resulted from human slavery, much of that which is con-
sidered to be of value to mankind resulted from the existence of
leisure. The challenge of modern technological culture is not so much
how to produce leisure, but how to use it.

As time passed man became wise enough to throw off the bonds of
slavery. Work, skill, and craftsmanship were elevated to a place of
esteem. Leisure was held in low regard for centuries. Even in this
country, it has been only after leisure was thrust upon us that society
began to awaken to its responsibility. What was best for another
generation must not be allowed to deter this generation. Concen- tration
on working for a living was the philosophy of Benjamin Franklin's
day. He was one of the most frequently heard proponents of this
philosophy. Leisure was frowned upon as wasteful. Work was the
watchword of the day. A living was produced by diligent application
involving long hours. Diligent application has produced for America an even better living, with leisure as a by-product. To enjoy this leisure, sincere and diligent application here too is demanded.

Growing Concern. "The social changes which affect the group life of people, but lack the direction or adjustment needed to keep societal organization, cause confused situations within society." This statement by Hutchinson, taken from Principles of Recreation (35, p. 55), reflects the attitude now being taken by social scientists with reference to the importance of adequate leisure and recreational activities for balanced living. He goes on to say, "So much confusion bears directly upon how people use leisure that it behooves all recreation leaders to re-evaluate the total leisure life of people to identify those contributions recreation can make to establish some modifying control." As pointed out earlier in this chapter, it is important for all aspects of this problem to be considered, the physiological, psychological, economic and sociological; for man moves within a climate where each of these is present in constantly varying degree. The immensity of the challenge and the greatness of the opportunity for better living are both being realized. That there is growing concern is indicated in such writings as The Threat of Leisure by Cutten (23, p. 86). His concern about leisure is reflected in the following statements:

It is certain that in most cases we are not making the correct use of it at the present time; can we be depended upon to do so in the future? The problem before us in the nineteenth century, and in previous years, was the creation of wealth; we have solved that. The problem before us in the twentieth century is the proper
utilization of our leisure; we have taught men how to make money but now how to spend it, we have taught men how to obtain leisure but now how to use it, and the salvation of our civilization depends upon whether we can teach them the latter, if, we know how to teach.

To give some direction this effort as a responsibility of industrial arts education is an objective for this study.

The conditions in this country shown in reports on the amount of crime and delinquency have roused the population to the point of concern. As shown in the discussion on public recreation expenditures, there is action to be seen toward meeting the situation. These figures are evidence of a belief that guided recreation is a crime preventative force. However, one institution, namely, government, cannot do the job alone. There must be education for recreation. That education for the proper kinds of recreation is needed is evidenced by the above reports of crime and delinquency. On this very important point Nash in his Philosophy of Recreation and Leisure states (46, p. 204), "In a democracy there must be an opportunity for each man to acquire a number of skills. Not only the genius but the average man requires profound stimulation and incentive toward creative effort and the nature of great hopes." Concerning himself with the adverse forces within a community, Nash goes on to say, "The tawdry forms of commercial spectator recreation afford no hope, and only a faint hope comes from our recreation centers designed to cater to people en-masse." Schweitzer, in his Philosophy of Civilization (63, p. 13), deplores the fact that man's "creative and artistic powers are atrophied." As pointed out by Schweitzer, man cannot move himself to high level accomplishments unless he is free to express himself. This
points toward an important aspect of the concept of recreation, a concept not generally realized. Participation through self-expression represents a force to offset the pressures which tend to lull man into inaction, and eventual degradation. It is the creative-recreation concept which must be spread.

Cultural Improvement or Disintegration. Leisure is no longer considered as degrading or unwanted. Though tradition would say there is little good to come of leisure, the feeling now prevails that it is something to be desired. Recreation is now considered to be an individual's or group's right. More than this, it is the individual's and the group's responsibility and challenge.

To guide recreational endeavor, it seems fitting to base it on sound objectives. In seeking the proposals of the authorities, those of Hutchinson in his Principles of Recreation have been chosen (35, p. 14). Stated quite simply, they are, "The general objectives of recreation are enjoyment, enriched community living, and individual fulfillment." In the recent past, play, and the enjoyment attached, was considered detrimental. More attention is given today to the quantity and more important, to the quality of recreation experiences. These appear as recreation's greatest challenge, for in attention or the lack of it to these two lies the way for modern civilization either to go astray or constantly to find re-creation. Cutten states in his book, The Threat of Leisure (23, p. 86), "We are looking upon it now as an opportunity which may be used for inestimable benefit, or misused for inevitable destruction."
The Responsibility Defined. Man's need for recreation indicates the need for resources to implement the situation. As pointed out earlier, the community thus far has assumed the greatest portion of the financial burden involved. To meet the challenge of leisure, careful planning is necessary and as suggested by Cutten (23, p. 113), "It shall be through communities organizing to bring about desirable means for occupying leisure time." And further: "The individual will be trained to spend his own leisure in a satisfying manner."

The Need for Leadership. Many forces have been mentioned, which, if left unguided, will assume such dominance as to enslave or destroy man. "Is there no call for another kind of leadership at the leisure end of life?" Jacks (36, p. 17) asks this question when considering the leadership which has long been evident in the world of work. He maintains that leadership and effort in work must be in harmony with leadership and effort in leisure. For, as he says, "Your recreational leader otherwise might conceivably become a promoter of sports and games, the effect of which would unfit the worker, either mentally or physically, for his occupational function; and the industrial leader, on his part, might be a promoter of work which equally unfit the worker for recreational interests, at least of the higher forms." It is proposed that industrial arts is uniquely fitted to assume a position of leadership in education for recreation. A statement outlining the opportunity and direction of the possible contributions of this area of educational effort will follow the completion of the study relating the definition and status of recreation in Chapter II and III.
Recreation - Defining the Term

It becomes difficult in the case of recreation to settle upon a single statement applicable to every person or situation, for what may be the nature of recreation in one situation, may be work in another. Recreation can be said to be in response to a situation that takes place within an individual, which adds to or brings him nearer to a state of balance or freedom.

Recreation as Re-creation. Essentially, recreation is something that takes place within the individual. A game of golf is not recreation, in view of this statement, until there is a leveling or balancing response within the participant. As pointed out in Recreation and the Total Personality by Slavson (65, p. 2): "Recreation does not consist of what one does, it is rather the motive, attitude, and value of the doing that gives recreational significance." This statement is fundamental to the concept being outlined here. It is agreed that motive and attitude are important in bringing about recreation, as mentioned by Slavson, yet the values or feelings, new reasons, new zest, and fresh strengths for living, mark a true "re-creation" of the individual.

In earlier sections of this chapter, concerning the physiological, psychological, economic, and social forces at play upon an individual, it was pointed out that these forces resulted in a need for other forces to act as counter-balances for the purpose of freeing and refreshing the individual for dynamic living. This too more clearly defines recreation as re-creation.
Recreation and Work. In surveying the thinking by writers on the subject, re-creation has been made almost exclusively a part of leisure. In view of the above statements or definitions, recreation does not take place only under conditions of leisure. Depending upon one's frame of mind and intent, recreation can take place either at a time one is diligently applying himself to the task of earning a living, or during the situations involved in leisure. It is here conceded that environmental conditions during work often are not conducive to the creation of attitudes necessary to re-creation. As pointed out by Hutchinson, Principles of Recreation (35, p. 4), recreation involves voluntary choice. It is difficult to guide oneself into re-creative experiences when working for basic needs.

Willis R. Whitney, director of the General Electric Research Laboratory from 1900 to 1932, was presented with a simple question concerning insects living in a vacuum. He presented it to first one and then another member of his staff. All laughed at the idea and indicated the project was so foolish that they wanted nothing to do with it. He took the project himself and made some simple tests and startling discoveries. His conclusions furthered his personal philosophy: to find meaning requires a desire to see meaning. He calls the desire and process of finding meaning "re-creation." He was known to ask his assistants in the laboratory what fun were they having that day? Here a man saw re-creation as a part of the labor of living. An interesting account of this man is found in the book (83, p. 373) American Science and Invention by Wilson, as well as in the Philosophy of Recreation and Leisure by Nash (h6, p. 110). The "stigma," which
he says is often attached to work, "may be removed if it can acquire meaning." If the worker who pauses a moment to consider the perfection of his work does not gain from the sense of accomplishment, he is not refreshed or re-created for greater accomplishment. He can be brought to greater balance by devising a more advantageous way of performing a task, redesigning a tool, or reorganizing a procedure. By this experience, he enjoys work, is having fun, finds meaning, and experiences re-creation.

Recreation and Leisure. The characteristics of leisure offer many opportunities and few restrictions to the individual seeking to satisfy his need for recreation. Leisure involves a time when a person is not obligated to winning a living and is relatively free to choose his activities. However, considering the number of pressures and demands for his attention and time that are brought to bear upon a person during leisure, it becomes in reality quite difficult to maintain a balanced leisure as is the case in work life. In fact considerable concentration is necessary to sort the good from the bad, among the opportunities for spending leisure.

There is little logic in stating that a particular activity is recreational or to say that recreation takes place only at a particular time. It occurs when a person wills to put out the effort to give meaning to a situation in which he senses the feeling of release, of freedom from pressures, of gaining greater "balance." This can happen either at work or leisure. According to Jacks (37, p. 76), in Education of the Whole Man, "The finest sorts of work and the finest sorts of play are hard to distinguish from one another." This further
supports the stand which proposes that recreation involves an attitude sorely in need of cultivation in order that proper choices will be made to meet the challenge and the opportunity of the times. Jacks goes on to say, "It is only on the lower levels that work and play stand in contrast. On the highest level they become two names for the same thing." And further from Jacks, "The only reason a wise man can give for preferring leisure to work, is that leisure affords him the opportunity for better work." A person taking such a position as this will find many experiences that lift him into a realm of enjoyable living. He will, by this conscious effort toward balance, find joy in fuller living.

Summary

Man, by nature, seeks balanced living. At times he has had little to work with and much to work against in his quest for a happy life. In order for an individual to progress toward the good life, he must look into himself and determine his strengths and weaknesses, or potentialities. He must be able to recognize the forces at work within himself. Equally, he must know the effect that environmental forces have upon him.

The forces at play within and about an individual involve both the mind and the body. A study of the effect of a pressure on one must involve the study of the other. Man's efforts toward supplying the need for relaxation from these numerous and varied forces or pressures of living are actually an expression of a need for recreation.
Each individual must recognize the presence of such forces as bring about unbalance. Some examples are the conditions of work, the cramped conditions of the home, the need for expending the energy now exerted by the machine, the lack of opportunity for creative expression in the world of work, and so on.

Concerning the psychological aspects of living, it is recognized that recreation is a matter of mood or attitude in which one finds it possible to place himself. Joyous living is a state of being. It does not come from even though it may be influenced by another person or situation. It is cultivated from within.

America has produced goods and services to meet an ever increasing number of needs and desires. The average worker's burden of work has been reduced from a point of drudgery to one of relative ease. Where work once challenged either his bodily strength or his mental capacity or both, it may now rouse neither to a demanding effort. Recognizing that it is easier to continue to punch buttons and not think, to pay someone else to "do" the thing which is amusing, the fact remains that there is little return in true value for the effort put forth. The delinquency, crime, and mental cases prevailing prove this, for these are but evidence of man's need and search for balance. Such disorders are but unguided expressions of aggressiveness, escape, release, sadistic urges, and other psychological forces. Activities offering acceptable ways of relaxing and/or venting these urges is the only answer. Only then, within the individual, will a sense of recreation develop.
The economic pattern of the times has not only eased man's work, it has influenced his leisure also. Man has found that left on his own leisure, he will frequently use poor judgment resulting in damage to himself and to his fellow man. Recreation has become big business, it has become highly commercialized. However, negative as well as positive recreation is being promoted. Proper selection and control must come through educated judgment. Education and scientific effort for guiding recreation are equally important to man's future. Regardless of how many goods and services, or how much leisure man produces, if he does not know how to maintain balanced living in face of these products, cultural progress will be hindered. Recreation as the counterbalance, can therefore be considered the answer.

Recreation involves certain motives or attitudes and living values to be sought and accomplished in any situation, whether it be work or leisure. Recreation is the satisfying experience of giving value and meaning to life. Recreation is re-creation, an experience of movement within an individual which releases him from the restrictive forces about him and opens the way for self-expression. Recreation is an ever present human need requiring the constant attention of every person. Recreation is a challenge and an opportunity which must be faced by society's institutions.
CHAPTER III

RECREATION - A CHANGING PICTURE

The forces within society which exert pressure for change can influence recreation just as they do other aspects of living. The study of these forces and the tracing of the resulting changes make possible better personal and social planning for recreation. A constant analysis of the changing picture of recreation by individuals and groups, aids in giving proper direction to the recreational movement.

Conditioning Factors

The forces within society which influence life might be called conditioning factors. Some of these are quite evident and are quickly made a part of all planning. Others, even though strong, often are not so easily seen. These should be studied in order to be guided toward aiding man in his quest for a better life. An attempt to recognize some of these forces is made here.

Power for Work. That man has power to make a better life is made obvious by observing the products and services available. Power was first sought to lighten man's work load. Other applications have developed at the same time. In Chapter II, it was recorded that the source of technical power for work has increased tremendously. Power
applications in the past decade are seen as a trend indicating that even greater energy sources will be tapped in the immediate future. Science hints that even greater sources of power are waiting to be converted to practical use. One such prediction was vividly recorded recently by the Bell Telephone Research Laboratories in a film entitled "Our Mr. Sun" (6). Here the viewer is startled by the possibilities of the power resources at hand, as for example the solar battery.

Greater power for work has made it possible for man to gain his living in fewer hours than previously. From Table 2 below, which is an interpretation of the findings recorded in America's Needs and Resources (21, p. 40 and 1073), it can be observed that man has many more hours for leisure than ever before. The estimates for even the near future indicate that the average man can look forward to being required to work even less than he does now.
Power for work has not only shortened work hours, it has also extended human effort to the point where its value has increased, benefiting all concerned. In the last column of the above table, estimates of increased value of work efforts are shown in the form of greater income per man-hour of productivity. Based on 1950 prices, this shows that income per man-hour, multiplied almost 10 times between 1850 and 1950. It can therefore be said that through increased resources for work, man has produced not only more leisure, but also more income for pleasurable living.

The extension of man's productivity and the subsequent rise in his status, are vividly seen in such tangibles as farm tractors, grain
combines, bulldozers, ditch diggers, land clearers, lift trucks, conveyors, electronic controls, computers, assembly lines, automatic machines, and the list is endless. Using the job of the bulldozer as an example of how man has multiplied his effort, the following comparison can be drawn. A generation ago one man and a horse-drawn scoop would have taken a full week to dig a basement. Today the same job takes a bulldozer or shovel operator less than a day.

The application of power in automation is one of today's technological wonders. The Automobile Manufacturers Association relates in their Automobile Facts (4, p. 1) under the title "Electronic Marvels Speed Automotive Progress,": "An example is the 32-station machine in use by one manufacturer. It performs 198 fully automatic operations while machining all of the holes in the top and both cylinder head faces of a V-8 engine block." It can be assumed, however, that even completely automatic production facilities are not able to operate without attendants. Trouble shooters and maintenance workers are needed to keep the equipment functioning properly. This suggests the existence of a need for more workers of higher qualifications than mere machine operators. These men must understand the intricacies of highly complicated devices.

W. C. White of the General Electric Company, in an address before the Institute of Radio Engineers, quoted by Dewhurst (24, p. 871), named "electronics as the new tool which enables us to do things electrically that require the use of the human senses, such as hearing, seeing, speaking, and smelling, and also need a muscular response but
not the thinking part of the brain." These mental labor savers not only do what the human being does, but like the muscle labor savers, they do it more efficiently. This then presents the worker with greater opportunity and challenge to apply his creative talents to his work environment. He may, for example, concentrate on the further improvement of his machine or operation.

The tremendous resource of power which technology developed is being used to relieve and supplement man's effort toward progress. Though this power can become a negative force at times, it can also be viewed as a positive force. It is this positive approach to the results of power for work which will make the changing picture one of progress. When the worker sees the opportunity offered in this relief from labor, and takes action, he will gain most. Power for work, as a conditioning factor, relieves a person from the demand of constant attention and effort, and gives him freedom. This must be used for improving and giving greater meaning to each situation in life — those in work as well as in leisure. Just as early man found his life improved as he sought to extend himself and to refine his tools, likewise greater satisfaction will come today in ever growing amounts to the person who diligently seeks, explores, and experiments with ways of involving, cultivating and sharing his talents. In this situation re-creation takes place. It is the result in great part of the availability of ever increasing power for work.

Power for Leisure. The application of power for better living has not been entirely in the area of work. After producing leisure,
power found many applications in leisure. These have changed the leisure of man tremendously.

Probably the most outstanding example of the application of power for leisure is in the realm of motoring, air, land, and water. Here man has harnessed and made available a tremendous force to give him pleasure. The pleasures in the area of motoring have been given a great deal of promotion and made to appeal to all ages. From joy riding and trip taking in station wagons for the family to customizing the car for the teen-ager and to air-conditioned luxury vehicles for the traveler, air, land, and water, the appeal reaches all ages.

Motor boating is another activity where power is being applied by the hundreds of units as Americans take to the waterways. According to an article entitled "Our Outboard - Boat Boom" by Whorton (80, p. 116), offered in Popular Mechanics Magazine (July 1957), the number of boat trailers alone was approximately 15,000 sold during 1956, or 40 times as many as during 1947. These applications of power definitely mark a trend in its growing use for pleasure. The secrets the future holds in the use of power for pleasure are constantly being sought by technicians. That Americans are hungry for an understanding of these secrets is shown by their interest in the various exhibits and shows which display the new applications.

Bester, in an article (7) entitled "New York's Coliseum: Biggest Show in Town," written for the August 1957 issue of Holiday magazine, states that "trade expositions have mushroomed into a tremendous entertainment business. Exhibitors have discovered that the public
is as interested in trade shows, mounted exclusively for professionals within a special industry, as it is in public shows, intended for laymen."

Technological Developments. "The effects of technology have nowhere been more spectacular during the past half century than in recreational activities," so state (24, p. 848) the Dewhurst analysts. Advancements in technology have made it possible for the worker to produce more in less time. This has resulted in increased free time. The average work week of 1850 in non-agricultural work (Table 2) amounted to 65.7 hours, whereas the average work week in 1950 was only 38.8 hours. This alone represents one of the most outstanding changes in the recreational picture. According to this, the average adult has very nearly twice as much free time now, including vacation, as compared with the amount prevailing in 1900. Another source reports that between the year 1946 and 1956, the number of weeks of vacation, for example, increased from 34.4 million to 70 million. These figures, given in a report by the President's Council of Economic Advisors in the February 1957 issue of U. S. News and World Report (76, p. 27), indicate that the value people are placing on vacations is actually showing itself as a trend. Vacations are being used as an incentive by employers, who also recognize their value and use them to attract more and better employees.

In addition to leisure itself, technology has produced many goods and services which represent new and different ways to spend leisure. The phonograph has gone through many changes due to technological
development. The placing on the market of various high-quality electronic components led to the development of a new hobby — the design and construction of "hi-fi" or high fidelity sound reproduction equipment. These kits represent another contribution of technology to musical recreation in the home. It is recorded in the Dewhurst survey that the number of phonographs in use in the United States increased from eight million in 1946 to nearly 27 million by the end of 1953 (24, p. 850). According to the 1956 Statistical Abstract of the United States, radios which came into use in the 1920's, are now to be found in 98 per cent of all homes (72, p. 838). Television became available on a large scale after 1946 and, according to the Broadcasting Telecasting Yearbook of 1956-57 (13, p. 12), 37.7 million homes or about 72 per cent had television by 1956. Radio, television, and automatic phonographs are three examples of technological developments having a dominant influence on the picture of recreation for all ages.

Recreation in the area of hobbies is changing rapidly due to technological advancements. The research department of Curtis Publishing Company reported in the September 6, 1954 issue of Time magazine under the feature, "Life and Leisure," that in 1954 there were 57 million cameras in the hands of some 35 million Americans who spent $720 million for supplies and equipment (68, p. 68). Cameras which will take and develop a picture in a matter of minutes and three-dimensional and home movie cameras and projectors are examples that boost photography as a recreational pursuit.
The development of home-size powered woodworking equipment has given rise to a boom in the home work-shop as a recreational pursuit in recent years. The Small Business Administration of the United States Department of Commerce, through its Business Service Bulletin (73, p. 3) reveals a mushrooming of the market for power tools. They place the estimate of homes which now have workshops at 11 million.

Interest in model-plane building grew rapidly when technological advances made available small size gasoline engines at a reasonable cost. Small electric motors and new developments in plastics have likewise given a surge to participation in model-railroading as well as to other forms of model building.

In the area of sports, science has wrought tremendous changes. Improved firearms, waterproof fabrics for outdoor living, reinforced plastics, nylon, portable boats, tents, and newly designed cooking gear, represent only a partial list of the "new" influencing sports.

Technology has created many products and services which have had far reaching effects upon all aspects of living, recreation included. Facilities for transportation and communication have been developed to such a place that goods and services in these areas now exist which were unheard of in the recent past. In the field of transportation, the developments have been such that the mobility of the population has increased many times over. This has made it possible for man to seek ways of caring for his needs, including recreation, in regions far from what was once considered to be possible.
The automobile and the airplane make it possible for a person to travel to distant places where a particular pleasurable activity can be found. The Automobile Manufacturers Association, as recorded in Automobile Facts and Figures (4, p. 18), shows that in 1956 automobile registrations amounted to over 54 million. In 1954, as reported in The Travel Market, published by the Curtis Publishing Company, Research Department (22, p. 21), more than eight per cent of the vacations taken by Americans were taken by air travel. In 1950, according to the Statistical Abstract of the U. S. (72, p. 948), 341,000 persons held private pilots' licenses. And from the same source (72, p. 355), over one-half of the use of all automobiles fell within the area of recreation. Americans are "on the move."

Another area of development is in the field of communication. Radio, television, and telephone have come to be common possessions within one generation. Improved communication not only has resulted in time saved for leisure, but has also furnished new leisure opportunities.

The list of items developed by science which contributes to the changing picture in recreation is almost endless. Mentioning but a few makes it obvious that technology is moving swiftly into the realm of recreation and making tremendous contributions. It can be said that technology has not only produced leisure but also many ways of spending it. If leisure has become a problem to some, it is to be observed that technology has made available many solutions to the problem. The individual's need for guidance in making technology
serve to improve his recreational living must be met in order for him to move toward balanced living. A more conscious interpretation of technology by education will serve the individual greatly in meeting this need.

Research Emphasis. This is to be felt not only in the technical aspects of recreational facilities but also in the theory and organizational phase of the changing picture. Leisure is something striven for and enjoyed in ever-increasing amounts by the average American.

This recognition of the possibilities for good, and of needs to be served through recreation, led to serious study of this new leisure. Veblen made an early study of how leisure was being used and how its use affected society. He was quite critical of the group which he called "The Leisure Class." He saw many values in leisure for the masses and in his book (77), The Theory of the Leisure Class. He exposed the inequalities of his day and pointed out many needed reforms. This marked the beginning of a trend involving careful studies of recreation along with basic studies of other important social, political, and technical aspects of living. The inclusion of recreation as a part of the study (62, Chapter 18) made by the President's Research Committee on Social Trends, Recent Social Trends in the United States, indicated the recognition of a need for organization and development. Dewhurst (24, Chapter 11) included a study on "recreation" as a dominant need and resource for better living. These studies represent a growing emphasis on research for better living through recreation - a long needed effort.
**Pace of the Times.** The average person in America is under the pressure of forced attention to a fast moving sequence of ideas and experiences involving many incidents demanding decisions. As a result, maintaining balance has become extremely difficult. Fast movement through space and time now appears the order of the times. This pace of the times has definite conditioning effects on recreational planning. Recreation must furnish needed moments for breaking the pace. Additional demanding activities which can also exist in recreation only add to a person's lack of balance. Training in the ability to perceive and to respond should not be overlooked if one is to meet the need of becoming more sensitive to true values and more discriminating in action.

**Changing Attitudes.** Recreation, like any other aspect of life, changes with the social and economic conditions of the times. During earlier times, winning a living in this country demanded long hours of hard work, leaving little time for recreation. Those who had leisure, as Veblen pointed out in *The Theory of the Leisure Class* were in a class all their own, and condemned by the masses (77). Slowly the machine dominated the scene and produced opportunities for leisure for the masses. As this change came about, likewise a change came in the possible value of leisure. The Church once viewed leisure in a negative manner as sinful and wasteful. This institution gradually changed its position and is now assuming a position of leadership in providing needed recreation. Brightbill and Meyer, in their book, (11, p. 5) point out that "widespread acceptance of the idea now that leisure is something to be enjoyed, rather than deplored and studied
rather than ignored, gives leisure time a status hitherto unknown." Leisure is now viewed as offering, even more than work, the greater opportunity for finding meaningful living. Learning how to live is becoming as important as learning how to make a living.

Technology, a tremendous force creating change, offers opportunities for re-creation during both work and leisure. The movement in America toward recognizing the opportunities of freedom for recreation during earning activities is on the upsurge. Work as recreation, however, is not a new theory. Jacks (37) has long been one of the outstanding proponents of this theory, giving it definition in his book *The Education of the Whole Man*. Business and industry see the idea as one becoming more necessary to the proper functioning of their organizations.

Recreation as a need has become of such importance that it is getting more and more consideration. This experience is now considered more frequently available to the many. Effort is aimed at increasing the capacity of all people of all ages and interests, to control, enjoy, and maintain a satisfying life through planned recreation.

**Trends in Recreation**

The picture of recreation includes certain movements within the effort recognized as trends. Defining these movements or trends serves to adjust such effort as is outlined in this study to the prevailing forces of the times. It makes possible the improving of current activities supporting recreation and also the determination
of unused potentials for new and greater contributions. This definition of recreational trends will at the same time define more clearly the responsibility of the individual, the family, the church, the school, and the community.

Recreation as a Need. It can be said that the increased emphasis in the search for recreation makes this an outstanding trend of the times. Many factors in life today contribute toward making recreation a prominent need and an experience common to every person. The increase in the amount of leisure alone justifies the demand for planned recreation. The inability of many people to use their leisure properly, as shown by the accounts of the actions of ill-adjusted individuals related in each issue of the daily news, is seen as a dangerous condition.

Gradually the values to be attained through guided recreation are being recognized. Brightbill and Meyer in their book, Recreation Text and Readings (11, p. 172), have the following to say about recreation as a trend:

The growing significance and importance of recreation challenges action. The needs for, the benefits from, and the values of recreation are constantly increasing. Recreation assumes its place along with health, religion, education, to work as one of the essentials of every individual's personality and every community's social well-being. . . Recreation is growing as a force to ameliorate, prevent, and cure social ills and negative practices in life.

Recreation is no longer considered a privilege of only a small group as in the past; it is now getting more serious study and action from all of society's institutions.
More Varied Opportunities. There is a general trend toward making a great variety of forms of recreation available. As noted in Hutchinson's Principles of Recreation (35, p. 52), "The expansion of leisure activities, whether in games and sports, arts, music, dramatics, or any other area, depends upon the demands made by the people." With the increase in leisure hours and also an increase in expenditures for leisure, man will constantly seek to broaden his field of exploration in an effort to satisfy his need for balance, for recreation. To meet the situation, business and industry exert a great amount of effort not only to meet the specific demands coming from the public but to create demands by presenting new ideas, products, and services. Recreation has become big business.

The tremendous progress made by the average American in obtaining leisure, combined with the influence of such common factors as improved communication and transportation, has resulted in recreational activities becoming somewhat standardized. Even in the face of the availability of a wide variety of leisure activities, certain ones seem to have universal appeal. The Dewhurst survey (24, p. 360) reveals that the movies, motoring, spectator sports, radio and television are sought most frequently. As further observed by Dewhurst: "The result has been a large degree of homogeneity: north and south, east and west, rich and poor, young and old, urban and rural, - all today have a large area of recreational experience in common."

Family and Home Centered Activities. One of the more frequently observed trends in recreation is increased participation in the family and home centered recreational activities. Of the new attractions,
television has had the fastest growth. Related vital statistics, issued by A. C. Nielsen Company and recorded in Telecasting Yearbook, 1956-57 (13, p. 11), reveal that 72 per cent of the nation's homes had television by the spring of 1956.

Another attraction is in the field of recorded classical music. A report in Scientific Monthly for September 1952 (61, p. 188) indicated the sale of classical records amounted to 40 per cent of the total. Before the war the percentage was much lower, or 30 per cent. The high fidelity phonographic equipment now available, assembled and in kit form, has added to this trend of better music in the home by appealing also to the constructive urge of the music lover craftsmen.

The attractiveness of home recreation has been increased considerably by the movement to include a recreation room in the design of homes. This room, with its practical furniture, its phonograph or "hi-fi" corner for listening and dancing, its radio and television sets, its ping pong table and game center, its tools and benches, and the fireplace or "cook-in" equipment, - all act as forces drawing the family and friends together in such a room. The movement to design indoor home areas for recreation is seen as a definite asset in improving conditions for parental influence over the growth of the youngsters in the home.

Coinciding with the inclusion of areas within the home specifically for recreation, has been the movement toward the home members doing much of the work themselves. This "doing it yourself" idea marks a return to the home-made effort which existed by necessity in the early history of America. Machine made items took over for a
time. Many things are being produced in kit form, some with only partially completed tool work. Once again the home-made, now more generally known as the "do-it-yourself" item, is being emphasized. Dewhurst calls this movement "builders-for-fun" (24, p. 359); a term more meaningful for this study. Actually this represents another force which acts to keep the individual occupied at home. Even though it may be the construction of the recreation room, a piece of furniture for the living room, or the repair or replacement of a door, even work to supply these needs can be recreational. Industry has recognized this trend as creating a market for many specially designed items. These items frequently are brought together in the form of exhibits and demonstrations and offered to the public in home shows now appearing annually in urban areas and attended by many thousands.

Involved in this movement is an upsurge of "home crafts." Where pottery making, weaving, leather working, rug making, and the like have long been removed from the home, they are returning as recreational activities for the many who seek opportunities for self-expression. Contributing to this trend are the many items produced by industry in the form of equipment and supplies. People have found new and interesting hobbies in this revival, as well as in the previously mentioned home improvement and maintenance or, "building-for-fun" experiences.

Hobbies. As one aspect of the recreation movement, hobbies have expanded as a result of the wide variety of interesting experiences now within easy reach of the individual. A great number of the hobbies are carried on in the home. The various incentives for
greater participation represent a distinct contribution to the family and home centered recreation trend. As a result of the production of many articles and services by modern technology, it can be said that many new opportunities have been opened to millions of hobby enthusiasts. The amateur photographers and radio operators, the model builders, home woodworkers, and young inventors are presented with many incentives for further effort.

Expenditures in these fields alone mark a trend toward increased participation in hobbies as recreation. Kalmbach, president of Model Industry Association, reported in the Wall Street Journal (42, p. 1) that the public is spending about $50 million a year for hobby kits alone. As pointed out above, technical developments have given impetus to the inclusion of workshops in homes. Figures on sales volume in home-size power tools mark the home workshop movement as a distinct trend. The sales volume of home-size power tools of all kinds as reported by the United States Department of Commerce in its November 1954 Business Service Bulletin (73, p. 3), totaled $159 million in 1953.

The growth trend can be seen by comparing the sales volume of 1946 with that of 1953. In 1946 the sales volume of multipurpose bench tools was $2.25 million, increasing to $24 million by 1953. The sale of single purpose bench tools, all types, amounted to $15 million in 1946, increasing to $40 million by 1953. The greatest increase in volume sales was in portable power tools. The sale of these amounted to approximately $6 million in 1946, jumping to $95 million by 1953.
Motoring. This is an activity having influence on many movements within the changing recreational picture. Vacation touring has become economically important to many sections of America since the advent of the automobile. A 1956 estimate by the American Automobile Association offered in their *Americans on the Highway: A Report on Habits and Patterns in Vacation Travel*, (2, p. 5), reveals that 24 million automobiles, averaging three passengers each, carried a total of 72 million persons on vacation travel that year.

Vacations do not account for all the recreational uses of the automobile. The car will be found in use during daily leisure for travel to the beach, sports events, theaters, picnics, and other amusement areas, as well as just "going for a ride." Each of the places and activities to which the automobile takes the individual has developed in many cases as a part of secondary trends in recreation.

Recreation in the Out-of-Doors. An outstanding trend to which the automobile has contributed is the use which the public now makes of the out-of-doors. A comparison to support this statement might be made between the number of car registrations and the number of visitors to national parks. Table 3 shows how the growth in privately owned automobile registrations has coincided with the increase of visitors to national parks.
Table 3
Motor Car Registrations and National Park Visitors, 1948-1956

<table>
<thead>
<tr>
<th>Year</th>
<th>Registrations</th>
<th>Park Visitors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1948</td>
<td>33,213,905</td>
<td>29,658,828</td>
</tr>
<tr>
<td>1950</td>
<td>40,185,116</td>
<td>33,252,589</td>
</tr>
<tr>
<td>1952</td>
<td>43,653,545</td>
<td>47,379,438</td>
</tr>
<tr>
<td>1954</td>
<td>48,323,909</td>
<td>46,543,678</td>
</tr>
<tr>
<td>1956</td>
<td>54,133,572</td>
<td>54,923,443</td>
</tr>
</tbody>
</table>

As shown in the above table nearly 55 million people visited the national parks in 1956. This does not account for the thousands who visited the many state and municipal park areas. The source used for obtaining this information was The Statistical Abstract of the United States - 1956 (72, p. 189 and 551) and the U. S. National Park Service Tabulations, 1954-57 (75, p. 1).

The automobile has opened new areas and activities for the enjoyment of individuals and families. Many states now publish guides to sights of particular significance to the tourist. One such typical publication by the State of Ohio Development and Publicity Commission at Columbus is titled Ohio Suggests an Auto Tour (56).

Camping, as one kind of out-door recreational activity, has seen tremendous growth in recent years. With the ready means offered by the automobile to get about, it is easy to understand how boys, girls, and more and more families have come to explore the out-of-doors. Using the June 1957 issue of the Ohio Conservation Bulletin as a source (54, p. 27), during a single year (1956), 190,125 campers spent...
one or more days and nights in state park camp grounds in Ohio alone. This is 66,000 more than registered during 1955. This is a trend which is not restricted to Ohio. It is nationwide. In this same issue (54, p. 27) it is reported there was a 19 per cent gain in tent camping as registered by the National Park Service. Ohio makes guides available to the various camping facilities in the state. The National Park Service does likewise for those available in Federally owned locations.

Many private organizations also contribute to this movement. For example, "Campgrounds Unlimited" of Blue Rapids, Kansas, publishes a guide to camping in America entitled Campground Guide for Tent and Trailer Tourist (17).

The automobile industry recognizes camping as a beneficial recreational activity made possible to the many by their product. An example making it evident that the automobile industry recognizes this use of the automobile is Ford Times (27); a periodical with articles inviting the reader to travel to interesting places. The publication staff for this magazine includes a group responsible for an effort called "Recreation Unlimited." The results of this group's work is seen in the monthly articles on outdoor fun and adventure to be had by way of automobile travel. A two-volume publication promoting these recreational activities was produced by this group entitled The Ford Treasury of Station Wagon Living (61). Regularly featured articles on travel and camping as well as other out-of-doors activities appear in many types of magazines. Woman's Day - the home maker's magazine (83); Nature Magazine - for the hobbyist and nature specialist (50); Holiday - for those with the travel bug (34); are but a few. The
space given to travel topics indicates the degree of interest that prevails toward this trend of recreation in the out-of-doors.

Organized group camping has likewise grown. Burns reported in *The Program of the Modern Camp* (15, p. 10) that more than eight million dollars was spent in 1951 for fees in organized camps. Many groups now offer camping opportunities of nationally recognized value. The National Audubon Society's Camps for one (48), and the Outdoor Education Association and their annual National Camp, is a second example (59); both having registrants from throughout America. Much of the country's camping effort is given direction by a national organization called the American Camping Association (3). This organization is designed to further the camping efforts of individuals as well as group camps.

The surge in day camp growth marks another movement in the outdoor recreation effort. Community effort is moving away from the early limited "playground" as the center of the recreation program. Many activities and a variety of areas are now used to meet the broad interests and needs of today's citizen. According to Nesbitt of the National Recreation Association's Consultant Service, camping under municipal recreation auspices grew from 245 cities reporting in 1946, to 415 in 1955. The separate day camps in use during this latter year totaled 971. The movement to the out-of-doors continues.

One movement dominating the picture of outdoor recreation today is the interest shown in boating. This is shown by the increase in the boats plying the waterways near home, to the tripping in the more secluded lakes of the north. An article appearing in the July 1957
issue of Popular Mechanics (80, p. 116) reports that Americans spent $1.25 billion on boating during 1956. This report reveals that in the past decade, the number of people owning pleasure craft has risen from two million to more than six million. This trend is due in great part to the improvements made on outboard motors.

Power boats do not account for all the water travel fun. For example, the Wilderness Outfitters, Incorporated of Ely, Minnesota, equips as many as 125 canoe parties at one time, serving as many as 300 persons. This tripping into the canoe country from this one point alone was participated in by 1500 persons in 1947, growing to 2000 persons in 1957. According to a letter from these outfitters, 10 percent of the groups served are family groups (33). When one considers that boating represents only one of the recreational activities involving water resources, this can then be seen as a very significant movement.

The trek for recreation in the out-of-doors has not all been beyond the home. The number of outdoor fire places and terraces support this observation. Another development in backyard recreation is the swimming pool. The new plastics have been a boon to the young and old alike. A report from the National Swimming Pool Institute in the June 1957 issue of Woman's Day magazine and in the feature "What Goes on Here," estimates (84, p. 12) that some 30,000 home pools were built in 1957, with even more in prospect for 1958. Kits are now offered for assembly by the purchaser.
Many outdoor areas of the home site have been developed as game areas. Industry has made available the necessary equipment to make the game area complete. Badminton, tennis, tether ball, basketball, and shuffle board sets are within reach of the average family. The construction of the outdoor play area itself, its equipment and its maintenance, offer many hours of rewarding recreational activity.

Church Sponsored Recreation. Efforts toward meeting the recreational needs of youth are being accepted by many of the institutions of society. The effort to meet the needs for activities of a recreational nature is now accepted as a responsibility of churches and is seen in tangible form in the new social halls, parish houses, gymnasiums, and craft rooms. One congregation, which is leading the way in church sponsored recreational activities, is the Bridgeport Methodist Church of Bridgeport, West Virginia. This church has facilities for a variety of recreational activities as shown in a brochure (10) outlining its facilities and program. A brief check with the leaders of urban and suburban area churches in and around a typical northeastern Ohio community in 1957 resulted in finding that every church had facilities for guided recreational activities. Churches are working individually and cooperatively to offer young people a recreational experience of a combined religious and social nature. "Christian Youth Fellowship," "Episcopal Youth Fellowship," "National Catholic Youth Council," are but three of many organizations typical of church sponsored groups. Several churches combine their devotional and recreational programs for youth, to form United Youth Fellowships.
The movement of religious institutions into this general recreational program has come about only gradually. It has become definite enough now to be considered a significant trend.

**Private Recreation Groups.** Both Dewhurst (214, p. 371) and the National Recreation Association (19) report large expenditures supporting private organizations contributing to recreation within the community. Large expenditures by such private recreational groups as Boy Scouts, Rotary Clubs, and recreation associations mark a trend of expanding effort to meet the growing need and demand for guided recreation.

**Recreation and the Military.** During the last World War, a movement by the military services took shape as a definite trend in the extension of recreation. The armed services provided facilities and personnel for creative experiences in off duty hours. Actually the effort was aimed at giving the individual a means to gain and retain balanced living, — an evident need regardless of occupation, as pointed out in Chapter II of this study. This function centered around a Crafts Program as a responsibility of the Special Services Division of the Adjutant General’s office. The Army alone has over 1,400 of these installations over the globe. Overseas craft shops are open to children and wives as well as to officers and enlisted men. The program includes work in leather, wood, metal, and ceramics, involving everything from furniture making and refinishing to pattern making (83, p. 34).

**Recreation for the Aged.** Another area of extension of organized recreational effort, marking a trend, is toward meeting the needs of
the aged. Many cities are now offering a recreational program attractive to the aged. One such program is outlined by the Director of Recreation for Older People of Philadelphia, Pennsylvania, in an article in the April 1955 issue of the *Journal of Living* (8, p. 19). Bowen in this article entitled "Fun vs Age" relates that this program, begun in 1946, has met with great success and been viewed as a model for starting a great many others. The success of the venture can be measured in number of participants. It now serves over 5,000 in more than 100 centers, with a yearly attendance of 111,000. The therapeutic force of recreation for older people is now generally recognized.

**Hospital Recreation.** The therapeutic values of recreation extend into what might be called "hospital recreation;" a type of privately managed recreation. A study by Brightbill and Meyer, entitled *Recreation Text and Readings* (11, p. 190), pictures this movement as one long needed. They state:

Skilled, trained recreation workers are doing the same fine things for the hospital community that they have accomplished in the normal city and town. Veteran's Administration, Army, Navy, state hospitals, national, private institutions, and local and other hospitals are finding that trained recreationalists are an integral member of the treatment team; that the ceaseless battle in hospitals against boredom and pain for recovery and comfort must include thoughtful and intelligent consideration of how the first person singular of the hospital community, - the patient, - occupies his leisure.

This movement is not entirely new, but now has become quite prominent.

**Commercial Recreation.** The body of recreational activities which are organized and presented to the public for profit, or by commercial agencies, are on the increase. The tremendous growth in commercial
recreation is one of the outstanding trends of the times. A Report on Recreation for Youth (69, p. 48) by the National Conference on Prevention and Control of Juvenile Delinquency, gives a figure of $10 billion as an estimate of the amount spent annually for commercial recreation. The Neumeyers indicate in their book Leisure and Recreation (52, p. 222) that "Measured in terms of persons participating, commercial amusements reach more people and exert greater influence than the public and semi-public forms of recreation." This reveals the important position held by the commercial types of recreation.

Influence of Increased Spending for Recreation. The increase of public, commercial, and private expenditures for recreation has been noted to influence other social and economic trends. The 1956 Statistical Abstract of the United States records (72, p. 297) consumer purchases of recreational goods as being approximately four times greater in 1954 than in 1940. This trend of increased spending for recreational goods has meant the development of tremendous industrial effort. The cases of the automobile and television industries are two outstanding examples. These have had tremendous influence on the recreational activities of contemporary living.

It is difficult to determine those movements considered to be most significant. Only the more dominant ones have been mentioned here in order to present the concept of recreation and in this instance to note the trends.
Implications

The many factors prevailing upon every American's recreational pursuits, need constant review. Only in this way will the greatest enjoyment come from the many resources involved. The development of energy sources has progressed to the extent that man has been greatly relieved of the physical and mental labors of life. Man is finding more opportunities for self-expression in both work and leisure. Leisure is more generally accepted now as something to be desired. In spite of this change in social attitudes toward leisure, most persons lack the capacity to recognize opportunities for creativity and self-expression, for cultural and artistic achievements and, most important, how to balance these in order to provide satisfying living. Man must diligently apply himself to the responsibility of maintaining a clear picture of recreational possibilities and values. He must consider carefully the actual experiences with which he chooses to become involved. Progress toward a better life comes when one is able to see and make use of the ever growing freedom that the harnassing of power provides.

Many of the conditioning factors and the resulting trends in recreation exert great pressures on the individual, influencing many phases of his existence. These factors tend to influence recreational experiences in work as well as leisure. In the past, few freedoms existed during work for seeking recreation. The machine and yet newer electronic controls, naming but two of the many technological advantages, have freed the worker for even greater creations. In this way man's work becomes daily more valuable.
With increased work values providing increased purchasing power and increased leisure, coupled with industry's innumerable goods and services available for pleasurable living, the average American finds himself faced with a challenge to select many meaningful as well as enjoyable leisure time activities. The task ahead is to give value and meaning to life's experiences, to turn the results of the application of power into beneficial and enjoyable living. Leisure that is worth living must issue out of a work-life that is equally worth living. Power can be the answer to making work-life worth living if its benefits are clearly seen. As technology is extended, there is a loss in value of the manual skills of the workers. This leaves the skill hunger, natural to man, to be satisfied in great part during leisure. As technology contributes more and more of life's activities, these basic creative activities of shaping wood, metal, clay, leather, fibers and other natural materials, drift into obscurity. These can be kept alive and of great benefit by making them a part of leisure. They can become re-creational experiences.

Nature tends to become hidden by the products of a technology. It is therefore logical to assume that the conscious involvement of nature during leisure can serve a need and offer meanings and values difficult to find otherwise.

All elements of society are under the influence of the prevailing pressures and are involved in the trends of the times. The responsibility for coping with the conditions influencing the recreation movement lies, not only with the individual, as might be assumed from the above statements, but must be shared by all institutions. The
family, as one institution, must give consideration to the needs and possibilities of recreation in its environment. The possibilities for control of as well as education for recreation exist here as they do no where else. The responsibility for leadership lies with clear thinking parents.

Education, as another basic institution, holds a key position in guidance towards proper use being made of the recreational opportunities. The person educated to desire beneficial recreation needs few regulations. This represents an area relatively undeveloped. Education for living is coming to be as important as education for making a living.

Religious groups are now assuming a noticeable role in meeting the recreational needs of their people. They are in a unique position to show how recreation and spiritual values can be brought together. Congregations are now feeling the necessity for supporting facilities and programs to meet the recreational needs of their people. In a time of great pressure from all the many creations of technology which make the art of living complex and often disturbing, the church must aid by offering a counter-balancing force.

The community, both local and national, is assuming more and more responsibility for presenting recreational opportunities for everyone. The average American faced with an abundance of free time and innumerable pressures willingly supports public recreation. With the increased value of work resulting from improved application of power, the average worker has purchasing power to obtain many of his desires. The problem resting with the public recreation movement is to make available
the type of recreation which will help society progress. This involves the task of supplying what the individual cannot supply himself. Only as individuals extend themselves will recreation be of greater value to both the individual and the community.
CHAPTER IV

AN INTERPRETATION OF INDUSTRIAL ARTS EDUCATION

Each generation makes its contributions to the constantly envolv­
ing culture of which it is a part. The dominant forces, seen as movements and trends, resources, values and goals, influence these contributions and therefore the progress of each generation. Each force should be consciously resolved. Furthermore, a careful study of these is necessary in order that the individual may be free to live most enjoyably and beneficially.

Education is one institution devised by man to aid in understand­ing and meeting the prevailing forces in life. Technology, developed by man to supply his needs for better living, has developed to the point where it is a dominant and complex force in contemporary living. Industrial arts education has been designed as one phase of education for orienting youth in the contemporary technological culture. Industrial arts seeks to interpret the industrial world and its many forces that affect living. It seeks to unfold the ways of having the products and services of technology give greater value to living.

A statement defining industrial arts education follows. Class notes in Education 856, the Graduate Major Course in Industrial Arts Education at the Ohio State University, the Ohio Prospectus for Industrial Arts, and the bulletin entitled Interpretation of Industrial
Arts (74) were the major sources drawn upon for establishing direction throughout this statement. Additional sources noted at certain points indicate support of specific items giving documented breadth to this statement.

**Derivation of Doctrine**

Education can be said to exist as an institution for the purpose of aiding in meeting the needs of the individual and through him the needs of society. The needs of the individual and of society result from the interaction of individuals on each other and with the many forces within society. The effort to control the interplay of an individual's desires, urges, drives, needs and conflicts with the forces within the culture of which he is a part, make up his daily experiences. Aiding the individual in getting a clearer picture of these basic influences on his life and in developing his ability to cope with them through guided experiences, is the challenge of education.

The various organizations which make up society represent forces of varying import on the life of the individuals within it. These forces must be given a corresponding degree of consideration in educational planning and endeavor. Technology, recognized as a dominant influence in living today, must, therefore, be given careful consideration in educational effort. Industrial arts is one area of educational effort organized to give proper emphasis and value to the study of the influence of technology on the life of man.
To picture clearly and to verify the basic doctrine or statement of position of industrial arts education, it is proper and necessary to point out certain basic supporting statements, here called postulates. These postulates can be divided into three simple, yet firm categories which form the content and the basis of a professional statement of position. They are the human postulate, the economic postulate, and the cultural postulate.

The Human Postulate. There are certain behavior patterns of man which appear regularly enough to be considered as "constants." These appear as a part of both the physiological and psychological characteristics of man. They should be considered fully in educational planning. They can be turned into distinct advantages when capitalized upon. Certain of these constants must be considered in a statement of the position or place of industrial arts education. These constants make obvious both the position and the necessity for industrial arts education.

Basic to the determination of the human constants is to realize that the entire organism is involved in the learning process, the body as well as the mind. To simplify the definition of these human constants they are here classified as physiological and psychological.

Consider first the physiological constants: Man desires activity, - to be active, to do things, to move about. He grows through activity. The young person is an obvious example of the human desire for activity. He is a bundle of energy, difficult to contain and constantly in the need of direction. Freeman, in his book, The Energetics of Human Behavior (29, p. 34) states:
As a living organism, man is that particular kind of an energy system whose behavior is not only an expender of aroused energy but also an attacher of new energy potential. This "open" type of system maintains a more or less constant level of energy transformation and hence does not run down or burn itself out by activity, as does a piece of coal.

Industrial arts has as one of its basic characteristics, the activity or doing approach to learning. An emphasis on observation and participation rather than on listening, characterizes the methods that industrial arts students experience. It appeals to the individual, not only because it is an opportunity to "extend aroused energy" as characterized by Freeman, but also because it is full of opportunities for orientation and experimentation.

Closely related to this constant are other important truths about the human being from which industrial arts education derives meaning and which further define the position of industrial arts. One of these is man's manipulative tendencies. There is a great deal of satisfaction and joy to come from handling objects, tools, materials — using the hands. It is a form of self-expression, another urge of the human considered here to be a constant.

The evident urge of the average American to build or to construct, is another truth closely related to the activity constant. A child does it with blocks. Later he is found building a playhouse with odds and ends of wood and nails. The adolescent enjoys building a hot-rod. And the adult enjoys the "do-it-yourself" effort in his urge to construct. The changing of materials to fit them to human
needs represents an important part of man's efforts, now, as in the past. It is seen in life as technology. It is seen in education as industrial arts. The possibility for contributions to recreational effort begin to appear.

**Skill and excellence** are two constants which are common terms in industrial arts education. They result in bringing recognition by others and satisfactions to the individual.

Consider now the psychological constants: The **desire to learn** is quite dominant in the make-up of all individuals. It is particularly great in youth. It is expressed in the form of **curiosity**—asking questions, seeking the answers to the what and the how of things. These two are expressed early, and as they grow older the why is sought. Curiosity when expressed, becomes investigation, which with guidance can be turned toward research and made scientific. Opportunities for advancing from curiosity to scientific investigation are present in the industrial arts laboratory, presenting the learner with an opportunity to experiment, explore, and investigate. Here young inventors are nurtured, and experience re-creation.

Also to be found are consciously prepared opportunities which promote man's search for freedom through the weighing of values determined by investigation and try-out, and finally resulting in creative expression. These involve the individual in activities demanding the use of his own native and acquired abilities, the discovery and testing of his own facilities and through these, the satisfaction of a very important need, that of self-discovery.
In the problem-solving situations involved in changing materials to have them better serve his needs, the student is experiencing a real and immediate challenge. It is an example of training demanding that he formulate a problem and come to a decision concerning its solution. Many decisions in problem-solving will be based on his thinking concerning real values. Problem-solving situations which demand decisions concerning the right and wrong about quality or design, for example, will frequently involve a moral element. If one is not trained to sense true values and to seek them, the prevailing forces amounting to brain-washing will defeat him. A desire for good is constant with every person. It is a matter of raising the level of values through education by the experiences of the laboratory. As pointed out in Chapter III, it is no longer a question of having enough power to make life easier and freer. The question is whether the human side of man is developed to the place where he can cope with power, involving millions of horse-power-hours, and have it result in the greatest of benefits and freedoms. Many cultures of the past have fallen after having developed great power, because of the lack of human values to support them. In view of the picture of recreation recorded in Chapters II and III, guidance in seeking and finding values in living with the products of technology is seen as industrial arts education in recreation. It is a matter of training each person to appreciate technological power and to understand its implications. Foshay (28, p. 133) says, "that the freedom of all in 1984 depends on the education offered in the immediate future."
The Economic Postulate. This aspect of the American scene, has modern industry as its central fiber. An understanding of this is made difficult by its complex nature. All too often only a small part is seen and not the relation of the parts nor the immensity of the whole. Its dominating influence on every phase of living demands that it be carefully studied, that it be a part of educational effort. In the book (18) How We Live, by Clark and Rimanoczy it is stated that "Because man lacks knowledge of this economic body, he is unable to avoid behavior which injures economic health." This is justification for carefully planned experiences which will aid the individual to see the whole as well as the parts and to direct his efforts to contribute to their maintenance and progress.

Industry was at first a concept of work for survival. Gradually, in the slow process of the evolution of the economic pattern, man extended himself by attaching importance to things about him. He moved from a "finder" to a "creator of things." Wyer in writing about Living in a Power Age (85, p. 3) marks this as man's next great stride. This extension made man's work more productive. In an address to an EPSILON PI TAU leadership group on Work as Education (19, p. 5), Clark stated that "Most of what we as individuals know, we learned from work. Most of what the human race knows, has been learned from what it has done, from its work. This has been true through the long span of history and is still true."

When man chanced to observe nature's way of planting seeds, he soon devised tools for doing this himself and the agrarian economy emerged. As man settled down to till the soil, and exploit animals,
conditions conducive to community life emerged. The struggle for a living soon became a social effort. Urban centers developed. This marks the creation of one of the major resources upon which the present day economy rests, that is, a concentration of labor resources.

Man's progress has coincided with his creation of tools and his learning to control them. The recognition of the tremendous advantages to be gained from quality and quantity tools and from controlled use gave rise to an era of industrialization. In a world of darkness, imposed by slavery, the common man moved by way of perfected crafts toward a higher life. He found a satisfaction for his urge for freedom through the invention and development of devices, tools and machines to increase his power, to lighten his load.

Craftsmanship, the dignity of work, and the role of the guilds marked the birth of a tremendous movement. Man found it possible to develop a second important resource upon which technology rests - the assimilation and use of wealth. With the development of a skilled working force and a concentration of supporting wealth, man needed but one more thing to set him off on the next pattern in his economic development. This one need was "power." With the harnessing of steam by Watt, the development of technical power as a resource mushroomed. It set off a chain reaction of energy-expressions to be harnessed by man which has not yet stopped. The major force shaping the prevailing pattern of the economy is technological power. This now is the slave of man. Today's economy is characterized by the tremendous amount of
energy harnessed to do the world's work. In order to control, transmit, and improve this powerful technological society, not only must its parts be understood, but also the organization of its parts. To see the picture in proper perspective, certain features suggest themselves. These might be used as "touch-stones" to guide one in viewing the technological economy as a whole. They can also be used as possible leads to the discovery of new interests and energy sources for the individual.

The role of man in relation to power in today's technological economy is quite different from what it was a hundred years ago. Even though man was able to supplement his energy with that produced by animals and a little by technology, he still had to work very hard. On the other hand the energy produced today has lightened the energy demanded of man. The major portion of man's effort today is spent in controlling the energy which is produced through technology. It now appears that man needs increasingly to apply himself intelligently in directing this energy. Only in this way can he relieve himself of his many needs and problems. A need for guidance in finding recreation in work becomes evident. Almost limitless power is available now and the projection of current trends indicates that there is to be no leveling off of energy production. Man as the director of literally billions of horse power hours of energy is to be a characteristic feature of a society that is also a technology.

Change characterizes technological society. This is a result of man's finding of new applications for energy sources. The institutions of society are affected by the tempo of the times. A constant effort
must be made to keep society's members informed. This should result in causing the inevitable affects on living to be of a positive rather than a negative nature. Whitehead in his Science and the Modern World (61, p. 207) gives this situation the tone of a challenge. He observes that:

Modern science has imposed on humanity the necessity for wandering. Its progressive thought and its progressive technology make the transition through time, from generation to generation, a true migration into unchartered seas of adventure.

The very benefit of wandering is that it is dangerous and needs skill to avert evils. We must expect, therefore, that the future will disclose dangers. It is the business of the future to be dangerous; and it is among the merits of science that it equip the future for its duties.

Technology, as one aspect of contemporary society, has had tremendous influence on all aspects of living, not just on the world of work. Man, for example, as a purchaser and consumer has found himself with more money and more goods and services to buy than ever before in history. Abundance is to be noted in such forms as more furnishings, more cars, more cultural education, and more leisure. Technology is of such a nature that it touches the personal lives of every individual.

The important position which technology holds has many implications for industrial arts education. The following statements are made to show some of these implications. As education for living, industrial arts must interpret the influence of technology on contemporary life. It is from technology that industrial arts draws the content of its curriculum. Industrial arts, as a study reflecting
technology, represents an interpretation of power for serving mankind's needs. Olson in his dissertation (58) suggests that the program be broken down into such divisions as power, manufacturing, construction, transportation, electronics, management, services, and research.

Industrial arts offers a look at the whole of technology as well as at its divisions. For example, it looks at transportation as a whole as well as at such parts as auto mechanics and driver training. The parts are given meaning by studying their relation to the whole.

Industrial arts must interpret consumption as well as production because all are involved as consumers. Clark in his essay on Work as Education (19, p. 11) states:

As the level of technology rises, the average person must obtain more and more skill to get along well. Just to fix the electric iron, the radio, the vacuum cleaner, the tractor, the refrigerator, the cold storage locker, the air conditioning equipment, the air filter, or the automobile takes skill. A few persons at the top of the income scale can have these things done for them, but the mass of mankind must do them for themselves.

Industrial arts education must keep its curriculum dynamic and abreast of the times. It must interpret both consumption and production.

The complexity of technology demands that the industrial arts laboratory be considered as the base for planning activities involving the facilities of the laboratory, library, industry, and the community. It also demands that research, reading, observation, experimentation, construction, and visitation be participated in by all students. The broader concept is to offer a program of experiences in technology which seek to develop a better understanding of its influence on the individual and on the society in which he lives. Manipulation then
takes its proper place in an experiential program. Industrial arts reflects the context of technology. Industrial arts is organized to capitalize on the fact that technology has given man freedom to attend to his desires for creative expression. Every person must appreciate the opportunity for expression now available in every aspect of living, including work as well as leisure. It is wrong to assume that the machine rules out creative expression in the world of work. Every task and every product can be improved. Each awaits the creative expression of man. Education must promote this aspect of the technological economy. One area of educational effort uniquely equipped to do this is industrial arts.

The Cultural Postulate. A definition of culture given in The New Century Dictionary (53) indicates that it is "a particular state or stage of advancement in civilization or the characteristic features of such a stage or state." Ellwood on page 9 of his book Cultural Evolution (26) writes:

Culture includes all of man's acquired power of control over nature and himself. It includes on the one hand, the whole of man's material civilization, tools, weapons, clothing, shelter, machines, and even systems of industry; and on the other, all of non-material or spiritual civilization, such as language, literature, art, religion, morality, law and government.

Hankins in the book Introduction to the Study of Society (33, p. 380), states that culture "represents all ways of living inherited from past generations, plus all the achievements of this generation which shall be inherited by the next."
The foundations of industrial arts education cannot be considered without giving attention to its contribution to the interpretation and transmission of the culture which exists today. Man as the creator and the very center of culture is characterized first, as an inventor with certain accumulated records and drives to creation, secondly, as a builder with definite supporting traits and resources, and thirdly, as a consumer, which is an aspect of constantly increasing importance. These three make up man's way of life, his contemporary culture. The foundations of industrial arts education must include proper consideration of these aspects of the culture. It can be said that herein lies the true nature or doctrine of industrial arts education.

Man as a builder has had to apply his mind to the control of his own native traits and talents as well as the resources outside himself. Traits which characterize man as a builder can be realistically shown by indicating some creation representing each trait. For example, man as a builder is imaginative—he has conquered the air. He is manipulative, as shown in the development of interchangeable parts. He is constantly searching for an aid, and has developed the electronic microscope. He accepts challenges such as in winning the oil from under the ocean. He has shown great intelligence by learning to harness the power of the atom. He is an organizer as indicated by the mass production techniques which characterize his industry.

A combination of the traits and the resources available, suggest possibilities for man the builder with horizons unlimited, all of which must be sensed by the members of contemporary society.
Better living through intelligent use of products and services is the goal of man as an individual and in groups. With improved efficiency of his tools, man has more time to consume. Fewer hours of an individual's time are needed for production to satisfy his needs. Timewise, man is predominantly a consumer. Consumer literacy, therefore, should be given proportionally greater emphasis in a program of effort in education for living. Offering opportunities for learning about the products and services of technological society in order to realize their full value, is a major responsibility to be assumed by industrial arts education.

As a profession, industrial arts education derives its position from these truths picturing the human, the economic, and the cultural aspects of life. From these, a definition of the function and scope of industrial arts education can be drawn. These functions follow as the next part of this interpretation of industrial arts education.

The Functions of Industrial Arts Education

In order to add to the completeness of this recording of an interpretation of industrial arts education, the functions of this effort are here named and then characterized. Industrial arts, as one phase of educational effort, is designed for the purpose of contributing to the program of education for life in a society which is fundamentally industrial. To serve this purpose, the following functions may be identified: (1) the guiding of the individual in the definition of himself and his technological environment and also his relation to this
environment, or the orientation function; (2) to introduce and interpret such of the technical aspects of this industrial society as require understanding and skill on the part of the person having a need or interest of a specialized nature and/or a desire to specialize in certain occupational possibilities, here named as the technical function; (3) to aid each individual in acquiring experiences and skills in the selection and use of the products of industry and in developing understandings and attitudes concerning the influence of technology on living, or the consumer function; and (4) to provide opportunities to experience and cultivate wholesome activities which satisfy the important need for re-creation, or the recreational function.

The Orientation Function. "To define the correct position or relation," according to the dictionary, is to orient. Every individual needs to define his position in life with reference to all the urges, drives, and pressures from within and without in order to live most beneficially.

As pointed out earlier under the heading of "human postulate" certain truths involving the physiological and psychological make-up of man must be considered in education for moving toward more beneficial living. Industrial arts education is designed for orienting the individual to his own individual make up. Through experiences which offer opportunities for activity, manipulation, self-expression, investigation, try-out, construction, development of skill and excellence, and for establishing and testing values, the student discovers himself. These experiences represent the action phase of the orientation function. He will discover his own interests, abilities and
potentials. And this is made even more meaningful to the student as the activities are related to his environment as well as to the technological economy of the times. Here orientation guides the student in determining his position in relation to the forces dominating his environment. As pointed out in the Ohio High School Standards (55, p. 10), industrial arts aids the student in becoming "better oriented in an industrial society by exploring many types of tools, materials, processes, products and occupations." This effort is centered on the premise that a dominant force in living today, both in production and in consumption efforts, is technology. This force, influencing every aspect of living, is here considered important enough that each individual needs to define his position or orient himself relative to this force. This is a major function of industrial arts education.

The Technical Function. The concept called to mind in the word "mechanical" once described the basic elements which made up the tools of industry, but this word no longer is adequate. Industry in all of its aspects has so advanced that its nature might better be described as "technical." And automation, characterizing this technical nature of industry today, demands so much more knowledge as well as manipulative ability and skill that the word technician better describes man's role in the effort. This role is fast becoming one of control of power measured in tremendous amounts. These changes within industry have reached beyond the realm of work and have influenced all aspects of living. Consumption has become more complex along with industrial
production. A greater need for knowledge and understanding of living in a dominantly technological culture becomes apparent.

Increased knowledge and understanding are needed in both production and consumption. In the realm of work the need increases as the individual first faces the task of selecting an occupation. The complexity and magnitude of modern industry becomes apparent as serious consideration begins. In the areas of consumption, as it takes place in daily living, the need for knowledge and understanding comes early and exists throughout life. Educational activities designed for exploring occupations must be of the nature of industry, that is technical. The simplification of this guided exploration is the task assumed by industrial arts education. To simplify this exploration it appears logical to study industry by divisions, the same divisions which make up the organization of industry. As indicated earlier (p. 76), these divisions can be considered as being research, power, manufacturing, construction, transportation, electronics, management, and services. The industrial arts effort is organized for serving the individual's needs, interests and intentions of a specialized nature, and in an explorational sense, relative to the above named divisions. The depth of the study in each case will be determined by the outcomes befitting the needs of each individual. For some the explorational activities in the technical realm will be only for better adjustment to the influence of the technology on daily living. For others, the technical study will be for purposes of understanding occupational conditions and possibilities, hence a deeper study.
Many will find the technical study opening avenues for recreational accomplishments. Each will fulfill a need.

The Consumer Function. A brief consideration of the figures showing the amount of power man has harnessed to satisfy his needs brings one to the conclusion that man is now capable of producing the good life he seeks. However, improved products for living are only part of the effort in attaining this good life. The consuming of the products of power also needs careful consideration. History has proven that power and its products misused can be disastrous. The modern economy, dominated by technology, places products before man that require study in order to use them properly just as these same products took study in order to produce them. Herein lies one of the basic functions of industrial arts education, that of offering a program resulting in consumer literacy.

The intelligent selection and use of the products of technology becomes even more important as man increases his productivity. Man has not only produced more but has freed himself for consumption activities. Industrial arts education is designed to assume a part of education's responsibility in meeting the situation.

In order to accomplish this goal of consumer literacy, industrial arts is organized to offer experiences involving raw materials, materials processing, construction and manufacture, finishing, and product use and maintenance.

The Recreational Function. As power resources are increased and harnessed, man becomes freer during work and also is provided more leisure time. The freedom during work and leisure becomes the
opportunity for man to satisfy his ever present need for re-creation - the gaining of a fresh outlook, the relaxation of inner pressures, to express himself more fully. Education for recreation appears necessary in view of all the variety of recreational opportunities offered in the contemporary technological culture. For the most beneficial use of the freedoms, man now finds available, he must see as his responsibility the learning of proper attitudes and skills in exercising these freedoms.

Industrial arts education is in a unique position to contribute to education for recreation. Its facilities and organization offer many opportunities for participation in activities long considered by him to be recreational. Industrial arts represents the school's effort to interpret technology or power and its products, one of which is recreation. It represents the effort needed for guidance in the use of the products of industry, many of which can contribute to the recreational needs of man. Industrial arts represents an effort to develop knowledge, attitudes, and abilities within the individual by which he may find release from restricting physical and mental pressures. Industrial arts, being the study of industry and its influence on living, is one area of education organized to guide the development within the individual of the ability to find recreation during work and during leisure.
The Scope of Industrial Arts Education

Program Types. The classification of the various programs of industrial arts education can be listed as normal, atypical, service, recreational, and professional. The program for normal students is found at the elementary, secondary, collegiate and adult levels, for both sexes.

At the kindergarten-primary level of the elementary school, industrial arts is offered as an integrated unit. The program at this early elementary level provides answers to "what is it and what is it for?" These questions are so often asked by these naturally curious youngsters. The display materials, films, trips, readers, and manipulative activities involving simple changes in related materials peculiar to industrial arts, makes up its unique contributions. Here industrial arts is used to enrich other studies.

At the intermediate level of the elementary school, industrial arts makes its contribution both as a method, as in the primary grades, and as a subject in itself. At this level the student begins to be guided toward a more serious consideration of the community. This necessitates a study of the various industries. He is fascinated by the stories of great men and their inventions and by the development of these into great industries. These stories become real as the student becomes acquainted with the inventor and his problems, and with the people he helps.

At the junior high level the program is designed as an opportunity for youngsters to become acquainted with the several general divisions.
of industrial effort. The scope of the program offered the early adolescent takes into consideration the natural tendency of students of this age to investigate and to experiment with the materials, products, and processes of industry. Here the "how" of things is answered and added to the "what" sought and answered earlier. The study at this level stimulates new energies. Increased attention is given to the recreation function of industrial arts education for this group.

At the secondary level the student, having experienced the junior high orientational program, will find it desirable to go more deeply into some particular area of the study of technology. The effort becomes more technical. He will seek to picture himself in relation to a possible vocation, weighing and shaping his technical abilities and potentialities. His endeavor may also be aimed at advanced accomplishment in interests offering recreation.

At the collegiate level the program emphasis is both intensively orientational and technical. The liberal or general education needs are considered here as regards the technological society of today. Consumer education may comprise a major part of the collegiate program. Here too an effort is made to contribute to the recreational needs of the college student.

The adult program is quite broad. It strives to serve any one or a combination of the orientational, recreational, technical, or consumer needs of the individual. This voluntary program strives to gain direction in each effort according to the desires or needs of the members of the group involved.
The atypical programs serve the blind, deaf, crippled, gifted, retarded, or behavior deviates. Here the basic characteristics of industrial arts lend themselves to bringing into use the remaining strengths within an individual. These are developed in order to reduce the difficulty the individual has in benefiting most from the advantages of living today. The characteristics of industrial arts, particularly those which involve the working in the realm of tangibles, lend themselves to the education of this group.

Because of its basic characteristics industrial arts education as a profession finds itself in a position to offer what are called service programs to a broad clientele. Industrial arts has much to offer college level programs in other areas, as for example the programs preparing teachers for the elementary school. Here the elementary teacher is introduced to and given training in the use of tools and materials with which the various other studies are enriched. Industrial arts is prepared to give students of business education and business and industrial management an overview of the technical aspects of industry.

Industrial arts serves in many areas outside of public educational institutions. The industrial arts facilities and staff often serve in the training efforts within the various industries. These programs are possible where a staff with special skills and special facilities are available. Educational programs of a technical nature in foreign countries under the sponsorship of the American Government has made use of a number of industrial arts specialists. These men adjust their efforts to fit the nation's served.
The technical training needs of the armed forces present many opportunities to which the industrial arts profession contributes. It offers assistance in the development of both technical and recreational programs and in their instruction.

Recreational types of industrial arts programs are to be found functioning as a part of the co-curricular activities of a school or as the adult leisure time programs. The facilities and techniques characteristic of industrial arts are found in the recreational programs of a wide variety of local programs. For example, they are to be found in community, military, mental and penal institutions, youth camps, private recreation groups, industrial and religious groups.

The professional program for the preparation of teachers, is responsible for educating for technical competency and leadership through the three degrees. From this professional program must come the thinking, training, and leadership essential not only to normal programs, but also to all other programs which contribute in important ways to allied efforts. For this reason the professional program can be said to be of paramount importance to the industrial arts effort.

Curriculum. The dynamic nature of technology and its influence on every aspect of life requires a curriculum that will reflect technology. It must orient the student to the complex world of work and provide him with an opportunity to experience the materials, tools, processes, problems, and deeper meaning of industrial efforts. It must represent the "divisions" of technology, namely, power, manufacturing, construction, service, research, and management.
Evaluation of its program is a concern of each phase of industrial arts. It must be participated in by the teacher and his profession, by the student and his parents, by the community and especially by industry itself. Complexity and constant change characterize the technology. These characteristics make constant evaluation of the educational program necessary.

The Setting. The setting for the study of technology centers initially in the planning center. It moves from there out into the industrial arts laboratories and into the community, but most important, into the representative industries concerned.

A Concluding Statement of Position

The study of technology as an economic pattern, in itself can be cold and impersonal. However, when one looks further into the ways by which this influences man, it is a force which must be faced. Man by nature has certain physiological and psychological characteristics which must be considered in educational planning. There are also the tools, materials, techniques and products of industry to be experienced in the divisions of industry, because these contribute the adjustment of man to his technological environment.

Beginning with the nursery school youngster every person regardless of sex, race, or condition has need for a guided interpretation through experience of the technological culture in which he lives. The advantages that have been derived from it are tremendous and the possibilities that it opens up for the future appear
to be unlimited. Industrial arts represents a major or concerted educational effort toward this end.

Industrial arts education functions as an experiential program aimed toward the interpretation, control, improvement, and transmission of technology and its influence on living for the purpose of aiding man better to adjust, contribute to and benefit more fully from its creations. Man is an inventor, producer, and consumer. Industrial arts provides opportunities for all ages and both sexes to gain needed interpretations of technology, and thereby to gain most from its existence.
CHAPTER V

A CONTENT STUDY OF RECREATION IN INDUSTRIAL ARTS

Upon the determination of the factors basic to recreation (Chapters II and III) and those outlining the position of industrial arts education (Chapter IV), a comparative study of the two efforts becomes possible. Such a comparison forms a basis for defining improved recreational opportunities possible through industrial arts education.

Organization. The development of the recreational activities included in this content study quite properly follow the pattern of their expression. Those having common factors are grouped together.

Purposes. Such an analysis is actually a review of the possibilities for industrial arts to contribute to man's recreational experiences. It represents a search to satisfy the profession's need for direction in this particular phase of its program. It points out possibilities for devising new, untried efforts toward improving recreation. These are the purposes of this content study.

Industrial Arts and Recreation: A Comparative Study

A summation of the findings resulting from a study of recreational efforts, reported in Chapters II and III, reveals its basic factors. These are organized under common related headings. They are grouped
according to the two efforts as the human, the economic, and the cultural and for further clarity by definition, function and scope. A comparative study of each aspect follows. First, the human:

Recreation.

<table>
<thead>
<tr>
<th>An Experience from Within</th>
<th>The Urge to Construct</th>
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<tr>
<td>Seeking Balance</td>
<td>Discovering Meaning and Values</td>
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<tr>
<td>An Expression of Joy</td>
<td>Expression of Skill Hunger</td>
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<tr>
<td>Counter-balancing Inactivity</td>
<td>Balancing Inner Drives and Urges</td>
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<td>Counter-balancing a</td>
<td>Seeking Rehabilitation</td>
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<td>Sedentary Occupation</td>
<td>Mental and Physical Therapy</td>
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<td>Counter-balancing Monotony</td>
<td>Giving to Others -- Leading</td>
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<td>Counter-balancing Tensions</td>
<td>Gaining Through Association</td>
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<td>Changing Attitudes</td>
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Industrial Arts Education.

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<th>Doing — Action</th>
<th>Creativity</th>
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<tr>
<td>Manipulation</td>
<td>Seeking Meanings, Values</td>
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<td>Exploring</td>
<td>Sharing</td>
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<tr>
<td>Experimenting</td>
<td>Rehabilitation</td>
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<td>Construction</td>
<td>Therapy</td>
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<td>Self-analysis</td>
<td>Improving Attitudes</td>
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<td>Self-improvement</td>
<td>Improving Skills</td>
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<td>Self-expression</td>
<td>Leadership Experiences</td>
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<td>Testing</td>
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As related by Brightbill and Meyer in their book *Recreation: Text and Readings* (11, p. 11), life has two movements, "acquisitiveness," and "creative sharing." These summarize the truths concerning the expressions recorded above. This further substantiates the value of the proposal made here, that education for recreation should be made a more definite part of industrial arts education. Second, the economic:

Recreation.

Expenditures for Recreation Increasing:

<table>
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<tr>
<th>Expenditures by Individuals</th>
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<tr>
<td>By Governmental</td>
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<td>By Local Governments</td>
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</table>
Factors Conditioning Recreation:
- Labor Saving Devices
- Transportation
- Communication
- Power Application
- Increased Leisure
- Creative Endeavor
- Increased Purchasing Power

Recreation Established as Big Business
Industry Creating Freedom for Recreation
Industrial Production "for" Recreation
Industrial Recreation,—Source of Economic Gain
"Builders for Fun" Movement — Economically Significant

Industrial Arts Education.

An Interpretation of an Industrial Economy, its Resources,
Manufacturing, Products, and Their Contributions to Living
Education for Adjustment to a Constantly Changing Technology
 Interpretation of Industry
Picturing the Interdependence of the Divisions of Technology
 Interpretation of How Man Earns and Wisely Spends
Role of a Contributing Member of an Industrial Economy
Leisure Studied as a Product of Industry
Education in the Use of Leisure Products
Economic Stability Through Better Worker Adjustment

Each of the factors mentioned concerning the economic aspects of
industrial arts education actually represents a factor influencing
recreation. It can be assumed, therefore, that the much sought-after,
fuller and more frequent recreational experience would be possible if
more definite guidance were given the industrial arts student in
participating in the recreational experiences. It now appears neces-
sary only to determine and define these experiences in order for in-
dustrial arts education to meet its recreational function more fully.

Third, the cultural:
Recreation.

A Dominant Factor in Adjusting to a Industrial Society
Opportunity for Attaching Meaning to Life's Experiences
Individual and Cultural Advancement
Essential to the Transmission and Improvement of the Culture
Offsetting the Forces Representing Cultural Degeneration
Evidence of a Society of Free People
Recreation Based Upon Freedom, - A Fundamental Need of Man
Conducive to Cultural Growth in Either Work or Leisure

Industrial Arts Education.

The Individual in the Creation of Material Cultures
Transmission of the Existing Technological Culture
Picturing Man as Inventor, Builder and Consumer:

1. Man the Inventor
Developing and Inspiring the Young Inventor
Experiences Arousing and Exercising the Inventive Urge
Extension of the Mind and the Hand by Work in Third Dimension

2. Man the Builder
Exercising, Through Doing, Control of the Resources for Living,
Personal Traits and Talents, Raw Materials, Accumulated
Knowledge, Tools, Power, Organization

3. Man the Consumer
Guided Experience in Worthwhile Consumption of the Products
of Technology,-Moving Toward Meaningful Living

When the factors included in the cultural aspects of recreational
and industrial arts educational efforts are reviewed it becomes
evident that modern culture can be dominated by the forces of tech­
nology. It is likewise evident that the chief function of industrial
arts is to interpret and to transmit this force within the culture.
In an era of complicated inventions and of industrial products, rec­
reational experiences take on a position of ever-increasing impor­tance as a stabilizing influence toward adjustment to the rapidly
changing and complex culture of today. It is logical, therefore, to
conclude that the area in educational effort devised to interpret
technology becomes the center for defining how this same technology might be made to serve, promote, and involve recreational experiences.

Fourth, "definitions:"

Recreation.

- Recreation as Re-creation
- Relaxation from Tensions
- The Experience of Gaining Balance
- An Experience Within the Person
- Enjoyment, The Central Fiber
- Can Take Place Anywhere
- Self-expression
- Creativity
- Individual Fulfillment
- Discovering Meanings
- Seeking and Finding Values

Industrial Arts Education.

- Interpretation of Industry and its Influence on Living Experiences Involving Tools, Materials, Processes, and Products
- Experiential, or Learning by Doing
- Improving Environment by Changing Materials
- Exploratory -- Experimenting -- Research
- All Persons, All Ages, In and Out of School
- Inventing, A Laboratory for Creative Experience
- Determining Values and Meanings
- Contributing to the Technological Culture

The statements defining industrial arts education make it plain that there are certain characteristics basic to this effort which can be used to benefit recreational effort. These center around the term "doing," or actually handling and working with materials and power. The primary concern in this educational effort is for what working with materials does for the student, rather than what changes are wrought in the materials by the student. A comparison of definitions reveals many possibilities for industrial arts to contribute to improved recreation. This will result when these possibilities are more clearly defined and capitalized upon. Fifth, "Functions:"
Recreation.

Offering Enjoyment in Living
Creating Balance in Living
Providing Opportunities for Self-Expression
Promoting Self-analysis
Offering Change of Pace
Improving Family Living
Enriching Community Living
Fostering Individual Fulfillment
Offering Release and Direction for the Expression of Urges
Improving Cultural Growth
Introducing New Areas of Work and Play
Serving: Compensatory Experiences, "Social Hunger"

Industrial Arts Education.

1. Orientational.
   The Individual to a Technological Environment
   Self Discovery, Potentials as an Inventor, Builder, Consumer

2. Technical.
   Interpreting Industry and Its Influence on Living
   Increasing Technical Competencies
   Presenting Activities Involving the Tools, Materials, and Products of Technology
   Interpreting Complex Industrial Products
   Controlling Power in Production and Consumption

3. Consumer.
   Investigating Materials
   Testing
   Measuring and Seeking Values

4. Recreational.
   Education for Recreation
   Introducing New Possibilities
   Increasing Skills
   Experiences for Activity, Manipulation, Self-Expression, Investigation, Try-out, Construction, Development of Skill and Excellence

A study of the factors concerning the functions summarized above, reveals that efforts aimed at attaining each of the functions of industrial arts education can also be directed toward contributing to the recreational experiences of the individual. This becomes obvious
when such a study is based on a truth noted earlier, namely that recreational experience can take place regardless of the occupation of the moment.

Though a comparison of the statements basic to the functions of the two efforts does make obvious the conclusion that industrial arts can contribute to recreational experiences, something more is needed. Determining precisely those recreational experiences to which industrial arts education can make a contribution, becomes a necessity.

Sixth, "scope:"

Recreation.

1. Content.
   - Experiences Contributing Balance — Compensatory, Escape, Rehabilitative, Therapeutic
   - Enjoyable Experiences
   - Creativity
   - Participative Experiences
   - Activity
   - Entertainment, Amusement, Play
   - Work, Vocational, Avocational

2. Levels.
   - Youth and Adult — Both Boys and Girls, Men and Women
   - All Levels of Physical and Mental Capacity and Development

3. Types.
   - Individual, Family, Group
   - Agency,
     - Governmental
     - Private
   - Commercial, Industrial, Military
   - Institutional,
     - Correctional
     - Hospital

Industrial Arts Education.

1. Content
   - Research, Design, Planning
   - Construction
   - Manufacturing
   - Power, Heat, Light, ...
99

Service
Management
Consumer Education
Recreation for Education

2. Levels. Universal

3. Types
   Normal
   Atypical
   Technical
   Service
   Professional
   Recreational

A comparison of the extent of the two efforts, recreational endeavor and industrial arts education indicates that both have many common factors relative to content, levels, and types. Industrial arts education proposes through its offerings, and specifically, through its interpretation of technology, that a fuller, better balanced living is possible. This also fits the definition of recreational effort. The content, as summarized here, indicates that there are approaches in industrial arts which characterize it as a necessary educational effort in bringing about balanced living in a technological culture. The levels of each effort are the same. Hence, analysis for coordinating the two efforts by expanding industrial arts education in recreation is not only possible but rational.

Recreational Experiences Involving Industrial Arts

The comparative study offered above makes it clear that the two efforts, industrial arts and recreation, are quite definitely congruent. This evidence indicates that the expanding of the recreation function of industrial arts should meet with immediate success. This supports
a demand for further analysis for the purpose of clearly defining the specific opportunities for industrial arts education to contribute to recreational effort. This further definition can come about by evaluating typical recreational activities for these specific opportunities: the task undertaken in this section of this chapter.

The procedure necessary to the solution of the problem is to develop an instrument to measure recreational activities for their industrial arts content, and then to apply this to a listing of typical recreational activities.

**Characteristics of Industrial Arts Education.** In order to construct a simple instrument, it becomes necessary to analyze this phase of education for its basic characteristics and then, for clarity, to list them in condensed form.

Industrial arts effort involves certain tools, materials, and processes which make unique contributions to the life of those who participate in their use. The contact which the individual makes with these unique tools, materials, and processes makes possible certain very important expressions. The listing of these unique elements and the expressions which they make possible, forms a summary of the basic characteristics of industrial arts and is the step taken here in the development of a simple device for determining the involvement of industrial arts in recreational activities. These characteristics are listed under the headings of tools and materials, processes, and expressions. There is, in this effort, no attempt made to list each tool, material, and process which make up the various divisions of
industry as represented in industrial arts education. Only typical or representative items are needed to give direction and meaning to this step. The listing of the basic characteristics of industrial arts education follows:

**Tools.**

Hand and Power Tools — tools typical of the several divisions of industry, representing the extension of man's hands and mind: ranging from the simple hammer to the electron tube and including light, power, and heat.

**Typical Materials -- Raw and Processed.**

<table>
<thead>
<tr>
<th>Adhesives</th>
<th>Metals and Metal Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cement</td>
<td>Minerals</td>
</tr>
<tr>
<td>Chemicals</td>
<td>Paper</td>
</tr>
<tr>
<td>Clay</td>
<td>Resins</td>
</tr>
<tr>
<td>Fibers</td>
<td>Rubber</td>
</tr>
<tr>
<td>Finishes</td>
<td>Stones</td>
</tr>
<tr>
<td>Gases</td>
<td>Textiles</td>
</tr>
<tr>
<td>Glass</td>
<td>Water</td>
</tr>
<tr>
<td>Leather</td>
<td>Wood and Wood Products</td>
</tr>
<tr>
<td>Lubricants</td>
<td></td>
</tr>
</tbody>
</table>

**Typical Processes.**

<table>
<thead>
<tr>
<th>Assembling</th>
<th>Drilling</th>
<th>Remodeling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carving</td>
<td>Fabricating</td>
<td>Repairing</td>
</tr>
<tr>
<td>Casting</td>
<td>Forging</td>
<td>Sanding</td>
</tr>
<tr>
<td>Composing</td>
<td>Forming</td>
<td>Sawing</td>
</tr>
<tr>
<td>Construction</td>
<td>Finishing</td>
<td>Servicing</td>
</tr>
<tr>
<td>Cutting</td>
<td>Grinding</td>
<td>Sketching</td>
</tr>
<tr>
<td>Decorating</td>
<td>Laying-Out</td>
<td>Spinning</td>
</tr>
<tr>
<td>Designing</td>
<td>Photography</td>
<td>Throwing</td>
</tr>
<tr>
<td>Developing</td>
<td>Planning</td>
<td>Wiring</td>
</tr>
<tr>
<td>Drawing</td>
<td>Printing</td>
<td></td>
</tr>
</tbody>
</table>

**Typical Expressions.**

<table>
<thead>
<tr>
<th>Changing Materials</th>
<th>Exploring</th>
<th>Scheduling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computing</td>
<td>Imagining</td>
<td>Selecting</td>
</tr>
<tr>
<td>Controlling</td>
<td>Inventing</td>
<td>Self-Expression</td>
</tr>
<tr>
<td>Co-ordinating</td>
<td>Organising</td>
<td>Shaping Materials</td>
</tr>
<tr>
<td>Creating</td>
<td>Planning</td>
<td>Sharing</td>
</tr>
<tr>
<td>Designing</td>
<td>Problem Solving</td>
<td>Studying</td>
</tr>
<tr>
<td>Evaluating</td>
<td>Recording</td>
<td>Testing</td>
</tr>
<tr>
<td>Experimenting</td>
<td>Research</td>
<td>Trying-Out</td>
</tr>
</tbody>
</table>
The above listings can be identified as meaningful terms from which can be drawn the criteria to be used in measuring recreational activities for industrial arts involvement. The listing of the criteria is now simplified.

**The Measuring Instrument.** Criteria for determining instances where industrial arts activities are made a part of recreational experiences now follow. An attempt has been made to have that which has been emphasized as fundamental in industrial arts education reflected in simple, concise form in these criteria.

EXPLORATION — Seeking New Experiences  
RESEARCH — Pioneering, Searching for New Information  
CREATIVITY — Self-Expression Through Manipulation  
CONSTRUCTION — Combining Ideas, Materials, and Tools  
MATERIALS HANDLING — Expression in Third Dimension  
IMPROVING ENVIRONMENT — Cultural Advancement  
WORK AND LEISURE — Seeking Values

The measuring device is now developed. Its application follows the development of a listing of typical recreational activities.

**Recreational Experiences Measured.** A study of the recordings of the results of national surveys on recreational activities in America was made for the purpose of developing a listing of representative recreational experiences which can be checked for industrial arts involvement. The major sources used were as follows: (1) Chapter XI of *America's Needs and Resources*, by Dewhurst and Associates entitled, "Recreation" (24); (2) a summary report of a survey made by the National Recreation Association entitled, "The Leisure Hours of 5000 People" (48); (3) Chapter XIV of *Introduction to Community Recreation* by Butler entitled, "Recreation Activities" (16); and (4) the 1956 *Recreation and Park Yearbook* (49). In addition to these, many of the
sources studied in preparation of Chapter III entitled "Recreation — A Changing Picture" included statistical material upon which this listing was also based. The writer's experiences in sponsoring industrial arts recreational activities among elementary, secondary, and college groups, adult groups, cub and boy scouts, organized camps, and 4-H clubs were also used. The guiding and observing of the growth of two sons and two daughters has likewise been of real benefit.

This search revealed that recreational pursuits were named in general terms only, though actually covering a great number of related activities. The study of these records, therefore, was used to determine kinds of recreational experiences and also to determine patterns of expression which might be used to give logical order. Titles which suggested themselves as indices of the patterns evidenced in the expressions of recreation and used here were: home and family living, outdoor living, handcrafts, athletics and games, and motoring. Each general activity and supporting activity determined was scrutinized for detailed completeness. With national survey results as the starting point, detail was given each recreational activity in order to make the planned analysis more complete and meaningful. The results of this search, beginning with titles representative of the evident patterns of recreational expression, moving on to general headings and finally detailing many activities often involved in the particular experience, make up the recreational activities to which the previously outlined measuring device is applied. This very important part of this study follows.
<table>
<thead>
<tr>
<th>Typical Activities by Expression Groups</th>
<th>Exploration</th>
<th>Research</th>
<th>Creativity</th>
<th>Construction</th>
<th>Materials Handling</th>
<th>Improving Environment</th>
<th>Work and Leisure</th>
</tr>
</thead>
</table>

### 1. HOME AND FAMILY LIVING

<table>
<thead>
<tr>
<th>Hobbies</th>
<th>Exploration</th>
<th>Research</th>
<th>Creativity</th>
<th>Construction</th>
<th>Materials Handling</th>
<th>Improving Environment</th>
<th>Work and Leisure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amateur Radio Construction and Care</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Carving and Whittling</td>
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<tr>
<td>Collecting</td>
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<tr>
<td>Coins</td>
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<td>Insects</td>
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<tr>
<td>Old Tools</td>
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<td>Stamps</td>
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<tr>
<td>Constructing Hobby Display Devices</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Designing and Drawing</td>
<td>x</td>
<td>x</td>
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<td></td>
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<tr>
<td>Firearms — Care and Repair</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Flower Arranging</td>
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<td>x</td>
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<tr>
<td>Food Preparation</td>
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<tr>
<td>Handcrafts</td>
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<td></td>
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<td>x</td>
</tr>
<tr>
<td>Home Workshop Activities</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Making Musical Instruments</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Making Collection Equipment</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Model Building</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Model Railroading</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Painting in Oils</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Photography</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Reading</td>
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</tr>
<tr>
<td>Repairing Musical Instruments</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Textiles — Making and Decorating</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

### Games and Activities

| Barn Dances |              |            |            |              |                   |                       |                   |
| Bicycling — Care and Use | x           | x         | x          | x            | x                 | x                     | x                 |
| Box Hockey Construction | x           | x         | x          | x            | x                 | x                     | x                 |
Table 4. Part 1 (continued)
Recreational Activities: Industrial Arts Content

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Exploration</th>
<th>Research</th>
<th>Creativity</th>
<th>Construction</th>
<th>Materials Handling</th>
<th>Improving Environment</th>
<th>Work and Leisure</th>
</tr>
</thead>
</table>

Typical Activities by
Expression Groups

HOME AND FAMILY LIVING, continued

Card Games
Constructing Basketball Backstop & Basket
Constructing Tennis and Basketball Court
Constructing Dart Games
Constructing Tennis Equipment
Playing Basketball
Playing Box Hockey
Playing Darts
Playing Table Tennis
Puppetry
Puzzle Construction
Stilt Making and Walking
Table Games
Toy Making
Working Puzzles

Home Repairs
Appliance Maintenance
Electrical Repairs
Furniture Refinishing and Decorating
Furniture Regluing
Maintaining Plumbing Fixtures
Maintaining Sidewalks and Drives
Reconditioning Basic Structures
Reconditioning Doors and Hardware
Refinishing Woodwork
Reglazing Windows
Repairing Roofs
Rescreening Windows

Home Improvement
Adding Rooms
Building Cook-out Area
Constructing Furniture
Table 4, Part 1 (continued)
Recreational Activities: Industrial Arts Content

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Exploration</th>
<th>Research</th>
<th>Creativity</th>
<th>Construction</th>
<th>Materials Handling</th>
<th>Improving Environment</th>
<th>Work and Leisure</th>
</tr>
</thead>
</table>

Typical Activities by Expression Groups

HOME AND FAMILY LIVING, continued

- Constructing Patios
- Constructing Recreation Rooms
- Grounds Improvement
- Installing New Kitchens
- Papering and Painting
- Recovering Floors
- Redecorating
- Remodeling Interiors
- Re-upholstering Furniture
- Tiling the Walls
- Entertainment
  - Conversation
  - Dancing
  - Listening to Radio
  - Listening to Recordings
  - Playing Instruments
  - Singing
  - Steak Fries
  - Television Viewing
  - Visiting
Table 4. Part 2
Recreational Activities: Industrial Arts Content

<table>
<thead>
<tr>
<th>Typical Activities by Expression Groups</th>
<th>Exploration</th>
<th>Research</th>
<th>Creativity</th>
<th>Construction</th>
<th>Materials Handling</th>
<th>Improving Environment</th>
<th>Work and Leisure</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. OUTDOOR LIVING</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Aquatics</td>
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<td>Aquaplaning</td>
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</tr>
<tr>
<td>Boat Building</td>
<td>x x x x x x x</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Boat Repairs</td>
<td>x x x x x x x</td>
<td></td>
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<tr>
<td>Canoeing</td>
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</tr>
<tr>
<td>Constructing Underwater Breathing Equipment</td>
<td>x x x x x x x</td>
<td></td>
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</tr>
<tr>
<td>Exploring by Boat</td>
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<tr>
<td>Fiber Glass Covering a Boat</td>
<td>x x x x x x x</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Motor Repairing</td>
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<tr>
<td>Paddle Making</td>
<td>x x x x x x x</td>
<td></td>
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<tr>
<td>Sailing</td>
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<tr>
<td>Sail Making</td>
<td>x x x x x x x</td>
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<tr>
<td>Surf Board Riding</td>
<td></td>
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<tr>
<td>Swimming</td>
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<tr>
<td>Underwater Exploring</td>
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<tr>
<td>Underwater Photography</td>
<td>x x x x x x x</td>
<td></td>
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<tr>
<td>Water Skiing</td>
<td></td>
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<tr>
<td>Water Ski Construction</td>
<td>x x x x x x x</td>
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<td></td>
</tr>
<tr>
<td>Astronomy</td>
<td></td>
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</tr>
<tr>
<td>Constructing and Using a Telescope</td>
<td>x x x x x x x</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Making a Star Projector</td>
<td>x x x x x x x</td>
<td></td>
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</tr>
<tr>
<td>Studying the Constellations</td>
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</tr>
<tr>
<td>Camping and Camp Crafts</td>
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</tr>
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Recreational Activities: Industrial Arts Content

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#### Typical Activities by Expression Groups

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Typical Activities by Expression Groups

HANDCRAFTS, continued

Photography
- Developing and Printing
- Equipment Construction and Care
- Making Movies
- Making a Simple Camera
- Making Slides and Film Strips
- Taking Pictures

Plastics
- Covering Boats
- Jewelry Making
- Molding Fish Lures
- Plastic Craftwork
- Preserving Specimens

Textiles
- Dying
- Needlework
- Painting and Printing
- Rug Making
- Weaving
- Weaving -- Natural Fibers
  - Basket Making
  - Mat Making
  - Seat Weaving

Woodcraft
- Carving
- Cabinetmaking
- Driftwood Craft
- Model Making
- Sculpturing
- Stagecraft
- Turning
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Table 4: Part 5
Recreational Activities: Industrial Arts Content

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<tr>
<th>Criteria</th>
<th>Exploration</th>
<th>Research</th>
<th>Creativity</th>
<th>Construction</th>
<th>Materials Handling</th>
<th>Improving Environment</th>
<th>Work and Leisure</th>
</tr>
</thead>
</table>

Typical Activities by
Expression Groups

5. MOTORING

Tripping
- Collecting Representative Materials
- Collecting Travel Information
- Conditioning the Vehicle
  - **X**
- Considering Possible Destinations
  - **X**
- Constructing Camping Equipment
  - **X**
- Constructing Travel Equipment
  - **X**
- Mapping and Map Making
  - **X**
- Noting Points of Interest
- Planning Route of Travel
- Planning Side-Trips
- Recording the Tripping Experiences
- Selecting the Mode of Travel

Maintenance
- Caring for the Finish on the Vehicle
  - **X**
- Finish Repair and Replacement
  - **X**
- Replacing Worn Parts
  - **X**
- Reupholstering Interiors
  - **X**
- Servicing the Mechanical Parts
  - **X**

Construction
- Camp Trailers
  - **X**
- House Trailers
  - **X**
- Motoring Accessories
  - **X**
- Motoring Vehicle Housing
  - **X**
- Motoring Transport Units
  - **X**
- Passenger Vehicles
  - **X**
- Power Plants
  - **X**
- Utility Trailers
  - **X**

Customizing - Hot rodding - Racing
- Competitive Racing
  - **X**
- Rebuilding Motor
  - **X**
- Restyling the Body
  - **X**
- Reworking the Basic Structure
  - **X**
Table 4. Part 6
Recreational Activities: Industrial Arts Content

<table>
<thead>
<tr>
<th>Typical Activities by Expression Groups</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exploration</td>
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<td>6. OTHER RECREATIONAL ACTIVITIES</td>
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<td>Hobby Clubs and Groups</td>
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<td>Archery</td>
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<td>Fine Art</td>
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<td>Flower Arranging</td>
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<td>Golden-Age Handcrafts</td>
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<td>Guilds</td>
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<td>Men's Club</td>
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<td>Mission Study</td>
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Table 4. Part 6 (continued)
Recreational Activities: Industrial Arts Content

<table>
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<th>Criteria</th>
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</tr>
</thead>
</table>

Typical Activities by Expression Groups

OTHER RECREATIONAL ACTIVITIES, continued

Recreation Center
School Board
Scouting
Settlement Houses
Y.M.C.A. - Y.W.C.A.
Lions Club
Construction for Community Improvement
Educational Programs
Social
Social Service
Rotary Club
Construction for Community Improvement
Educational Programs
Social
Social Service
Serving Youth
Agriculture Extension 4-H
Competitive Sports
Hand Crafts
Hobbies
Home Improvement Projects
Social
Woodcrafts and Conservation
Boy's Club of America
Competitive Sports
Handcrafts
Hobbies
Boy and Girl Scouts
Competitive Sports
Handcrafts
Hobbies
Home Improvement Projects
Woodcrafts and Conservation
Table 4. Part 6 (continued)
Recreational Activities: Industrial Arts Content

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<th>Improving Environment</th>
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</tr>
</thead>
</table>

OTHER RECREATIONAL ACTIVITIES, continued

Junior Achievement
Advertising, Distribution, Selling
Manufacture
Organization and Financing
Research and Design
Recreation Centers
Competitive Sports
Handcrafts
Hobbies
Social

x x x x x x x x
The findings determined by the above analysis can be recorded as content for industrial arts education in recreation. This content is classified into expression groups and given below. Each group is given further meaning by sub-dividing into categories, typical experiences, and including finally the supporting industrial arts curricular components. Together, these results can be considered as being both a summary of the application of the instrument devised to determine where industrial arts activities are involved, and also an interpretation of the findings. This record and its interpretation follow in a form considered best for showing more clearly the possibilities for industrial arts to contribute to man’s recreation. Every recreational activity in any way involving industrial arts is seen as offering direction to the expansion of industrial arts education in recreation. A detailed breakdown of each activity can be found by referring to the analysis. These activities summarized as categories make up the content of industrial arts education in recreation, which follows.

**Content for Industrial Arts Education for Recreation**

**Home and Family Living**

Categories:
Home Repairs, Home Improvement, Hobbies, Games

Typical Experiences:
Construction, Re-decorating, Repair, Developing, Experimenting, Creating, Try-out, Practice, Play, Work, Growth, Sharing, Re-creation, Manipulation

Supporting Industrial Arts Components:
Outdoor Living.

Categories:

Typical Experiences:

Supporting Industrial Arts Curricular Components:

Handcrafts.

Categories:
Ceramics, Leather Craft, Metalcraft, Woodcraft, Textiles, Plastics, Graphic Arts Including Photography, Sculpturing, Drama, Music

Typical Experiences:
Self-expression, Self-analysis, Creativity, Changing Materials, Decorating, Experimenting, Testing, Exploration, Discovery, Self-improvement, Construction, Care and Use, Refinishing, Upholstering

Supporting Industrial Arts Curricular Components:
Ceramics, Crafts, Art Metals, General Metalworking, Woodworking, Textiles, Plastics, Graphic Arts, Photography, Stagecraft

Athletics and Games.

Categories:
Construction and Care of Equipment — Archery, Badminton, Baseball, Basketball, Bowling, Croquet, Football, Golf, Horseshoes, Shooting, Shuffleboard, Softball, Table Tennis, Track, Volleyball, Winter Sports, Ring Toss, Checkers, Chess

Typical Experiences:
Self-expression, Try-out, Self-improvement, Experimenting, Equipment Construction, Repair

Supporting Industrial Arts Curricular Components:
Planning, Metalworking, Woodworking, Plastics, Crafts, Safety
Motoring.

Categories:
Tripping, Maintenance, Construction, Customizing, Hotrodding, Racing

Typical Experiences:

Supporting Industrial Arts Curricular Components:
Library Research, Planning, Cartography, Graphic Arts, Styling, Structural Design, Power, Welding, General Metalworking, Machining Metals, Finishing, Upholstering, Safety

Other Activities.

Categories:
Hobby Clubs or Groups, Junior Achievement Groups, Church Activity Groups, Community Service Clubs, Rehabilitation and Therapy Efforts

Typical Experiences:
Work, Sharing, Re-creation, Study, Creating, Manipulation, Construction, Self-expression, Experimenting, Group Dynamics

Supporting Industrial Arts Curricular Components:
Research and Planning, Design, Crafts, Metalworking, Woodworking, Ceramics, Graphic Arts, Power

Conclusions. The application of the measuring device outlined in this chapter has resulted in revealing definite support of the hypothesis of this study. That is, industrial arts activities are involved in many of man's recreational activities and in such measure as to demand attention. The content for a program indicates that the potential for expanding this program is tremendous.

Another result of the application of this instrument is to reveal direction or courses which might be taken in expanding the recreation function of industrial arts education. These moves toward expansion
can be seen to have influence upon both education and the recreation movement. The direction revealed for a course of action appears as the succeeding chapter, while the implications of this expansion appear as Chapter VII.
An objective accomplished by the previous chapter was to define the contribution of industrial arts to recreation. The result amounts to a demand for planned action.

The Educational Effort

The need for a balanced life through recreational experiences is evident in the child as well as in the adult. It is quite logical, therefore, to include education for recreation in the learning activities of the students of the elementary school. The objective of attaining a balanced school-life in the classroom can in this way be more nearly accomplished. The youngster is constantly seeking recreation in the areas of outdoor living, handicrafts, athletics, games, hobbies, and even in his work. The value of a program of education, such as industrial arts, which offers opportunities for the students to discover and explore interests in these areas, is attested by real examples of the student's whole-hearted and enthusiastic participation. Such examples of participation were observed in a program conducted on the elementary level of the University School of Kent State University. The demands at the end of the day, to borrow tools and materials to take home, testify to the program's
value in the mind of the student. A contribution to home life through parental involvement can be seen as a positive outcome of this situation.

Elementary school students will find it particularly instructive to study the games which peoples have played in seeking recreation. The construction of similar games and the actual playing of them, involves the materials, tools, and processes typical of industrial arts education. These efforts provide direction to the profession in meeting its responsibility in educating for balanced living in a technological culture.

Secondary School. The possibilities for accomplishment which the student of the secondary school can attain in skill in coordinating the mind and the hand with ideas and things, become almost limitless at this level. Many of the accomplishments of youth are attained as a result of a recreational pursuit. Participation in the area of model building, has reached astounding proportions. Many potential scientists are testing and improving their technical knowledges and skills by experiencing recreation. Here the basic nature of industrial arts is the means by which recreational experiences are accomplished. There is little doubt about the value of increased guidance through more conscious planning in the area of industrial arts education.

Another recreational pursuit being adopted by great numbers of secondary school youth is in the area of motoring. Specifically, the activities of this age group fall in the categories of construction, customizing, maintenance and hot-rodding. Accident records indicate
that this level is in need of guidance in its effort to seek recreation through motoring. The involvement of industrial arts can be seen as one answer toward the attainment of true recreation. Through the increase of carefully planned units within the industrial arts curriculum, through an increase in the number of hot-rodding club activities sponsored by men in industrial arts teaching, and through making industrial arts facilities available, greater guidance is possible toward motoring becoming a positive rather than negative force in the lives of youth.

Though the direction for expanding two areas of recreational activities in industrial arts education has been dealt with here, many more opportunities exist. Each of the recreational pursuits involving industrial arts which are sought by youth represents a possible course for expanding the good to be accomplished by industrial arts education for recreation.

**Higher Education.** Learning how to spend a living has become as important in recent years as learning how to earn a living. This takes place as the hours demanded of the average worker decrease and his work value increases. Specialization in learning to earn dominates higher education curricula. Institutions of higher education, desiring to free the student from extensive specialized demands in his major and minor areas and making available planned education for recreation for everyone, might well take direction from the program at Dartmouth College. Created and developed by Virgil Poling, this program gives the student many explorational and experiential opportunities to develop recreational skills. As pictured in the October
1949 issue of The Industrial Arts Teacher (60, p.5), the growing participation in this program attests to its value in providing balance in the life of the student body.

The institutions of higher education are finding it necessary not only to offer a program of recreation for the participation of the campus community, but also to offer training in professional preparation for job opportunities. In addition to these are the institution's responsibilities to recreation research, to the creation of source materials, and to the organization and sponsoring of related institutes and workshops. As pointed out by Meyer and Brightbill in their book Community Recreation (11, p. 236), institutions of higher learning are making noteworthy progress in meeting these challenges.

The trends in recreation pointed out in Chapter II and III make obvious the necessity for stating here that industrial arts must assume its share of the institution's responsibility. Industrial arts needs to provide for a growing involvement in recreational demands. Industrial arts facilities and techniques should be made a part of each of the responsibilities related to recreation: professional preparation, recreational research, and extension services, such as workshops and institutes. These efforts should be made a definite part of the industrial arts program since its resources are so rich and varied.

Adult Education. The school which incorporates the serving of the educational needs of the student as a family member cannot overlook the growing demand for recreation among the adults as well.
Full vent can be given in the industrial arts laboratory to man's urge to build for enjoyment, or to become a part of the "do-it-yourself" movement mentioned in Chapter III (p. 51). Here too, the adult citizen can express his creative urge by changing clay, wood, metal, plastics or any one of many available materials into a thing of beauty and utility. With proper guidance, many quality products, such as furnishings, can be produced for the home. Proper care, use, and servicing of home appliances can become fun when a part of the common effort of neighbors in the school's industrial arts laboratory. The "hi-fi" or amateur radio enthusiast can be found assembling and testing the equipment basic to his enjoying these hobbies. Adults are found spending time and money on many phases of motoring. Proper guidance in this recreational activity could be most beneficial. This represents another opportunity for industrial arts to serve. This provides a guidepost for industrial arts.

Outdoor Education. Americans are turning to the outdoors in order to gain relief from the complexities of contemporary living. (See Chapter III, p. 54.) Educational institutions, recognizing the values to be gained from activities centered in the outdoors, have begun to develop a program of "outdoor education." Many of these experiences were found to involve activities typical of industrial arts education. The seeking, identifying, collecting, and putting to use many of the raw materials of the outdoors can actually be experienced. Reading about these things is not nearly so meaningful or satisfying as when experiencing the real thing. Industrial arts, having long used this "doing" approach, and being a program of
education designed to offer needed facilities and guidance for activity, can immediately find and offer direction. Constructing gear for exploring the under-water world, cutting and polishing stones found in the earth's crust, constructing a telescope to search into the unknown above the earth, offer many meaningful experiences. The industrial arts teacher might, therefore, be found digging with a group for raw clay to be built and placed in a home as a useful vase, or aiding in the development of a collection of wood samples in the study of conservation and forestry, or guiding in the creation of articles made from natural fibers. These then represent directions industrial arts effort might take when made a part of outdoor education and living.

Co-Curricular Activities. These can be recognized in such developments as the cooperative training programs in higher education, as for example, the University of Cincinnati, where business, industry, and education get together and share in the responsibility of offering many real and meaningful experiences. As stated earlier (Chapter II, p. 32), when values and meanings are discovered, recreation is experienced.

Movement toward learning and living can also be achieved in the elementary and secondary classrooms which exploit the many valuable resources of the community through field trips. An example is the program in the University School of Kent State University where the science student, pressing to go beyond the facilities of the science laboratories for proving a theory, will be found enjoying an opportunity
to construct, say, a working model of a blood pump for keeping a beef heart alive as a part of a "Science Day" project. And where students of speech and dramatics find satisfaction in developing complex lighting, sound, and stage settings as a part of their interpretation of the true meanings involved in voice delivery. The industrial arts program with time allotted to aiding other areas, finds these co-curricular activities unique opportunities for guiding students in their search for meaningful activities of a recreational type.

As It Serves the Home

Recreational pursuits within the home have been given more attention and seen greater change in the recent past than has almost any other home-centered activity. Recreational units involving industrial arts include handicrafts, home workshop hobbies, home improvement, home maintenance, and family games and play. Suggestions for developing a course are made in brief form under each heading mentioned as follows.

Handcrafts in the Home. Handcrafts in the home of today stem from a desire for recreational experience rather than from the demand for the satisfaction of the bare essentials of existence. The individual, for this reason, is found participating in handicraft activities which are widely varied in materials and techniques. The only course for the industrial arts teacher is to make this opportunity a responsibility of his program. He will be found offering young people
the opportunity to discover and develop skills in the handicrafts, both during regularly scheduled classes and after school hours. The facilities available on certain evenings will be used by family groups exploring individual and common interests as for example amateur radio station operation. This course of action gives impetus to the re-awakening of handicrafts in the home.

**Development of the Home Workshop.** The sales of small size power tools as noted in Chapter III, make possible the introduction of industrial arts into the home. The rapid growth of the home workshop movement can be coupled with the re-awakening of handicrafts in the home, and the builders-for-fun movement, reported in Chapter III. There is need for greater action on the part of the profession to train home-members in the safe use of this equipment. Individuals, with the guidance of an industrial arts program can also learn to use these facilities for constructing additional home-workshop equipment. As a resource area for "things," as well as "how" to do in the home workshop, industrial arts can add to the value of this home-centered effort. As a resource area for suggestions and a laboratory for supplementing the home workshop in carrying out these suggestions, industrial arts can increase the satisfactions gained from home improvement projects. A planned effort aimed at furnishing a boy's room can become a part of day or evening adult activity. A regularly scheduled family night at the school can be planned to offer a block of time centered around this effort. Another time can be planned for centering this family effort on developing hobbies
and games. This family group might be found in the construction of a ping pong table, a box hockey game, a dart game, or shuffle-board equipment. They may be constructing a model railroad, scenery, display cases for collections, additional equipment for outdoors trips, such as paddles, fiber glass coverings, and pack sacks. Such an opportunity as this will draw the parents closer to the school and increase their understanding of the whole program.

Organized Recreation in the Community

Recognition of recreation as a need is shown by the figures given in Chapter I of the expenditures for recreation by federal, state, and local governments. These indicate an increasing support of organized public recreation.

The recreational experiences made possible through the use of the staff and facilities of the industrial arts departments of a school, represent a broadening of the recreation program sponsored by various community groups.

Public Recreation Program. Finding application in various programs of public recreation, industrial arts represents an effort to meet the needs of all participants. For example, the directed play of the "playground era" is being replaced by the "day camp" movement which includes many activities involving tools, materials, and manipulative techniques quite like those of an industrial arts education program. The extension of the local school's industrial arts facilities and staff into this effort represents one way of
aiding public recreation. This need not be confined to any one group because industrial arts is for all people regardless of age, sex, or condition.

A school desiring to become a community school should support industrial arts in expanding its program to serve the recreational needs of the aged. These older persons find great satisfaction in shaping clay or wood, in weaving various fibers into pleasing designs and useful articles, and in tooling leather. An expansion of the industrial arts program in this direction can serve well the recreational needs of the "golden age" group.

Certain evenings might be turned over to young adults just beginning home construction or furnishing. This group, in their use of the industrial arts facilities, will see many possibilities for extending and satisfying their recreational needs. Their only demand will be guidance in their effort to express themselves.

Voluntary and Private Youth Effort. Such community-centered youth programs as the Boy Scouts, the Girl Scouts, the YMCA, the YWCA, Junior Achievement, and the Boys Club, are aimed at guiding their participants through wholesome and meaningful activities. Where some of these programs, such as Junior Achievement, use the tools, materials, and techniques typical of industrial arts, others could be made increasingly beneficial and enjoyable through greater involvement. Such an extension of the industrial arts program should be through the direct participation of the industrial arts teacher as a leader of the recreation experience. There are, however, other ways
in which the program might direct its course with voluntary, private, or public programs. An analysis of these follows.

Community Centered Programs of Recreation. The problem of obtaining a sufficient number of volunteer leaders is always present. Even though the industrial arts teacher qualifies, he represents a source for aid of a type more valuable than when he is used merely as a volunteer leader. Industrial arts can be involved to distinct advantage, in the training of volunteer activity leaders. The recreation program is only as strong as the preparation of its leaders. Training workshops, institutes, and conferences centered in and involving the facilities of the local industrial arts program, offer many valuable possibilities for improved leadership.

The staff of the industrial arts program should offer to staff the community recreation effort and especially on advisory or consultant levels. These specialists serve in these capacities in an effort to upgrade the program, activities, and facilities. The practical knowledge of the industrial arts teacher and his training in planning physical plant layouts offers organized recreation effort a valuable source for needed aid. The industrial arts teacher should make himself a part of these efforts.

Another direction to be taken by the industrial arts teacher is in preparing suggestions for activities and program ideas, complete with the listing of needed tools and facilities. The publishing of such suggestions is lacking in the professional literature. Contributing first to his own professional literature, the industrial
arts teacher might also contribute to local recreation newsletters, or even to more widely circulated recreation magazines.

**Organized Group Camps.** Suggestions involving facilities and/or the possible contributions of the teacher of industrial arts are offered as possible courses for expanding the recreation function of industrial arts education. These do not represent the writer's attempt to make a complete list of existing possibilities. A few have been offered here as guides in developing the potential revealed in the analysis of recreational activities made in Chapter V.

Camping implies that the experience participated in centers in and involves the attributes of the setting. The industrial arts teacher will find many possibilities for enriching camping experiences through the bringing together of industrial arts education and some of the elements found in the outdoors. The above referred to analysis reveals that the industrial arts teacher has many opportunities to involve the elements of nature in camping activities. Typical examples of such activities are nature study or conservation, woodcraft, and camp-site improvement. A few examples should be sufficient to show possible courses for expanding such work in organized group camps.

The industrial arts teacher in nature study will find himself guiding the construction and the use of underwater viewers, fish and insect nets, mounting boxes for collections, animal traps and cages, windmills, water wheels, compasses, and survival kits. These activities and more like them offer many happy hours for the individual's
living and learning in the outdoor camp site.

The industrial arts teacher in conservation work will find his tools, materials, and techniques useful in constructing and demonstrating conservation devices such as "splash erosion indicators" and "run-off boxes" for measuring erosion. He will find use for these tools in the construction of check dams in gulleys, fire trails, and tree pruning. Industrial arts can aid in trail construction in camp site improvement, building steps, in constructing retaining walls, signs and markers. These activities are enjoyed by the camper because he sees value in them. He senses accomplishment.

The industrial arts teacher in woodcraft can share many skills. The axe and the knife are his tools. Their skillful use requires the guidance of an experienced hand. With these and possibly a few additional tools, such activities as studying trees, their characteristics and uses, can take place. Outdoor camp furniture and shelter construction offer interesting and enjoyable experiences. Pioneer trail gear construction, using available materials, present themselves as possible activities. Loom construction, and using natural fibers in weaving, take the camper into crafts familiar to industrial arts. Ropemaking from hemp is a craft leading to other interesting activities. The experienced woodsman knows how to tan an animal hide and how to work leather into useful articles, as does the industrial arts teacher.

The industrial arts teacher finds that the usual camp craft program involves materials. However, this program often represents
little more than a poor transplanting of activities which can be carried on in the recreation center in the heart of a city. These do not reflect the true camping ideals or proper use of the resources of the natural setting. On the other hand, industrial arts does offer many opportunities for enriching the camp program by bringing together its resources and those of the camp site.
CHAPTER VII

IMPLICATIONS OF THE RECREATION FUNCTION

As a result of the development of this study to the point where proposals for expanding the recreation function of industrial arts education are made, as in Chapter VI, inferences can be drawn which indicate the possible effect of these proposals on certain individuals, groups, or programs of effort. For the purpose of giving greater meaning to what has been recorded thus far, these implications will be defined with reference to their center of influence. These centers are located within the individual student participating in a program of industrial arts education for recreation, in the whole educational program, in the efforts of the industrial arts teacher, in the industrial arts laboratory, in the industrial arts teacher education programs, and in community life. Each will be dealt with briefly in this chapter.

The Individual

Opportunity for Growth and Adjustment. Industrial arts has an experiential type program. This offers many opportunities for the individual to express himself. The emphasis on experiencing and on self-expression, and the resulting increase in self-understanding,
make this a particularly direct approach for the individual to experience re-creation. Where there is opportunity for self-expression, there is adjustment, a gain in balance, a refreshing of the mind and body, recreation. The inference here is that there is much for the individual to gain in guidance toward recreational experiences through contact with an industrial arts education program.

A Positive Force. Industrial arts activities offer direction and impetus to creative living. Designed to define values common in both work and leisure, these activities represent planned effort for guiding the individual in finding and enjoying the good life. It can be implied by what has been recorded here that the expanding of industrial arts education in recreation represents a force for dynamic living. This force is needed where so many pressures exist which tend to thwart creative living such as monotony in work resulting from specialization and popular but passive television viewing during leisure.

Education

Education in Balanced Living. Balanced living within the framework of an educational program, whether it be of the elementary, secondary, or collegiate level, must be maintained. Education is living, and as such it must be balanced. Opportunities for the experience of recreation should be quite numerous in educational planning. This experience must be carefully fostered in order for it to be most beneficial to the participant.
The expansion of the recreation function is a move to offer a well-rounded educational experience. A good education includes and prepares one for positive, meaningful pursuits in both work and leisure. Industrial arts education, designed to give meaning and value to work experience and to leisure time recreational activities, is therefore a definite aid in guiding an individual toward more balanced and therefore enjoyable living.

The Industrial Arts Teacher

A Position of Leadership. The expanding of the industrial arts program to such a point that advantage is taken of the many opportunities which exist for serving the need for education in recreation, justifies the assumption that the teacher within this program is in a position to offer leadership. The fact that industrial arts is that area of education which involves the tools, materials, and techniques typical of industry endeavoring to give them value and meaning, places the industrial arts teacher in a position to offer leadership relative to guidance in recreation during work. The revelations made in the analysis recorded in Chapter V are evidence that the industrial arts teacher can also assume recreational leadership of real importance in the search for recreational experience during leisure.

Public Service. The industrial arts teacher finds that his skills place him in a position to be of great service to many groups. He is prepared to serve private voluntary efforts, the public
recreation program, and many special activity groups, because of the fact that he is skilled in several frequently sought activities. This opportunity should not be overlooked by the industrial arts teacher. Through such services he himself can find that which is sought by all,—recreation.

Responsibility and Direction. During the development of this study, no detailed statements were found which clearly defined the position of industrial arts as a profession, in its stated recreational function. This infers that it is the individual teacher who is yet the center and pioneer in this rich area of service. It further infers that this teacher at present carries the responsibility for definition and direction of the industrial arts profession's responsibility in recreation. Only the profession's stated and agreed function appears to support his attention to this effort. This study, however, reveals not only that industrial arts is very definitely involved in man's recreational pursuits, but also that action must be taken in this educational area to meet the demand for guidance in this effort. That responsibility rests upon the teacher as director in the broader use of industrial arts in education for recreation.

The industrial arts teacher seeking to expand his program of education in recreation might, as a first step, determine what organized recreation programs are already in existence in the school and community. Efficient use of the resources for guiding the search for recreational experiences is logically based on the cooperation of all existing organized efforts. A good start for
the industrial arts teacher, therefore, is to become acquainted with the recreational programs and their leaders. He should, as a second step, study their needs and on the basis of such potential as revealed in this study, determine what procedure appears logical for organizing to contribute to the satisfaction of these needs.

A plan for contributing to the recreational effort must include careful consideration of such details as staff time available, the availability and care of facilities, the development of policies concerning the costs involved, scope of the program and group to be served. Such items as these prepared in the form of a written plan and submitted to the school administration justifies favorable acceptance and support.

The industrial arts teacher may decide to become involved on a small scale and serve as a leader in another organized program. He may, on the other hand, find it possible to involve the school facilities in curricular and co-curricular student activities as well as in evening adult recreational guidance.

The industrial arts teacher is not only skilled in performing many activities through which recreation can be experienced, he is also trained to teach these skills. This makes him of great value in a recreation leadership training effort. The industrial arts teacher, realizing this situation, will move to expand the recreation function of his program by offering to serve various recreational efforts as a training specialist.
The Industrial Arts Laboratory

A Planned Center. The many recreational experiences involving industrial arts infer that the industrial arts educational facilities found in schools are logical centers for many school and community recreational activities. The school, recognizing its obligation to serve the community in this effort should plan and arrange its facilities accordingly. This further implies that, as a planned center for community recreation, the industrial arts facilities will be properly located in relation to other school recreational and supporting facilities. The gymnasium, toilet and wash facilities, for example, should be conveniently adjacent. Entrances should be so located that only the needed portion of the building will be opened. These and other such considerations should be given attention in planning for education in recreation. Attention to such considerations will make control less difficult.

Facilities for Varied Interest Groups. The school program equipped to meet the objectives of industrial arts education will have adequate facilities for a recreation program. As indicated in the development of this study, typical industrial arts materials, tools, and techniques are found to be involved in many recreational experiences. The facilities of the school need but few if any additions in order to serve recreation needs. Expanded storage space, coupled with increased resource materials in the library, are quite likely to be the only places where the facilities need special attention. These and other problems which might arise can often be solved by the groups participating in the recreation program.
This bringing of adults or families into the school, and having them use the facilities, serves as an avenue for developing good public relations. A better understanding of the school and its problems results in greater support by the community and better service to the community.

**Industrial Arts Teacher Education**

**Interpretation and Training.** It is of increasing importance for each individual to become capable of directing the use of the time he is released from labor. It has been shown that recreational experiences do involve the characteristics of industrial arts. The implication which can be drawn here is that a concept of the potential for industrial arts education in recreation should be a part of the training program of industrial arts teachers to the degree of its importance. Many of the factors conditioning recreation, as pointed out in Chapters II and III, are a result of the influence of industry.

Part of the task of teacher education must be training in recreation as well as interpreting the effort. Since industrial arts, by nature, represents so many opportunities for guiding individuals toward recreational experiences, teacher education must participate in training their product to contribute to the effort.

**Sharing the Responsibility for Leadership.** Whether the college student is directing his major studies toward the field of recreation, industrial arts teaching, or some other field, there is much to be gained by preparing him for recreational leadership through contact
with appropriate studies in the industrial arts curriculum, expanded in the area of education for recreation. Preparation by learning special manipulative skills is not enough, however. The development of a concept of how to have these skills serve his recreational needs and those of others is also important.

Demand for a Statement of Position. All that has been said thus far points out that the profession, and no less industrial arts teacher education, must formulate a statement of position on their responsibility for recreation. It is inferred by what has been recorded here that it is time for the profession as a whole to plan and take action. Such a statement and such plans by teacher education tend to give unity to and make more positive any movement to fulfill this function of industrial arts education.

The Community

Cultural Improvement. Man constantly seeks balance through recreation. Given the opportunity to express himself through the changing materials to improve their use, man can improve his environment at the same time. Such considerations imply that the program of industrial arts education is making a definite contribution toward improving life within the community.

An Attractive Community. The community which is consciously endeavoring both in work and leisure efforts to present wholesome opportunities for recreation appears attractive to everyone. This conscious effort represents a unifying force moving toward control
or balance of sponsored recreational efforts whether industrial, school, church, public, or commercial. Any effort toward education in recreation represents the meeting of a need of the individual for making the most of all such varied opportunities. Education for recreation as is possible through the greater involvement of the school's industrial arts programs can be seen as offering meaning and direction to recreational living within the community.
CHAPTER VIII
SUMMARY AND CONCLUSIONS

Certain findings have been made in the development of this study which establish position, define potential, and offer direction for expanding education in recreation in the area of industrial arts. Certain basic principles underlying this educational effort have been brought into focus. These are here recorded as the summary and conclusions of this study.

Findings Establishing Position

1. Recreation is a basic need of man and is sought for the balancing of physiological and psychological aspects of his being.
2. Recreation as re-creation is movement toward balance.
3. Recreation represents a need of every person and is therefore the responsibility of every individual, parent, and institution seeking their proper place in today's culture.
4. There exist certain factors conditioning man's recreation in such a way as to represent forces needing careful consideration in order that valued recreational experiences can be had.
5. Technology continues to present man with more and more opportunities for recreation, during work and during leisure, making
this aspect of living both a greater opportunity and a greater challenge.

6. Industrial arts, as the area designed to interpret industry and its influence, meets its responsibility more fully only when it seriously endeavors to guide its students in recognizing and making the most of the recreational opportunities produced by industry.

7. Through comparative analysis many aspects of the two efforts, recreation and industrial arts education, are congruent, each one having much to offer the other.

8. Many of man's activities through which he seeks recreation involve the basic characteristics of industrial arts education.

Findings Defining Potential

1. Technology is not only producing more leisure, it is also producing more ways of spending leisure. Guidance in the effort to place values and select the right way is a challenge to education; a challenge which industrial arts is uniquely equipped to accept.

2. The trend toward individual participation and application in the effort to satisfy current needs and desires, or the "do-it-yourself movement," should be recognized by the industrial arts profession as a distinct opportunity for service.

3. Industrial arts education is well fitted to promote the homecraft revival already found to be underway.

4. The growing demand for creative expression through manipulation places industrial arts education in a position where it must
develop its already organized program for such activities and coordinate them with the recreational program.

5. Recreational activities in industrial arts characteristically represent opportunities for self-expression. As such they represent a much needed force to offset the many sedentary types of recreation which prevail today, as for example, the currently popular television viewing pastime.

6. The harnessing of tremendous power resources means many more opportunities for recreational experiences if the resources for its control are likewise developed. The tools, materials, and processes of industrial arts education involved in recreation, offer one means for developing controlled living with power.

Findings Revealing Direction

1. The freedoms produced by technology represent re-creational opportunities in ever increasing numbers, as well as possibilities for movement toward unbalanced living. These freedoms demand educated use.

2. Education rather than laws, offers the most acceptable force in bringing about truly re-creational experiences.

3. Industrial arts education represents a needed resource for individuals and communities seeking improved recreational opportunities.
4. The expanding of the recreation function of industrial arts education is necessary in view of the increasing importance of learning to spend a living as opposed to directing educational effort dominantly toward learning to earn a living.

5. The characteristics of the industrial arts educational program, the training of its staff and the type of facilities, make it well qualified to serve in the leadership training efforts of the recreation movement.

6. Industrial arts education in recreation represents an opportunity for the school to serve not only the school population, but also the out-of-school population.

7. Personnel in charge of the preparation of industrial arts teachers are obligated to interpret and contribute to the movement this area is so well equipped to serve,—recreation.

Guiding Principles as Conclusions

1. Recreation is an experience which can take place within an individual during either work or leisure. Industrial arts education is uniquely equipped to guide the individual in recognizing recreational opportunities and in increasing his skill in making use of these opportunities, whether they be in work or leisure, in that it involves the basic characteristics of industry which are also involved in many leisure activities.
2. Growth through self-expression characterizes industrial arts. It is through such creativity that meaningful contributions are made to the advancement of the culture. Conditions for recreational experiences prevail here.

3. Since the need of recreation exists for people of all ages, the expanding of the recreation function in industrial arts education should take place at all levels of its program, kindergarten through adult, typical and atypical.

4. Industrial arts activities are involved in a large portion of the recreational experiences centered in the home. They represent activities participated in and enjoyed by all ages and abilities. It can be said, therefore, that industrial arts is free to move in a direction to increase the positive influence of the home on its members.

5. By guiding the individual in seeking and finding meaning in occupations made sedentary as a result of the application of power, industrial arts education brings the individual nearer to recreational experiences.

6. Industrial arts education revealed as being involved in many of man's recreational activities, is one area of educational effort equipped to meet the growing demand for educational guidance in recreation.

Such a study as this reveals many topics which should be developed further. These would serve as the means for a more complete expansion of industrial arts education in recreation. A listing of some
of these study topics follows:

1. Industrial arts and outdoor education in the school camping movement.

2. A new approach to handicrafts in organized camping programs.

3. Industrial arts and conservation education.

4. Industrial arts as a liberal education beyond high school.

5. Family recreation and industrial arts.

6. Industrial arts and the recreational needs of atypical cases.


8. A plan for coordinating the efforts of school programs contributing to education in recreation.

The tools, materials, techniques, and science of industrial arts places it in position to make unusual contributions to the recreational experiences of the individual. It has been revealed that recreational activities include many typical industrial arts activities. Industrial arts is seen as a program of such scope as to make possible contributions to all ages and both sexes, regardless of condition. These and the many more findings revealed in this thesis, give clear support to the original hypothesis; namely, that industrial arts is a part of the efforts of many individuals seeking recreational experiences and therefore demands conscious direction in this educational program. It remains only for industrial arts as a profession to recognize this opportunity and take action. Greater accomplishment can be expected when this action is coordinated with other areas of education in recreation.
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