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A Comparative Study of Selected Contemporary Theories of Creativity With Reference to Music Education in the Secondary Schools.

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A COMPARATIVE STUDY OF SELECTED CONTEMPORARY
THEORIES OF CREATIVITY WITH REFERENCE TO MUSIC
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A COMPARATIVE STUDY OF SELECTED CONTEMPORARY THEORIES OF CREATIVITY WITH REFERENCE TO MUSIC EDUCATION IN THE SECONDARY SCHOOLS

A Dissertation

Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of Doctor of Philosophy in

The School of Music

by

Edith Ann Rhodes
B.Mus.Ed., Louisiana State University, 1958
M.M., Louisiana State University, 1960
August, 1970

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ABSTRACT

Until recently creativity was often considered an inappropriate or incidental outcome of the secondary music education program. The 1967 Tanglewood Symposium endorsement of creativity as a major goal of all music education precipitated this study to determine: 1) the extent of support by composers and music educators for the stated objective; 2) the extent of agreement existing among philosophers, psychologists, and musicians regarding the nature and nurturing of creativity; 3) reasons justifying creativity as a suitable educational goal; and 4) ways to promote creativity in the secondary non-performing music class.

This report was divided into two parts. Theories in Part I dealt with the creative person, the creative process, and the creative outcome. Theories in Part II were concerned with the promotion of creativity. In each chapter theories were presented in sections by disciplines. Sectional summaries included a comparison of major topics discussed. The same topics were used in comparing positions of philosophers, psychologists, and musicians. A comparative summary indicated the extent of agreement existing within and among the three disciplines regarding topics compared. Finally, implications for music education were
Many divergent theories of the nature of creativity were proposed. Implications for music education drawn from proposals of theorists were not all favorable to the contention that creativity can and should be promoted through music education in the secondary schools. It was concluded that when defined as a thought process involving identifiable cognitive abilities or as a normal, universal personality trait which may be demonstrated by a product or activity unique to the individual, creativity may serve as an appropriate goal for many secondary school music students. Music educators agreed with more aspects of this view than did composers who generally defined creativity as a highly specialized ability expressed in a unique, artistic work of the highest standards—a goal perhaps unattainable for most music students.

Most music educators and other theorists justified creativity as a suitable educational objective on the basis of its universality as a personality trait, diverse means of being expressed, nature as a process, dependence upon large amounts of information, and positive relationship to conditions of openness. Recommended instructional principles and procedures were aimed at encouraging personality traits, cognitive abilities, and environmental conditions positively associated with creativity. These teaching aids appeared to be relevant and applicable to the promotion of creativity.
in the secondary school non-performing music class.

An investigation of the limited writings of musicians concerning creativity in the secondary music program indicated that: 1) creativity has not been widely recognized as a major goal at this level, 2) the majority of views favorable to the stated objective were expressed during the last decade, and 3) music educators are beginning to acknowledge that creativity can and should be promoted in the secondary schools.

A need exists for: 1) greater endorsement of the necessity, value, and appropriateness of creativity as an objective of secondary music education; 2) greater efforts in secondary schools to implement teaching procedures which facilitate creativity; and 3) more instruction in teacher-training programs regarding creativity and factors affecting its promotion.

Future research is needed to derive implications for secondary music education from: 1) theories of creativity proposed by sociologists, anthropologists, artists, and writers; and 2) findings of empirical studies of creativity conducted during the last fifteen years. Also needed is a study of the nature of problem-solving and other musical projects and activities involving creative thinking which would be suitable for a general music or humanities class.
CHAPTER I

INTRODUCTION

Creativity, a topic that is widely discussed and debated, is also widely acclaimed as a significant aspect of productive living. Indeed, leaders in the sciences, arts, and industry have become more keenly aware of the necessity for creativity in dealing with the increasing complexity of demands in this age of ever-expanding knowledge. Their concern for ways to stimulate and promote creativity has precipitated a vast amount of research in this area during the last ten years. Much of this research has implications for music educators.

Traditionally, most of the attention given to creativity in music education has been focused upon the elementary school program. There has not yet been any widespread acceptance of creativity as an objective of the secondary music education program. However, at the Tanglewood Symposium, which was held in 1967, the following aims of music education were adopted for all levels: 1) the art of living, 2) the building of personal identity, and 3) the nurturing of creativity.¹

Leading music educators at the Tanglewood Symposium also stressed the need for more interdisciplinary studies
concerning music education. To date, no interdisciplinary-comparative dissertation concerning creativity and music education at the secondary level has been written. The present study is of this nature.

I. Statement of the Problem

Until recently many music educators considered creativity to be an unsuitable or incidental outcome of the secondary music education program. However, the Tanglewood Symposium endorsement of creativity as a major goal of music education at all levels suggests a need to investigate more fully the meaning of creativity and its value and appropriateness as an objective of music education in the secondary schools.

This report involved the examination and comparison of theories of twentieth-century philosophers, psychologists, and musicians regarding the nature and nurturing of creativity. The purpose of the study was:

1) to ascertain ideas and information from a wide variety of sources concerning the nature and nurturing of creativity
2) to identify the views proposed or endorsed by selected composers and music educators regarding major topics discussed
3) to determine the extent to which theories of selected composers and music educators are in
agreement with each other and with theories of selected philosophers and psychologists concerning topics being compared

4) to determine the implications of positions endorsed by selected musicians for the task of encouraging creativity through music education in the secondary schools

5) to discover educational principles and instructional techniques which contribute to the promotion of creativity in the secondary non-performing music class.

II. The Significance of the Problem

The present investigation may be significant in the following ways:

1) As an interdisciplinary comparison it may contribute to a broader understanding of the general nature of creativity.

2) It may help music educators become more aware of the reasons justifying the endorsement and promotion of creativity as an objective of music instruction in the secondary schools.

3) It may call attention to ideas concerning creativity which are presently endorsed by musicians, but which perhaps may need to be revised or implemented.
4) It may offer ideas and information derived from the disciplines of philosophy and psychology which are relevant and applicable to the promotion of creativity in the secondary non-performing music class.

III. Delimitations

1. The comparative investigation was limited to views expressed by writers within the fields of philosophy, psychology, and music.

2. These views were limited to those proposed during the twentieth century.

3. The views of psychologists included those proposed by factor-analysts, stimulus-response psychologists, humanistic psychologists, gestalt psychologists, and psychoanalytically-oriented psychologists.

4. The views of philosophers consisted of those derived from the areas of general philosophy and educational philosophy.

5. The views of musicians were limited to those expressed by writers whose special interests were in the areas of music composition or music education.

6. Theories of creativity were selected from the literature available in the libraries of Louisiana State University, Baton Rouge; Tulane University; New Orleans Public Library, Main Branch; and the Louisiana State Library.
7. Instructional principles and procedures had primary reference to music education in the secondary non-performing classes.

V. Definitions

An interpretation and clarification of the meaning of pertinent terms used throughout this dissertation are indicated below.

**Theory.**—A theory will be interpreted to mean either a plausible explanation of an issue or the best imagined model one can conceive of a situation.

**Empirical study.**—An empirical study refers to a research project conducted by the scientific method.

**Creativity.**—Specific meanings attributed to this term by theorists are indicated in the description of the stated theory. When not defined otherwise, the term "creativity" will refer to a unique, effective manner of expressing ideas, dealing with a situation, or responding to an experience.

**Secondary schools.**—The secondary schools will be interpreted as those including grades seven through twelve in the American educational system.

**Non-performing music class.**—This designation will refer to a music class characterized by a flexible
curriculum in which performance is not the primary activity.

VI. Type of Research

This investigation followed a comparative procedure.

VII. Development of the Remainder of the Report

The body of this report is divided into two parts. Part I, entitled "The Nature of Creativity," consists of the following three chapters:

Chapter II: The Creative Person
Chapter III: The Creative Process
Chapter IV: The Creative Outcome

Part II, entitled "The Nurturing of Creativity," consists of Chapter V: Promoting Creativity Through the Educational Process.

Each chapter of Parts I and II is divided into five sections. Section I deals with philosophical positions, Section II with psychological positions, and Section III with musical positions. A summary follows each section. In addition, each chapter includes a comparative summary indicating the extent of agreement existing within and among theorists regarding essential aspects of theories compared. Section V consists of implications for music education as drawn from findings indicated in the comparative summary.

The final chapter of this research report, Chapter VI, contains a general summary, conclusions, and recommendations.
Notes

PART I

THE NATURE OF CREATIVITY
CHAPTER II

THE CREATIVE PERSON

Creativity has been defined as a human behavioral trait or cluster of traits which is manifested in a unique personality style. Therefore, one significant way to investigate the nature of creativity has been to study the cognitive, motivational, and stylistic patterns of behavior by which the creative person interacts with his environment.

Theories regarding the creative person have been advanced by philosophers, psychologists, and musicians and are derived from a variety of sources. Ideas proposed by philosophers and musicians appear to be introspectively derived and subjective. Theories proposed by psychologists are drawn from clinical observations and are also somewhat subjective. Descriptions of behavioral traits reported in the empirical studies are derived from scientific experiments with creative persons and provide a more objective view of the observable aspects of creative behavior.

An interdisciplinary investigation of representative theories regarding the creative person may provide insight into the inner dynamics and the outer manifestations of creative behavior. With reference to music education the
purpose of this investigation will be:

1) to determine the extent to which views of composers and music educators are in agreement with each other, and with theories proposed by philosophers and psychologists;

2) to discover ways by which to recognize creative behavior in one's self and in others;

3) to gain knowledge concerning the creative person which may be relevant to the encouragement of creative behavior through participation in the secondary school music program.

The theories reported will be grouped according to the disciplines of philosophy, psychology, and music. A summary will follow the presentation of selected theories within each discipline and will include a comparison of the major aspects of the theories reported. A comparative summary will follow the completion of the music section and will be designed to show the extent of agreement existing both within and among the three disciplines with regard to the major topics being compared. Implications for music education will be drawn from these findings.

Section I: Philosophy

A. Theories of Philosophers

1. Alfred North Whitehead (England, d. 1947)

Whitehead conceived of creativity, the "urge toward novelty," as a cosmic force imminent in everything that
exists. All persons, therefore, are potentially creative and possess a creative tendency toward new adventure, new possibilities, and new types of experiences. Whitehead also referred to the creative tendency as one's "creative sense of growth" and "sense of values."

Man's creative potentialities lure him toward the actualization of his felt possibilities for value. Whitehead believed that the source and realization of all actual creativity lies not in a spiritual force but within the individual himself and in society. Man makes himself continually from the creative potential which is present in him and supported by the world.

2. Henri Bergson (France, d. 1941)

Bergson believed that it is the nature of all life to be creative, and that the individual, taken as a whole, is necessarily creative from the mere fact that he is alive. Because of man's creative impulse (élan vital), he continually seeks to express novelty. "Every human work in which there is invention, every voluntary act in which there is freedom, every movement of the organism that manifests spontaneity brings something new into the world."

The creative person experiences a continual state of change or "becoming" like that operating in the universe. Bergson's contention that change and creativity are essentially related was made clearly evident when he stated: "For a conscious being to exist is to change; to change is
to mature; and to mature is to go on creating itself endlessly."\textsuperscript{12}

3. Jacques Maritain (France, )

Maritain identified the creative person, best represented by the fine artist, as a spiritual being who gives expression to works emerging from his unconscious being. He believed that one's creative powers arise in the "spiritual unconscious," and are derived from God. Man, in the act of creating, is controlled by a supernatural force outside himself.\textsuperscript{13}

According to Maritain's theory, the fine artist is motivated to create primarily by his love for making beautiful objects, and is directed by "poetic intuition."\textsuperscript{14} The intellect acts as a moral censor in guiding him to beget works pleasing to God.\textsuperscript{15}

4. Nicolas Berdyaev (Russia, d. 1948)

Berdyaev considered the creative person to be one called by God to creative activity as a creative answer to His love.\textsuperscript{16} "Only he who has conquered in himself the egoistic striving for self-salvation and selfish reflection about his own powers is strong enough to be a creator."\textsuperscript{17} In creativeness man reveals the image and likeness of God in him and manifests the divine power within him. The meaning of the creative act is best revealed through artistic creation.\textsuperscript{18}
Berdyaev gave three elements which he felt are essential to man's creativeness. They are: 1) the created world, the source from which man obtains his raw materials and the workshop in which he creates; 2) the gifts and talents with which man is endowed; and 3) man's primary "freedom," which itself is not created.  

Freedom, according to Berdyaev, refers to the "power of the Spirit to create out of itself, and not out of the world of nature." Freedom and creativeness are inseparable; only one who is free creates. Through this freedom man applies his given talents of the mind to a given world of nature and produces something new.  

B. Philosophy: Summary

Theories proposed by philosophers regarding the creative person deal primarily with the following topics: 1) the normality of creative behavior, 2) the universality of creative behavior, 3) the source of creative power, 4) motivation toward creative behavior, and 5) the expression of creative potential. Statements denoting the basic position(s) taken on each topic and the philosophers endorsing each position follow.

A. Topics from Theories

1. The Normality of Creative Behavior
   a. Creative behavior is a normal human response. It represents living at its fullest. (Whitehead, Bergson, Maritain, Berdyaev)
2. The Universality of Creative Behavior
   a. Everyone has the potentiality to be creative to some degree. The creative tendency is inherent in all life. (Whitehead, Bergson)
   b. Everyone does not possess the potentiality to be creative. The creative person expresses an exceptional gift. (Maritain, Berdyaev)

3. The Source of Creative Power
   a. One's creative power has a supernatural origin. It comes from God. (Maritain, Berdyaev)
   b. One's creative power has a natural origin. It comes from within one's self. (Whitehead, Bergson)

4. Motivation toward Creative Behavior
   a. The creative person responds to a need to serve God. (Maritain, Berdyaev)
   b. The creative person responds to a need to fulfill himself. Life is a continual state of "becoming." (Whitehead, Bergson)

5. The Expression of Creative Potential
   a. The creative person expresses his creativity in a creative product. (Maritain, Berdyaev)
   b. The creative person may express his creativity as a product, or a natural mode of living. (Whitehead, Bergson)
Section II: Psychology

A. Theories of Psychologists

1. Sigmund Freud (Austria, d. 1939)

Freud described the creative individual, exemplified by the artist, as one who finds through creating a means of expressing an inner conflict which would otherwise be expressed in neurosis. In effect, Freud considered the creative person to be a "prisoner of his impulses," and creativity to be a form of behavior on the same continuum with madness.

In psychoanalytic theory man strives to achieve a maximum of satisfaction and minimum of punishment and guilt. In attempting to do so, creative behavior is necessitated by a conflict originating in the unconscious mind. The conflict occurs when instinctual desires, primarily sexual, residing in the unconscious part of the mind (the Id), are denied normal expression by the rational controlling part of the mind (the Ego). It is the Ego's function to avoid feelings of guilt and achieve satisfaction of instinctual desires in a form which is acceptable to one's conscience (the Superego) and to society.

Freud believed that the artist "longs to attain honor, fame, and the love of women, but lacks the means of achieving these gratifications realistically." He must then find a substitute means of reducing the tension and
anxiety brought on by his unconscious instinctual drives. If the proposed solution is unacceptable to the Ego, it will be repressed and emerge as a neurosis. But, if a rational, acceptable substitute means of alleviating instinctual drives is found, the resulting solution can be an expression of creative behavior.\textsuperscript{29}

Freud described the creative person as one who, like the neurotic, lives with greater anxiety than the average person. "He has an unusual capacity for sublimating his instinctual drives, and a gift for resolving these conflicts in a flexible fashion, rather than in the compulsive pattern of the neurotic."\textsuperscript{30} The creative person's behavior can be expected to show a blending between productive ability, perversion, and neurosis.\textsuperscript{31}

2. Otto Rank (Austria, d. 1939)

Rank considered the creative individual, also referred to as the artist and productive type, to be one who is able to achieve a highly effective integration of the conflicting tendencies within himself. Creative functioning reflects the ideal development of a personality.\textsuperscript{32}

According to Rank's theory, the major source of internal conflict arises because of man's need to minimize both his fear of life (of being alone, or being himself) and his fear of death (of union with and dependence upon others). Rank regarded these opposite tendencies as a greater source of tension and anxiety than instinctual
As a person moves through life, his personality is largely determined by the interaction and strength of the two conflicting fears. The Will, which is similar to Freud's Ego, is the integrating power of the personality which serves both to inhibit and control instinctual drives and to guide and organize the creative impulse. According to Rank, an individual's creative impulse arises in the unconscious because of an urge to gain a measure of immortality through his creations.

Rank described three basic personality types resulting from the management of one's impulses, fears, and Will. An individual who later wills what he was earlier compelled to will is referred to as the "adapted" or "average" type. For him there are fewer possibilities of conflict, but also fewer possibilities of creativeness.

The individual who struggles against inner and outer pressures to conform, is unable to resolve his conflict, and finds himself plagued by self-criticism and feelings of guilt and inferiority, is then referred to as the "neurotic" type. His creative potential is greater than that of the "adapted" type.

The individual who is able to resolve his conflicts, to form his own ideas and standards, moves on to productive functioning and is referred to as the "creative" type.
instinctual drives which are then pressed into service to bring relief to his fears by creative efforts.\textsuperscript{38}

The "creative" type would be expected to be highly conscious of himself, his work, and his artistic mission.\textsuperscript{39} In addition, he would show intimacy with and commitment to other people, but without slavish loyalty or undue concern for social proprieties. The creative person is particularly characterized by a high degree of integration and differentiation in thought, feeling, and action.\textsuperscript{40}

3. Carl Rogers (United States, \textemdash )

Creative behavior, as described by Rogers, is an expression of normal human functioning, not mental illness. Rogers regarded an individual as being "creative" if his behavior falls within either the broad or narrow meaning of that word. He identified a creative person in the broadest sense as one who is able to actualize the inherent potentialities within him.\textsuperscript{41} Creativity, defined as "the capacity for growth in the direction of psychological health," is considered by Rogers to be a natural tendency of all people.\textsuperscript{42} One's behavior is creative to the extent to which he is able to fulfill himself as a person.\textsuperscript{43}

Rogers identified the "creative" person in the narrow sense of the word as an individual from whom creative products consistently emerge.\textsuperscript{44} However, Rogers recognized that a strong relationship exists between the behavior of both types of creative individuals. He stated clearly that
"one involved in the directional process termed 'a good life' is the type of person from whom creative products and living would emerge."45

The creative person is motivated by a positive urge to fulfill himself. Through creative activity he may find a means of self-expression. The self concept, one's sense of who and what he is, defines the ways by which the capabilities may be developed.46

In the opinion of Rogers, the creative person reflects the following inner characteristics:

1) Openness to experience. This implies a lack of rigidity and defensiveness, and a permeability of boundaries in concepts, beliefs, and perceptions. "Openness" also refers to a tolerance of ambiguity, and the ability to receive and accept much conflicting information without forcing closure upon the situation.

2) An internal source of evaluation. One's values and basis of judgment lie within himself.

3) The ability to toy with elements and concepts and to juggle many ideas and elements into seemingly impossible juxtapositions and wild hypotheses.47

4. Abraham Maslow (United States, _____)

Maslow recognized the creative person as one who expresses either "special talent" creativeness or "self-actualizing" creativeness. "Special talent" creativeness, defined as a unique expression of certain gifted persons,
may occur despite neurosis and generally results in a creative product. "Self-actualizing" creativeness is the reflection of a sound and integrated personality and is normal and common to everyone to some degree. It need not result in an observable product.48

According to Maslow, man experiences both "deprivation motivation," a survival tendency to maintain life, and "growth motivation," an actualization tendency to enhance life. These tendencies are not antagonistic. However, Maslow believed that the survival tendency is stronger and takes precedence over the actualization tendency. Therefore, growth motivation is strong only when physiological needs have been satisfied.49

In "self-actualizing" creativeness the individual responds to the actualizing tendency in order to achieve expression of his own special individuality and worth. Through fulfillment he seeks not to reduce tension, but to increase it.50

In the development of one's personality, an individual may also demonstrate creativeness at the primary and secondary levels, instead of, or prior to achieving integrated, "self-actualizing" creativity. Primary creativeness refers to behavior which originates as primary process thinking within the unconscious, is then accepted into conscious life, and expressed as the ability to play, fantasize, or be spontaneous. Secondary creativeness refers
to the behavior of one who progresses beyond the spontaneous expression of his ideas. His actions are affected by conscious, rational, and evaluative judgment of his ideas.51

"Self-actualizing" creativeness accounts for both rational and non-rational thought processes. One is able to use both easily and well. Maslow considered self-actualizing behavior as the highest type of human activity. He described this type of creative person as one who:

1) expresses ideas and impulses without fear of ridicule;

2) behaves in a spontaneous, effortless, unsterotyped manner;

3) is relatively unfrightened by the unknown, the mysterious, or the puzzling, and is often positively attracted to them;

4) can be comfortably disorderly, sloppy, chaotic, vague, and doubtful;

5) is more self-accepting of his own impulses, emotions, and thoughts.52

5. Erich Fromm (Germany, ______)

Fromm believed the creative person exemplifies the highest expression of man's basic need to "be himself and for himself."53 Each individual strives to perfect himself, not only in terms of his inherent capabilities, but in the direction of higher values and ideas concerning the "good life."54 Fromm, like Rogers, recognized the creative
person as being one who assumes a basic attitude or style of living which reflects growth in the direction of psychological health. Therefore, creative functioning, considered as a life-style, is potentially within the capacity of most persons to achieve. Such behavior may or may not result in a creative product.

Fromm attributed to man both an "animal" nature, which is instinctual, and a "human" nature, which is self-transcendent. Antagonism existing between one's "animal" nature and "human" nature may provide the impetus for creative behavior, but one is motivated to create primarily by the need for self-fulfillment. According to Fromm's theory, it is the freedom and independence stemming from the "human" nature that can lead to great heights of accomplishment. Shrinking from freedom amounts to conformity and defensive behavior. Acting on one's "human" nature leads to productiveness and non-defensive behavior.

Fromm described the creative person as one possessing the following attributes:

1) the ability to be puzzled.
2) the ability to concentrate intensely on the present.
3) the ability to accept, rather than avoid conflict and tension.
4) the ability to cultivate courage and faith (self-confidence in one's self).
Creative living emphasizes freedom, productiveness, individuality, and a lack of defensiveness.59

B. Empirical Studies

1. Donald MacKinnon (United States, _______)

MacKinnon, director of the Institute of Personality Assessment and Research at the University of California at Berkeley, in 1960 conducted a study of creative persons in various professions. Artistically creative individuals were represented by novelists, poets, and essayists. Scientifically creative persons were represented by scientists, engineers, and inventors. Individuals selected for participation in this study were those whose ability, in the opinion of experts, ranged from highly creative to relatively uncreative. The purpose of the investigation was to identify those traits generally found in creative people.60

Each participant was examined by means of problem-solving and experimental tests, questionnaires indicating opinions, attitudes, interests, and values, and by psychiatric interviews. Obtained scores and ratings were assessed and correlated with independently obtained estimates of each subject's creativity.61

MacKinnon found that "openness to experience" is one of the most striking characteristics of the creative person. This is reflected by his sensitivity to emotion, his self-awareness, his preference for perceiving rather than judging,
and his wide interest in areas thought of as feminine. The test results also indicated that the creative person experiences considerable psychic turbulence, but is more given to expression than to repression or suppression. This type of individual is also relatively uninterested in policing his own impulses or those of others. He shows concern for meanings and implication and little interest in small details.62

All groups tested indicated that theoretical and aesthetic values were more significant to them than were economic, social, political, or religious values. Creative persons also showed a capacity to tolerate the tension created by opposing strong values. Closely allied with a tendency toward strong theoretical and aesthetic values are the creative person's preference for complexity and his delight in bringing order and unity to divergent elements and ideas. It was also noted that creative persons generally are not conformists, nor deliberate non-conformists, but genuinely independent.63

With reference to intellectual traits, the test results showed that the creative individual possesses an unusual ability to record and retain experiences and generally commands a wide range of information. Creative thinkers are also characterized by cognitive flexibility and fluency, intellectual curiosity, and a preference for intuitive thinking.64
The intelligence quotients of those tested ranged widely, with most being well above average and none classified as feeble-minded. This was indicative of a positive correlation existing between intelligence and creativity. From his findings MacKinnon concluded that a certain minimum level of intelligence appears to be required for effective creative functioning. He further stated, however, that while the quantity and quality of one's intelligence are of great importance for creativity, intelligence, in the absence of other traits and dispositions, will not make one creative. Neither will mere intelligence identify creative potential or predict creative performance. "What appears to be more important are the structure of one's personality, his enduring interests, values, and motives, his cognitive style, and his whole-hearted commitment to the creative enterprise."  

2. Frank Barron (United States, )

Barron, research psychologist at the University of California at Los Angeles, identified the creative person as one who is regularly original. From observing that some individuals are regularly original and others regularly unoriginal, he inferred that certain patterns of traits must underlie the disposition toward originality. Based upon this hypothesis, Barron conducted a research project in 1955 at the University of California Institute of Personality and Assessment Research, Berkeley, to determine those
characteristics underlying the disposition toward originality.67

The first task of the project was to identify subjects who consistently produced original responses. This was done by observing and administering standardized tests to a group of one hundred captains in the United States Air Force. Eight tests were used to determine the subjects' originality, which was measured on the basis of two criteria: 1) the unusualness of the response, and 2) the adaptability of the response to the situation. To be considered regularly original a subject had to score at least one standard deviation above the mean on the test composite score and had to be at least two standard deviations above the mean on one of the eight tests. Those receiving the fifteen highest scores of the final distribution were selected and designated as the regularly original subjects. Those receiving the fifteen lowest scores on the final distribution were designated as the regularly unoriginal subjects.68

Tests were administered to the two groups to determine the degree to which the subjects possessed certain personality traits felt to be associated with originality. Based on previous work by Barron, five hypotheses concerning the personalities of original persons were proposed. These hypotheses stated that:

1) original persons prefer complexity and some degree
of apparent imbalance in phenomena.

2) Original persons are more complex psychodynamically and have greater personal scope.

3) Original persons are more independent in their judgment.

4) Original persons are more self-assertive and dominant.

5) Original persons reject suppression as a mechanism for the control of impulses.  

Using a significance level of .05, the results substantially confirmed the hypotheses suggested by previous work done by Barron on complexity-simplicity and on independence of judgment.

Barron interpreted the results to mean that in the disposition toward originality a definite relationship exists between originality and preference for complexity. He explained that complexity generates greater freedom of organization. The greater one's freedom to organize is, the greater one's capacity is to produce unusual and adaptive responses. Barron also concluded that "originality flourishes when suppression of impulses is minimized and when some degree of disintegration is tolerable in the interest of a final, higher level of integration." The creative person, by virtue of his strong Ego, rejects suppression. He is able, instead to regress into his preconsciousness, and return to a high degree of rationality.
Barron described the creative person as both "more primitive and more cultured, more destructive and more constructive, and crazier and saner than the average person."72

From the test results of his research on the disposition toward originality, Barron also determined that dominance, the need for mastery over experience, is a significant factor underlying creative behavior. One aspect of dominance is an insistence on self-regulation and a rejection of regulation by others. Rebellion against external control of impulses often results in adults who like things to be messy at first and highly organized later. Barron identified the less socially desirable traits which accompany the need for dominance as rebelliousness, disorderliness, and exhibitionism. The socially valued traits which accompany the need for dominance include independence, freedom of expression, and novelty of construction and insight. The socialized form of dominance is known as self-realization. Stated in another way, the results of Barron's project indicated that the creative individual is one whose behavior affirms his freedom of expression and movement, his lack of fear of dissent and contradiction, his willingness to break with custom, his spirit of play as well as dedication to work, and his sense of purpose on a grand scale.73

A subsequent investigation was conducted in 1959 by Barron using the same group of subjects. Its purpose was
to determine the relationship of originality to personality
and intellect. A comparison of the personalities of those
who received the top twenty-five scores in originality with
the personalities of those high in originality could best
be described by the following adjectives: clever, imagina-
tive, playful, poised, determined, talkative, logical,
rational, shrewd, civilized, loyal, mature, versatile, effi-
cient, initiatory, resourceful, reflective, quick, enter-
prising, energetic, organized, and fair-minded. 74

3. J. P. Guilford (United States, _____)

Guilford, director of the psychological laboratory
at the University of California at Los Angeles, said that
the creative person is one who commonly expresses certain
patterns of aptitudinal, motivational, and temperamental
traits. Guilford felt that, of these, the intellectual
abilities are the most significant attributes of the
creative person. Therefore, he conducted an experiment
called the Project on Aptitudes of High Level Personnel to
identify any distinct kinds of cognitive abilities commonly
possessed by creative people. This ten-year research
project (1949-1959) was sponsored by the Office of Naval
Research. 75

Guilford designed appropriate tests of creative
thinking to be administered to a group of highly creative
subjects and a group of relatively uncreative subjects to
measure certain mental abilities thought to be related to creative thinking. It was hypothesized that a comparison of scores would indicate the following outcomes:

1) evidence of a definite ability to sense problems.
2) a difference in the rate of producing ideas.
3) a difference in the flexibility of thinking.
4) a difference in the degree of originality.
5) the superior capacity of creative subjects to analyze and synthesize.
6) the superior capacity of creative subjects to redefine thinking.

The test findings, obtained by factor analyses, confirmed the following factors as a significant part of creative thinking:

1) Sensitivity to problems--the ability to see defects and sense the unusual.
2) Fluency--the ability to produce a large number of appropriate responses.
3) Flexibility--the ability to produce responses in a variety of categories.
4) Originality--the ability to produce ideas of highly infrequent occurrence.
5) Redefinition--the ability to use information in a new way.
6) Elaboration--the ability to supply details.

No unitary ability to analyze or synthesize was
found. However, the ability to elaborate, although not hypothesized, was found to be a significant factor in creative thinking.

From these results it is evident that not one, but many mental factors are involved in being creative. These factors are usually possessed by all in varying degrees. Therefore, Guilford contended that creative ability is not a special gift of a selected few, but is shared by the population to some extent.

The identified cognitive abilities associated with creativity have a definite place within the spectrum of man's total thinking processes. In Guilford's model of the "structure of the intellect," intellectual activity is divided into the following five kinds of mental processes:

1) Cognition--the comprehension of information.
2) Memory--the retention and storage of information.
3) Divergent thinking--the generation of information with emphasis upon achieving variety in the quantity of output.
4) Convergent thinking--the generation of information with emphasis upon achieving a single, or conventionally accepted outcome.
5) Evaluation--the exercise of judgment concerning the correctness, suitability, or desirability of information.

Divergent thinking underlies creative performance,
but cognitive and convergent thinking are also involved. Of the six factors related to creative thinking, fluency, flexibility, originality, and elaboration, all may be categorized as types of divergent thinking. Redefinition falls into the category of convergent thinking and sensitivity to problems into the category of evaluation. In addition to identifying the aptitudinal traits possessed by the creative person, Guilford, by means of personality inventories and questionnaires, was able to identify non-aptitudinal traits commonly reflected by creative thinkers. Guilford reported that persons scoring high in fluency tend to be impulsive, self-confident, ascendant, more appreciative of originality, and somewhat less inclined toward neuroticism. Persons scoring high on originality tend to be more interested in aesthetic expression and meditative thinking, to be more tolerant of ambiguity, and to feel less need for discipline and orderliness. They do not have a strong need for adventure and apparently recognize the need for cultural conformity.

Although Guilford regarded aptitudinal traits as determiners of the quality and quantity of creative potential, he was convinced that whether or not a person will produce the results of his creative nature will depend largely upon motivational and temperamental traits.
The research conducted by Getzels and Jackson (1960-1961) at the University of Chicago was directed toward determining the relationship existing between intelligence and creativity. It was specifically designed to determine whether or not a significant difference existed in the school achievement of a group of highly intelligent high school students and a group of highly creative high school students.

The two groups were drawn from a population of 449 adolescents from a midwestern, private, secondary school. A standardized intelligence test was administered to each student to measure his general intelligence quotient. Each student also was given a group of creativity tests, adapted from Guilford's tests, to measure creative thinking ability in terms of the mental factors identified by Guilford. The IQ and creativity test scores were then ranked. Those students whose scores were in the top twenty percent on intelligence but were not in the top twenty percent on creativity were chosen as the highly-intelligent group (N = 26). Those whose scores were in the top twenty percent on creativity, but were not in the top twenty percent on intelligence, were chosen as the highly creative group (N = 28). Students scoring in the top twenty percent on both intelligence and creativity tests were eliminated.
Achievement test scores obtained from both groups showed that despite a difference of twenty-three points in the mean IQ score between highly creative and highly intelligent students, the achievement of the highly creative group was equal to that of the highly intelligent group. Since the highly creative students were not in the top of their class, their superior school performance can be attributed to some factor other than intelligence as measured by the IQ test. Getzels and Jackson attributed this difference to creativity, thereby concluding that creativity and intelligence are not synonymous terms.  

From other aspects of their investigation, Getzels and Jackson also found that the essence of the performance of creative adolescents was their ability to produce new forms, to risk joining dissimilar elements, and to venture into new directions. The highly creative adolescent tends to diverge from stereotyped behavior and to seek careers that do not conform to the expected. He also favors qualities having no relationship to those believed to contribute to adult success. Since the creative adolescent is naturally independent and unconventional, it is not surprising that he is less adjusted to his peers than the average student. It was also noted that the creative student is often difficult to handle. Because he is more independent, self-absorbed, less friendly and communicative, less studious or orderly, he tends to isolate
himself, to be overly critical of others, to think unconventionally, and to break rules.  

5. E. Paul Torrance (United States, _____)  

A study involving highly creative and intelligent elementary school children was conducted in 1959 and 1960 by Torrance at the Bureau of Educational Research at the University of Minnesota. The procedure was similar to that involved in the Getzels and Jackson project; however, creativity test scores were obtained from the Torrance Tests of Creative Thinking.  

The results obtained when comparing achievement scores showed that although there was a difference of twenty-five IQ points between the mean intelligence quotients of the two groups, there was no statistically significant difference between achievement scores of the highly creative and the highly intelligent students tested. From this finding Torrance concluded that while abilities measured by both standard IQ tests and scholastic aptitude are important, there appear to be cut-off points, levels above which the demonstration of ability is determined by factors other than intelligence. The cut-off point may be determined by discovering how high intelligence must be before a point is reached when a higher IQ makes little difference in creative output and when creative thinking abilities become determiners of success. Torrance
gave the critical point for academic success as approximately IQ 120. Further enforcing his contention that creativity and intelligence are not the same, Torrance stated that "if one were to identify children as gifted on the basis of IQ tests alone, he would eliminate 70% of the most creative students." The results obtained by Torrance with elementary children were duplicated in similar experiments performed in a Minneapolis high school and at the University of Minnesota high school.

Concerning various personality traits commonly demonstrated by creative individuals, Torrance reported that elementary school children scoring high on creativity tests had far more wild ideas and produced work characterized by humor, playfulness, and a lack of rigidity. Psychiatric interviews of the highly creative children showed them to be significantly high on strength of self-image, ease of recall, and unevenness of ego development.

In personality studies conducted with adults at the Summer Guidance Institute, Torrance found that the creative person appears to be one who enjoys intense, sustained, and vigorous effort to mount obstacles and who needs to prove and display his personal worth. These needs are checked by his self-awareness, awareness of the feelings and experiences of others, and by his detached intelligence.
C. Psychology: Summary

Psychological theories of the creative person will be compared concerning the same essential topics set forth in summarizing the theories of philosophers. Psychologists advocating the basic positions proposed for each topic will be indicated. A summary of the findings of reported empirical studies will then be given regarding the following topics: 1) creativity and aptitudinal traits, 2) creativity and non-aptitudinal traits. These comparisons will be followed by a compilation of characteristics found to be commonly expressed by creative persons as previously reported. Separate tables will indicate intellectual, motivational, and personality traits.

A. Topics from Theories

1. The Normality of Creative Behavior
   a. Creative behavior is a normal human response. It is an indication of psychological health and ideal human functioning. (Rank, Rogers, Maslow, Fromm)
   b. Creative behavior is an expression of psychological illness. (Freud)

2. The Universality of Creative Behavior
   a. Everyone has the potentiality to be creative to some degree. (Rogers, Maslow, Fromm)
   b. Everyone does not possess the potentiality to be creative. It is an exceptional ability. (Freud, Rank)
3. The Source of Creative Power
   a. One's creative power has a natural origin. It comes from within one's self. (Freud, Rank, Rogers, Maslow, Fromm)

4. Motivation Toward Creative Behavior
   a. The creative person responds to a need to fulfill himself. (Rogers, Maslow, Fromm)
   b. The creative person responds to a need to resolve a psychological conflict. (Freud, Rank)

5. The Expression of Creative Potential
   a. The creative person expresses his creativity as a creative product. (Freud, Rank)
   b. The creative person may express his creativity as a product or a life-style. (Rogers, Maslow, Fromm)

B. Topics from Empirical Studies

1. Creativity and Aptitudinal Traits
   a. A positive relationship exists between creativity and intelligence. (MacKinnon, Getzels and Jackson, Torrance)
      1) The achievement of subjects with high creative ability was found to be equal to that of subjects with IQ 23 points higher. (Getzels and Jackson, Torrance)
      2) A minimum level of intelligence appears to be necessary for effective, creative functioning. (MacKinnon, Torrance)
b. A definite group of cognitive abilities are involved in creative thinking. (Guilford)

1) Intellectual abilities determine the quantity and quality of creative potential. (Guilford, McKinnon)

2) Intellectual abilities are the best indicators of creative potential. (Guilford, Torrance)

2. Creativity and Non-aptitudinal Traits

a. A wide array of motivational and personality traits is commonly evidenced by creative persons. (Guilford, MacKinnon, Barron, Torrance)

b. Motivational and personality traits are important determiners of whether creative potential is realized. (Guilford, MacKinnon)

C. Traits Associated with Creative Persons

TABLE 1

<table>
<thead>
<tr>
<th>INTELLECTUAL TRAITS</th>
<th>REFLECTIVE TRAITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>High level intelligence</td>
<td>Reflective</td>
</tr>
<tr>
<td>Sensitivity to problems</td>
<td>Intuitive</td>
</tr>
<tr>
<td>Cognitive flexibility</td>
<td>Logical</td>
</tr>
<tr>
<td>Cognitive fluency</td>
<td>Rational</td>
</tr>
<tr>
<td>Originality</td>
<td>Efficient</td>
</tr>
<tr>
<td>Capacity to redefine</td>
<td>Clever</td>
</tr>
<tr>
<td>Capacity for elaboration</td>
<td>Shrewd</td>
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</tbody>
</table>
**TABLE 2**

**MOTIVATIONAL TRAITS**

<table>
<thead>
<tr>
<th>Trait</th>
<th>Corresponding Trait</th>
</tr>
</thead>
<tbody>
<tr>
<td>High creative energy</td>
<td>Desires mastery of problems</td>
</tr>
<tr>
<td>Strong commitment to creative task</td>
<td>Preference for perceiving</td>
</tr>
<tr>
<td>Intellectual curiosity</td>
<td>Shows initiative</td>
</tr>
<tr>
<td>Aesthetic sensitivity</td>
<td>Strong sense of purpose</td>
</tr>
<tr>
<td>Likes to manipulate ideas</td>
<td>Need for variety and autonomy</td>
</tr>
<tr>
<td>Preference for complexity</td>
<td>Resists premature closure</td>
</tr>
<tr>
<td>Tolerates tension and ambiguity</td>
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</tr>
</tbody>
</table>

**TABLE 3**

**PERSONALITY TRAITS**

<table>
<thead>
<tr>
<th>Trait</th>
<th>Corresponding Trait</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open to experience</td>
<td>Prefers ideas to people</td>
</tr>
<tr>
<td>Independent, non-conforming</td>
<td>Enterprising</td>
</tr>
<tr>
<td>Emotionally stable, free</td>
<td>Active</td>
</tr>
<tr>
<td>from restraint</td>
<td>Impulsive, spontaneous</td>
</tr>
<tr>
<td>Feminine interests</td>
<td>Preference for expression</td>
</tr>
<tr>
<td>More dominant and</td>
<td>Resourceful</td>
</tr>
<tr>
<td>self-assertive</td>
<td>Sense of humor</td>
</tr>
<tr>
<td>More complex</td>
<td>Disorderly</td>
</tr>
<tr>
<td>More self-accepting</td>
<td>Playful</td>
</tr>
<tr>
<td>More self-confident</td>
<td>Poised</td>
</tr>
<tr>
<td>More resourceful and</td>
<td>More introverted but bold</td>
</tr>
<tr>
<td>adventurous</td>
<td>Talkative</td>
</tr>
<tr>
<td>More radical</td>
<td>Loyal</td>
</tr>
<tr>
<td>More emotionally sensitive</td>
<td>Mature</td>
</tr>
</tbody>
</table>
Section III: Music

A. Theories of Composers

1. Arnold Schoenberg (Austria-United States, d. 1951)

Schoenberg spoke of the creative person as one who possesses exceptional capacity. He considered a composer to be a real creator only if he has something to say which has not yet been said and which he feels must be said.\(^{94}\) In Schoenberg's opinion, "There is no doubt that every creator creates only to free himself of the high pressure of the urge to create, and although he creates in the first place for his own pleasure, every artist who delivers his work to the general public, aims, at least consciously, to tell his audience something of value to them."\(^{95}\) From the lives of truly great men he deduced that "the urge for creation responds to an instinctive feeling of living only in order to deliver a message to mankind."\(^{96}\)

It is also Schoenberg's position that a creator must have both a vision and the power to realize it.\(^{97}\) "Human creators, if they be granted a vision, must travel the long road between vision and accomplishment—a hard road where, driven out of Paradise, even geniuses must reap their harvest in the sweat of their brows."\(^{98}\) The creative work represents the embodiment of inspiration and perfection, wish and fulfillment, will and accomplishment.\(^{99}\)
2. Igor Stravinsky (Russia-France-United States, )

Stravinsky described the creative composer as "an inventor of music." Invention presupposes imagination, but should not be confused with it. "Imagination is not only the mother of caprice, but the servant and handmaiden of the creative, as well." It is the faculty of creative imagination that helps one pass from the level of conception to realization.

Stravinsky observed that the faculty of creative imagination always goes hand in hand with the gift of observation. "The true creator may be recognized by his ability always to find about him in the commonest and humblest things, items of note."

Stravinsky considered composition to be an inner necessity. He is attracted to creative activity by the idea of discovery and hard work. The very act of putting a work on paper seems to be inseparable from the pleasure of creation. Stravinsky expressed his need to create very pointedly when he said, "For me, as a creative musician, composition is a daily function that I am compelled to discharge. I compose because I am made for that, and cannot do otherwise."

3. Aaron Copland (United States, )

Copland envisioned the creative artist as the "embodiment of a free man." He must be free in order to function creatively, for only in so far as he functions as
he pleases will he create significant works.  

Within each human creator lies a resurgent need to make evident his deepest feelings about life. Copland found that each work is both a means of self-expression and a means of self-discovery. He stated this conviction clearly with these words: "I must create in order to know myself . . . ."  

Copland also asserted that the creator must be instinctive and spontaneous in his impulses and possessed of a self-imposed and controlling discipline. The creator believes in the value of his own work and in its perfectability.

B. Theories of Music Educators

1. James L. Mursell (United States, d. 1963)

Mursell considered the creative person to be one from whom come creative responses. He believed that creativity is demonstrated in growth, which he defined as "the attainment of new vistas, new powers, new precisions, the deepening and defining of insights and understanding, and the widening of horizons."  

Within each individual is a creative impulse, the potential power to respond creatively. Creativity flows from an inner need, without which there is no creativity at all. Mursell felt that creative potential is best realized through self-expression.

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2. Ray Moore (United States, 

Moore identified the creative person as one generally possessing high mental ability. In the Journal of Research in Music Education he reported the results of empirical studies conducted with reference to creativity and intelligence and the significance of these findings for music educators.

Moore cited the evidence of Getzels and Jackson and Torrance showing a positive correlation between creativity and intelligence and a high level of achievement attained by creative students. Moore also concurred with MacKinnon's finding that creative ability, while more often accompanied by a high level of intelligence, may be found in lesser degrees at all levels of intelligence.

3. Eric Jensen (United States, 

Jensen described the creative person as an aggregate of behavioral traits such as were indicated in the Empirical Studies reported. From the research of Barron, Jensen stated that the creative person seems able to delay his impulse expressions. Jensen also cited the adjective check list derived from Barron's project concerning the relationship of originality to personality and intelligence. This list may be found in the final paragraph of the discussion of Barron's empirical research, p. 29.

From the findings reported by Guilford and Torrance, Jensen pointed out that the creative personality
encompassed a vast span of variable behavioral traits which seem to have one common characteristic—an intensity evident in everything he does.\textsuperscript{118}

4. Neal Glenn (United States, _____) and Edgar Turrentine (United States, _____)

Glenn and Turrentine's description of the creative person was derived from investigations conducted at the Institute of Personality Assessment and Research by MaccKinnon and Barron.\textsuperscript{119}

The authors reported the following traits as characteristic of the creative person: 1) a genuine openness to experience, 2) a tolerance of ambiguity, 3) confusion and disorder, 4) a strong disposition to be independent, and 5) the tendency to perceive through intuition.\textsuperscript{120}

B. Music: Summary

Theories proposed by composers and music educators will be compared regarding the basic topics outlined in the summaries of the two preceding sections. Musicians endorsing the designated position will be noted. Aspects of the empirical studies and tables of traits which are endorsed by music educators will also be indicated.

A. Topics from Theories

1. The Normality of Creative Behavior

   a. Creative behavior is a normal human response. It represents a high level of human activity.
(Schoenberg, Stravinsky, Copland, Mursell, Moore, Jensen, Glenn and Turrentine)

2. The Universality of Creative Behavior
   a. Everyone has the potentiality to be creative to some degree. (Mursell, Moore, Jensen, Glenn and Turrentine)
   b. Everyone does not possess the potentiality to be creative. The creative person possesses an exceptional gift. (Schoenberg, Stravinsky, Copland)

3. The Source of Creative Power
   a. One's creative power has a natural origin. (Schoenberg, Stravinsky, Copland, Mursell, Moore, Jensen, Glenn and Turrentine)

4. Motivation Toward Creative Behavior
   a. The creative person responds to a need to fulfill himself. (Copland, Mursell)
   b. The creative person responds to a need to resolve a psychological conflict. (Schoenberg, Stravinsky)

5. The Expression of Creative Potential
   a. The creative person expresses his creativity as a creative product. (Schoenberg, Stravinsky, Copland)
   b. The creative person may express his creativity as a product or life-style. (Mursell, Jensen)

B. Topics from Empirical Studies
   1. Creativity and Aptitudinal Traits
      a. A positive relationship exists between creativity
and intelligence. (Moore, Jensen, Glenn and Turrentine)

b. A definite group of cognitive abilities are involved in creative thinking. (Moore, Jensen)

2. Creativity and Non-Aptitudinal Traits

a. A wide array of motivational traits are commonly evidenced by creative persons. (Jensen, Glenn and Turrentine)

b. Motivational and personality traits are important determiners of whether creative potential is realized. (Jensen)

C. Traits Associated with Creative Persons

Traits of creative persons endorsed and reported by musicians are indicated by asterisks in the Tables which follow.

TABLE 4
INTELLECTUAL TRAITS

*High level intelligence
*Sensitivity to problems
*Cognitive flexibility
*Cognitive fluency
*Originality
*Capacity to redefine
*Capacity for elaboration

*Reflective
*Intuitive
*Logical
*Rational
*Efficient
*Clever
*Shrewd
**TABLE 5**

**MOTIVATIONAL TRAITS**

*High creative energy
*Strong commitment to creative task
*Intellectual curiosity
*Esthetic sensitivity
*Preference for complexity
*Tolerates tension and ambiguity
*Likes to manipulate ideas

*Desires mastery of problems
*Shows initiative
*Strong sense of purpose
*Need for variety and autonomy
*Resists premature closure
*Preference for perceiving

**TABLE 6**

**PERSONALITY TRAITS**

*Open to experience
*Independent, non-conforming
*Emotionally stable--free from restraint
Feminine interests
*More dominant and self-assertive
*More complex
*More self-accepting
*More self-confident
*More resourceful and adventurous
*More emotionally sensitive
*More introverted, but bold
*Active

Prefers ideas to people
*Enterprising
Impulsive, spontaneous
*Preference for expression
*Sense of humor
*Disorderly
*Playful
*Poised
*Talkative
*Loyal
*Mature
*More radical
*Resourceful

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**Section IV: Comparative Summary**

Table 7 serves to indicate the extent of agreement and disagreement existing among philosophers, psychologists, and musicians regarding topics discussed in the summaries of each section.
<table>
<thead>
<tr>
<th></th>
<th>Philosophy</th>
<th>Psychology</th>
<th>Music</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Topics from Theories</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. The Normality of Creative Behavior</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Creative behavior is a normal human response.</td>
<td>Whitehead, Bergson, Maritain, Berdiaev</td>
<td>Rank, Rogers, Maslow, Fromm</td>
<td>Schoenberg, Stravinsky, Copland, Moore, Jensen, Mursell, Glenn and Turrentine</td>
</tr>
<tr>
<td>b. Creative behavior is an expression of mental illness.</td>
<td></td>
<td>Freud</td>
<td></td>
</tr>
<tr>
<td>2. The Universality of Creative Behavior</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Everyone has the potential to be creative to some degree.</td>
<td>Whitehead, Bergson</td>
<td>Rogers, Maslow, Fromm</td>
<td>Mursell, Moore, Jensen, Glenn and Turrentine</td>
</tr>
<tr>
<td>b. Everyone does not possess the potential to be creative.</td>
<td>Maritain, Berdiaev</td>
<td>Freud, Rank</td>
<td>Schoenberg, Stravinsky, Copland</td>
</tr>
<tr>
<td>3. The Source of Creative Power</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. One's creative power has a supernatural origin.</td>
<td>Maritain, Berdiaev</td>
<td></td>
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</tr>
</tbody>
</table>
## Table 7—Continued

<table>
<thead>
<tr>
<th></th>
<th>Philosophy</th>
<th>Psychology</th>
<th>Music</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. One's creative power has a natural origin.</td>
<td>Whitehead, Bergson</td>
<td>Freud, Rank, Rogers, Maslow, Fromm</td>
<td>Schoenberg, Stravinsky, Copland, Mursell, Jensen, Moore, Glenn and Turrentine</td>
</tr>
</tbody>
</table>

### 4. Motivation toward Creative Behavior

a. The creative person responds to a need to serve God.  
   - Maritain, Berdyaev

b. The creative person responds to a need to fulfill himself.  
   - Whitehead, Bergson, Rogers, Maslow, Fromm

### 5. The Expression of Creative Potential

a. The creative person expresses his creativity as a creative product.  
   - Maritain, Berdyaev, Freud, Rank

b. The creative person may express his creativity as a product or lifestyle.  
   - Whitehead, Bergson, Rogers, Maslow, Fromm

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Fromm, Freud, Rank, Rogers, Maslow, Copland, Mursell, Jensen, Moore, Glenn and Turrentine
### TABLE 7--Continued

<table>
<thead>
<tr>
<th>Philosophy</th>
<th>Psychology</th>
<th>Music</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>B. Topics from Empirical Studies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>1. Creativity and Aptitudinal Traits</strong></td>
<td></td>
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<tr>
<td>a. A positive relationship exists between creativity and intelligence.</td>
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<tr>
<td>b. A definite group of cognitive abilities are involved in creative thinking.</td>
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<tr>
<td><strong>2. Creativity and Non-aptitudinal Traits</strong></td>
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<tr>
<td>a. A wide array of motivational traits are commonly evidenced by creative persons.</td>
<td></td>
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<tr>
<td>b. Motivational and personality traits are important determiners of whether creative potential is realized.</td>
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</tbody>
</table>

- MacKinnon, Torrance, Getzels and Jackson
- Guilford
- Moore, Jensen, Glenn and Turren-tine
- Jensen, Glenn and Turren-tine
- Jensen, Glenn and Turren-tine
Section V: Conclusion
Implications for Music Education

A statement of the relationship of positions taken by composers and music educators to those proposed by philosophers and psychologists will be noted regarding each topic listed in the comparative summary. An assessment will then be made of the significance of the views endorsed by musicians for the promotion of creativity in the secondary school music education program.

A. Topics from Theories

1. The Normality of Creative Behavior

Composers and music educators cited concur with the vast majority of other theorists who believe that creative behavior is normal, wholesome, and desirable and indicative of mental health, not illness. Creativity, so considered, may serve as a worthwhile and valuable educational goal.

2. The Universality of Creative Behavior

Music educators endorse the position proposed by humanistic psychologists (Rogers, Maslow, Fromm) and philosophers (Whitehead, Bergson) that everyone has the potential to be creative to some degree. Adopting this premise means that creative functioning is a possible attainment for all students to some extent. Schoenberg, Stravinsky, and Copland accept the view of other theorists that creative behavior is
evidence of a very special talent. As such, creativity would be an appropriate educational goal for only a few persons.

3. The Source of Creative Power

Composers and music educators concur with the majority view of psychologists and philosophers that one's creative power has a natural origin. This infers that it is a human potentiality and therefore within the realm of individual development. Abilities outside the control of the individual are also outside the realm of teachability or encouragement.

4. Motivation toward Creative Behavior

There is no general agreement among philosophers, psychologists, and musicians concerning the need to create. Many factors may stimulate a creative response. Musicians cite the need to resolve internal conflicts and the need for self-fulfillment as significant motivational drives. Encouraging the development of creative potential as a means of self-fulfillment is well within the scope of the current educational objective of achieving the total growth of every student.

5. The Expression of Creative Potential

There is much disagreement among theorists concerning the question of how the creative person demonstrates his creativity. Music educators concur
with humanistic psychologists, particularly, in stating that the creative person may express his creativity as a style of living or as a product. The conception of creativity as a general way of interacting with others is an attainable goal for many students.

Schoenberg, Stravinsky, and Copland accept the position of other theorists who consider the essential expression of one's creativity to be a creative product. The production of a tangible creative product would be a probable educational goal of only those with exceptional creative potential.

B. Topics from Empirical Studies
1. Creativity and Aptitudinal Traits
   a. The existence of a positive relationship between creativity and intelligence and the probable necessity of a minimum level of intelligence may mean that creative functioning is attainable only to a negligible degree by students with IQ's below the hypothesized minimum level.
   b. Evidence indicating that high creative ability may be demonstrated by students of average and slightly above average intelligence infers that creative achievement is well within the range of possibility for many students other than the academically gifted.
c. The identification of definite, cognitive abilities related to creative thinking suggests that specific steps may be taken to encourage the use and development of these abilities in various subject areas.

2. Creativity and Non-aptitudinal Traits

The descriptions of motivational and personality traits provide educators with non-test means of recognizing possible signs of creative potential and with knowledge of significant factors involved in encouraging creative potential.

The recent endorsement by music educators of empirical findings of research psychologists may help to strengthen the knowledge of music educators concerning the nature of the creative person and perhaps assist many music educators to recognize the desirability and possibility of promoting creative behavior through the secondary school music education program.
Notes


6. Ibid.

7. Ibid., p. 228.


9. Ibid.


12. Ibid.


15. Portnoy, op. cit., p. 15.


18 Ibid., p. 9.


20 Berdyaev, *op. cit.*, p. 146.

21 Ibid.


25 Ibid., p. 20.


30 Ruitenbeek, *op. cit.*, p. 16.


32 Maddi, *op. cit.*, pp. 488-89.

33 Ibid.


36 Ibid., p. 41.

38 Rank, op. cit., p. 41.

39 Ibid., p. 37.

40 Maddi, op. cit., p. 489.

41 Ibid., p. 75.


43 Maddi, op. cit., p. 75.


45 Hallman, op. cit., p. 135.

46 Maddi, op. cit., pp. 75-77.

47 Rogers, op. cit., pp. 75-76.


49 Maddi, op. cit., p. 81.

50 Ibid., p. 83.


54 Maddi, op. cit., p. 109.

55 Hallman, op. cit., p. 133.

57 Maddi, op. cit., p. 107.
64 Ibid., p. 30.
68 Ibid., pp. 140-45.
69 Ibid., pp. 147-48.
70 Ibid., p. 148.
71 Ibid., pp. 149-50.
72 Ibid., p. 151.
73 Ibid., p. 152.
74 Frank Barron, "Originality in Relation to Personality and Intellect," Journal of Personality, XXV (December, 1957), 730-41.

77 Ibid., p. 155.


80 Ibid., p. 273.


84 Ibid., p. 164.

85 Ibid., p. 165.

86 Ibid., p. 175.

87 Kneller, op. cit., p. 68.


89 Ibid., p. 88.

90 Ibid., p. 5.

91 Ibid.

92 Ibid., p. 77.
93 Ibid., p. 70.
95 Ibid., p. 200.
96 Ibid.
97 Ibid., p. 102.
98 Ibid.
101 Ibid.
102 Ibid., p. 54.
103 Ibid., p. 51.
106 Ibid.

112 Mursell, Music Education: Principles and Programs, p. 327.


114 Ibid., p. 245.

115 Ibid., p. 252.


117 Ibid., p. 35.

118 Ibid.


120 Ibid.
CHAPTER III
THE CREATIVE PROCESS

Creativity has been defined by numerous philosophers, psychologists, and musicians as a mental process which occurs within the creative person. The term "creativity" refers not so much to a personality style as to a thinking procedure which is demonstrated by creative behavior.

In the subsequent investigation of the creative process it will be noted that theories proposed by philosophers and composers deal primarily with creating which results in art, while theories proposed by psychologists and music educators deal with creating in terms of more general creative outcomes.

Since these theories are basically concerned with the mental processes involved in achieving a creative result, an interdisciplinary comparison of selected theories may serve to indicate both the nature of the creative process, generally, and the extent to which theories derived from both the arts and sciences are related.

With reference to music education the purpose of this investigation will be:

1) to determine the extent to which theories of composers and music educators are in agreement with each other
and with theories proposed by philosophers and psychologists;

2) to gain knowledge concerning the types and relationship of mental activities associated with the process of creating which may be useful in helping the music educator to promote greater creative productivity in himself and his students.

The theories reported will be grouped according to the disciplines of philosophy, psychology, and music. A summary will follow the presentation of selected theories within each discipline and will include a comparison of major topics drawn from the theories reported. A comparative summary will follow the completion of the music section and will be designed to show the extent of agreement existing within and among the three disciplines with regard to the major topics being compared. Implications for music educators will be drawn from these findings.

Section I: Philosophy

A. Theories of Philosophers

1. Benedetto Croce (Italy, d. 1952)

Croce, espousing the philosophy of Idealism, considered the creative process to consist of purely mental activities. Art, which he defined as "intuition," has its beginning and end in the imaginative mind of the creator. In Croce's view, "the artist forms or expresses. He does not create in terms of ends, nor is his expressing or
creating properly describable in terms of the forming of matter."^3 "Nothing counts in art but the perfection of the imaginative vision in itself and by its own standards of expressiveness. . . ."^4

Croce attributed the presence of creative intuition to "inspiration," a spiritual phenomenon over which the artist has no control. In Croce's words, "The true artist finds himself with his theme; he knows not how. He feels the moment of birth drawing near, but he cannot will it or not will it."^6 Croce further asserted that the artist does not know the exact nature of the image achieved by "inspiration." Neither does he plan ahead that which he expresses. ^7

Croce spoke of artistic expression as "free intuition," expression free from supernatural influence and free from restrictive judgment or conditions. ^8 Because of this creative freedom, "every work of art expresses a state of the soul, and the state of the soul is individual and always new. . . ."^9

2. Robin George Collingwood (England, d. 1943)

Collingwood defined the process of producing a work of art as one entailing two phases: 1) the making of a plan, which is "creating," and 2) the imposing of the plan on certain matter, which is "fabricating."^10 Like Croce, Collingwood felt that "the work of art may be completely 'created' when it has been created as a thing whose only place is in the artist's mind."^11 Collingwood, elaborating
on this position, stated that "to create means to make it non-technically, but voluntarily and consciously." However, "the person who creates need not be acting in order to achieve any ulterior end; he need not be following a pre-conceived plan; and he is certainly not transforming anything that can properly be called 'new material.'"

Collingwood also believed that the person who creates a work of art must have within him a certain unexpressed emotion and the wherewithal to express it. Thus, "before the emotion is expressed, the artist is oppressed by it; he works so his mind will become 'lightened and eased.' His aim is to make his emotion clear to himself--indeed to discover what the emotion is."

Collingwood further asserted that the artist, in the process of achieving his goal, was directed by a controlling emotion which exists prior to the completion of the work, preserves its identity throughout, and determines the main course of the creative process. The work is considered complete when the original impulse has been exhausted.

3. Milton C. Nahm (United States, _______)

Nahm regarded the creative process as one of "making." He defined "making" as that state in which the artist's imagination is freely at work under conditions requiring choice. Nahm did not consider imagination to be a faculty linked with the supernatural or conceived as "inspiration," but as the creative embodiment of the highest
powers of reason, i.e., the powers of making original and rational choices."¹⁹ Imagination brings to the creative work "its unique substance and shape."²⁰

Nahm also felt that along with imagination, artistic "making" involves the exercising of two freedoms. He identified these freedoms as: 1) the freedom to put into a work of art the stuff of deliberated intention and 2) the freedom to release criticism into the potential realm of mastery as one perceives and studies the work of art.²¹ Thus, the "maker" of art plots a value and by the process of selection, rejection, and transformation exerts his creative freedoms.²² From this process emerges "an intelligible form produced in the material on which the artist operates by means of his technique."²³

4. Jacques Maritain (France, ___)

Maritain described artistic creation as a process by which one imposes a form or plan conceived by intuition upon matter, and proceeds in conformity to the rules of "making."²⁴ The essence of the process is to manifest externally in beauty what is grasped within the intellect.²⁵ The creative outcome is something unknown prior to the process and not capable of being specified by the intellect.²⁶

Maritain theorized that the creative process transpires within two stages which he identified as 1) systole and 2) diastole.²⁷ The entire first stage occurs within the "spiritual unconscious," an area of the preconscious mind.
where the creative act is initiated by some "lucky conjunction of circumstances." It is "within the depths of the preconscious that the artist's soul ceases to be controlled by the external world and his creative intuition begins to 'germinate.'" Maritain also believed that at the moment of creative intuition everything was given—all the vitality, all the insight, all the strength of creativity which goes into the act. "The totality of the work to be engendered was already present in advance. . . ."

In the stage of diastole the creative idea is clarified for consciousness and expressed. Maritain described this stage in terms of two sub-phases. The first sub-phase is purely mental and tends toward verbal expression, while the second sub-phase entails the externalization of the creative intuition.

Maritain asserted that both the conscious conception of the idea and its skillful embodiment in a given medium are significant for the creative act. According to Maritain, it is by "the steady labor of intelligence intent on the elaboration of the form that this virtuality contained in poetic intuition actualizes and unfolds along the process of production."

5. Samuel Alexander (England, d. 1938)

According to Alexander, the process of artistic creation consists of the fulfilling of a general impression through a physical medium. The artist's aim is to express
the subject which occupies his mind in the medium which he uses. In non-representational art, such as music, there may be no other subject but what is contained in the formed material itself. The creative process is initiated by the excitement and passion evoked by the subject matter.

Alexander recognized the creative process as one progressing through the following stages: 1) preparation, 2) incubation, 3) illumination, and 4) verification. During the stage of preparation the artist's mind is filled with those images, thoughts, and passions called up by the subject matter which give the work its particular excitement and direction. It is these vague images, together with unconscious thoughts and feelings, which control and feed the creative impulse. However, as Alexander stated, these images are not to be equated with what the artist intended to say. Nor is it the images which are translated into the material. Alexander felt that all the artist was aware of before completing the work were the thoughts and emotions of the subject matter. "He does not know till he has said it either what he wants to say or how he shall say it."

During the stage of incubation, mental images and passive thoughts combine with unconscious movings and emotions to yield the illumination of a creative idea, a "vision" which will guide the artist in bringing form and unity to the material creation. The making of an art object also requires corrections to satisfy the creative
impulse which drives him into his work.  

Alexander regarded the creative process as being complete only when the creative idea is represented in its material form. Indeed, as he stated, "The essence of the work of art is that in it the creative mind and the material are indissolubly fused."  

6. Monroe C. Beardsley (United States,  

Beardsley described the creative process as that stretch of mental and physical activity occurring between the inception of the creative idea and the final touch. He postulated that there are no universal stages of the creative process, but there are two clearly marked phases which alternate throughout and which involve the interplay between conscious and preconscious activity. Beardsley denoted these phases as: 1) the inventive phase, the moment of inspiration when a new idea from the preconscious appears in the conscious mind, and 2) the selective phase, which is nothing more than criticism, the conscious choosing and rejection of new ideas.  

Beardsley considered the process lying between these two phases to be essentially one of self-correcting, of constantly redirecting aims. He identified the element of control influencing the artist's choices as a "regional quality hit upon early in the game" which is gradually intensified. Beardsley also proposed that the "final quality" is at work throughout, not as a foreseen goal.
headed for teleologically, but as a present quality whose immediately perceivable value suggests that it would be of more value if there were more of it. Thus, the artist proceeds by exercising critical judgment, based on what has been done and what might have been done.

The resulting artistic creation is described by Beardsley as "nothing more than the product of a self-creative object."

7. John Dewey (United States, d. 1952)

Dewey defined creating as an act of intelligence by which a desired future is used to organize things, activities, and ideas so that an end is obtained. The creative process as a mental operation consists of the imaginative and intuitive fusion of past and present experience into new and unprecedented combinations. During the process material and ideas derived from one's interaction with his environment are refashioned in such a way that new qualities are expressed, new meanings projected, and new appreciations become available.

Dewey also characterized creating as a dynamic, ongoing process which is both cumulative and consummatory. As such it proceeds through the following stages: 1) inception, 2) intuition, and 3) consummation.

The process begins with the perception of the possibility of a new construction, a new quality, or a more refined concept. The inception is marked by a "groping," an
indeterminate feeling concerning the organization and manipulation of material and data. Intuition is described as the sudden conscious recognition of a unique fusion of the old and the new brought about in the imagination. The consummation of the process calls for the refinement of the creative idea into an observable product.

Dewey regarded the above procedure when associated with the creation of art as a process of "doing" or "making." According to Dewey, "the artist does something with some physical material." This "doing" is directed by the artist's sensitivity to the quality of the product with respect to the goal. The resulting creation then represents a "fusion of the cumulative experiences of the person as he confronts the material called into play."

8. Vincent Tomas (United States, )

Tomas identified the creative process in art as one consisting of two parts: 1) the moment of inspiration, during which a new idea appears in consciousness, and 2) a time of development or elaboration, during which the artist strives to find out what his inspiration is. Both inspiration and critical control are essential factors in truly creative activity.

Tomas considered the nature of inspiration to be less meaningful to an understanding of the creative process than the very fact of its presence. According to Tomas, the major factor is that inspiration, whether it appears at the
threshold of the artist's reflective consciousness as an impression, an emotion, a fantasy, or an unclear idea, is something that is "already there" in the creative process. "That it should be 'already there' is the essential point."\textsuperscript{68}

Tomas also felt that although inspiration is present throughout the process, it does not completely reveal the final outcome. The artist has no preconceived plan of the total work before he finishes. In fact, "he truly does not know until he has completed it what he seeks to express."\textsuperscript{69}

During the period of elaboration the creative idea grasped at the moment of inspiration is gradually developed under the artist's conscious control. Tomas, accepting the mechanistic theory of control, believed that the artist was directed not by the final outcome which is not yet known, but by the critical judgments he makes about what has been done so far.\textsuperscript{70} He knows what is right or wrong because something is "pushing him from behind."\textsuperscript{71} Tomas stated that whenever the artist goes wrong he feels himself being "kicked," and so tries another way. "What is kicking him is the 'inspiration which is already there.'"\textsuperscript{72}

In effect, Tomas conceived of the act of creating as a self-correcting process calling for the conscious selection and rejection of ideas in order to achieve a product of aesthetic value.\textsuperscript{73}
Vivas felt that the most satisfactory way to describe the creative process was as a matter of "discovery." He identified the two essential elements contributing to this "discovery" as 1) spontaneity and 2) control.

Adhering to a teleological theory regarding the element of control, Vivas contended that the artist is not directed by "inspiration kicking him from behind," but is lured by the "not-yet-there" completed object which "pulls him from ahead." The factors controlling the creative work lie in the future, in the whole to be created. Vivas stated that it is the "for-consciousness-not-yet-there" whole which dictates what is admissible and what is not. As the artist creates, he follows the idea initially attracting him, until the created object stands fully revealed before him. Hence, "creation is discovery."

The major basis of support for this view is that the artist produces a result that is novel with respect to the knowledge and data on hand before its completion. Since the artist is not consciously aware of the factors influencing the novel aspect of the product, something other than what the artist started with must have conditioned the finished product.

Therefore, based upon this reasoning, Vivas contended that the creative process cannot be reduced to problem-solving, the reshuffling of material already experienced.
Neither can the creative process be adequately described by "mechanistic" theories which liken the mind of an artist to a machine which works according to pre-established ideas. Both problem-solving and mechanistic explanations fail to account for the ways by which material taken in by the senses is "added to" as well as shuffled.

B. Philosophy: Summary

Theories proposed by philosophers regarding the creative process deal primarily with the following topics: 1) a definition of creating, 2) the factors guiding the creative process, 3) the forms of creative expression, 4) the stages of the creative process, and 5) the nature of mental activity associated with creating.

Views of individual philosophers concerning these topics are indicated in Table 8. A summary and comparison of the positions taken by philosophers as indicated in Table 8 follow.
### TABLE 8

#### THE CREATIVE PROCESS: POSITIONS OF PHILOSOPHERS

<table>
<thead>
<tr>
<th>A. Definition of Creating</th>
<th>B. Guiding Factor</th>
<th>C. Form of Expression</th>
<th>Philosopher</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Creating is &quot;intuition.&quot;</td>
<td>Inspiration</td>
<td>Mental images</td>
<td>Croce</td>
</tr>
<tr>
<td></td>
<td>Predominant emotion</td>
<td>Mental images</td>
<td>Collingwood</td>
</tr>
<tr>
<td>2. Creating is &quot;making.&quot;</td>
<td>Imagination directs rational choices</td>
<td>Material result</td>
<td>Nahm</td>
</tr>
<tr>
<td></td>
<td>Poetic intuition directs choices</td>
<td>Material result</td>
<td>Maritain</td>
</tr>
<tr>
<td></td>
<td>Passion of subject matter directs choices</td>
<td>Material result</td>
<td>Alexander</td>
</tr>
<tr>
<td></td>
<td>Regional quality directs choices</td>
<td>Material result</td>
<td>Beardsley</td>
</tr>
<tr>
<td></td>
<td>Inspiration directs choices</td>
<td>Material result</td>
<td>Tomas</td>
</tr>
<tr>
<td></td>
<td>Standards of the goal directs choices</td>
<td>Material result</td>
<td>Dewey</td>
</tr>
<tr>
<td>3. Creating is &quot;discovery.&quot;</td>
<td>Completed object directs process</td>
<td>Material result</td>
<td>Vivas</td>
</tr>
<tr>
<td>D. Stages of Creative Process</td>
<td>1. Description</td>
<td>2. Name of Stage</td>
<td>3. Order in Sequence</td>
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<td>---------------------</td>
</tr>
<tr>
<td>a. A period during which the problem is recognized and facts, ideas, and material are accumulated.</td>
<td>Preparation</td>
<td>Stage 1</td>
<td>Unconscious mind</td>
</tr>
<tr>
<td></td>
<td>Incept</td>
<td>Stage 1</td>
<td>Non-conscious mind</td>
</tr>
<tr>
<td>b. A period during which data and material are manipulated into new combinations.</td>
<td>Incubation</td>
<td>Stage 2</td>
<td>Unconscious mind</td>
</tr>
<tr>
<td></td>
<td>Incept</td>
<td>Stage 1</td>
<td>Non-conscious mind</td>
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<tr>
<td></td>
<td>Systole</td>
<td>Stage 1</td>
<td>&quot;Spiritual unconscious&quot; mind</td>
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<tr>
<td>c. A period during which the creative idea becomes known.</td>
<td>Illumination</td>
<td>Stage 3</td>
<td>Unconscious mind</td>
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<tr>
<td></td>
<td>Intuition</td>
<td>Stage 2</td>
<td>Non-conscious mind</td>
</tr>
<tr>
<td></td>
<td>Diastole: subphase 1</td>
<td>Stage 2</td>
<td>&quot;Spiritual unconscious&quot;</td>
</tr>
<tr>
<td></td>
<td>Inventive phase</td>
<td>Stage 1</td>
<td>Preconscious mind</td>
</tr>
<tr>
<td></td>
<td>Imagination</td>
<td>Stage 1</td>
<td>Conscious mind</td>
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<tr>
<td></td>
<td>Inspiration</td>
<td>Stage 1</td>
<td>Preconscious mind</td>
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<td>Inspiration</td>
<td>Stage 1</td>
<td>Non-conscious mind</td>
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<td>Inspiration</td>
<td>Stage 1</td>
<td>Unconscious mind</td>
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<tr>
<td></td>
<td>Inspiration</td>
<td>Stage 1</td>
<td>Unconscious mind</td>
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</tbody>
</table>
### D. Stages of Creative Process

<table>
<thead>
<tr>
<th>1. Description</th>
<th>2. Name of Stage</th>
<th>3. Order in Sequence</th>
<th>E. Origin of Mental Activity</th>
<th>Philosopher</th>
</tr>
</thead>
<tbody>
<tr>
<td>d. A period during which the creative idea is developed.</td>
<td>Verification</td>
<td>Stage 4</td>
<td>Conscious mind</td>
<td>Alexander</td>
</tr>
<tr>
<td></td>
<td>Consumption</td>
<td>Stage 3</td>
<td>Conscious mind</td>
<td>Dewey</td>
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<td></td>
<td>Diastole: subphase 2</td>
<td>Stage 2</td>
<td>Conscious mind</td>
<td>Maritain</td>
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<td></td>
<td>Selective phase</td>
<td>Stage 2</td>
<td>Conscious mind</td>
<td>Beardsley</td>
</tr>
<tr>
<td></td>
<td>Elaboration</td>
<td>Stage 2</td>
<td>Conscious mind</td>
<td>Nahm</td>
</tr>
<tr>
<td></td>
<td>Elaboration</td>
<td>Stage 2</td>
<td>Conscious mind</td>
<td>Tomas</td>
</tr>
<tr>
<td></td>
<td>Elaboration</td>
<td>Stage 2</td>
<td>Conscious mind</td>
<td>Vivas</td>
</tr>
</tbody>
</table>
Summary and Comparison of Topics

A. Definition of Creating
   1. Creating is "intuition." (Croce, Collingwood)
   2. Creating is "making." (Nahm, Maritain, Alexander, Beardsley, Tomas, Dewey)
   3. Creating is "discovery." (Vivas)

B. Factors Guiding the Creative Process
   1. Artistic creating results from creative inspiration. (Croce, Collingwood)
   2. Artistic creating results from rational choices made under the guidance of a pervading creative idea. (Nahm, Maritain, Alexander, Beardsley, Tomas)
   3. Artistic creation results from rational choices made under the guidance of the final goal. (Vivas, Dewey)

C. Forms of Creative Expression
   1. The creative process is consummated in a mental image. (Croce, Collingwood)
   2. The creative process is consummated in a material or observable result. (Nahm, Maritain, Alexander, Beardsley, Tomas, Dewey, Vivas)

D. Stages of the Creative Process
   1. Description
      a. A period of preparation during which the problem is sensed, and material and ideas accumulated, is recognized as an essential aspect of the creative process by Alexander and Dewey.
b. A period of incubation during which materials and ideas are manipulated into new combinations is recognized as an essential aspect of the creative process by Alexander, Dewey, and Maritain.

c. A period of insight or inspiration when the creative idea becomes known is recognized as an essential aspect of the creative process by all philosophers cited. (Croce, Collingwood, Alexander, Maritain, Dewey, Beardsley, Nahm, Tomas, Vivas)

d. A period of elaboration during which the creative idea is developed is recognized as an essential aspect of the creative process by all philosophers cited who define the creative outcome as a material result. (Alexander, Maritain, Beardsley, Nahm, Tomas, Vivas)

2. Sequence of Stages

a. The creative process results from mental activities occurring in the following sequences:

1) preparation, incubation, inspiration, elaboration. (Alexander)

2) incubation, inspiration, elaboration. (Dewey, Maritain)

3) inspiration and elaboration. (Beardsley, Nahm, Tomas, Vivas)

b. Mental activity characteristic of individual stages may occur throughout the creative process. (Beardsley, Tomas, Dewey)
E. The Nature of Mental Activity Associated with Creating

1. Types of Thought Processes Occurring during Stages
   a. Conscious thinking occurs during the stage of preparation. (Alexander, Dewey)
   b. Conscious thinking occurs during the stage of elaboration. (Alexander, Dewey, Maritain, Beardsley, Nahm, Tomas, Vivas)
   c. Non-conscious thinking occurs during the stage of incubation. (Alexander, Dewey, Maritain)
   d. Non-conscious thinking occurs during the stage of inspiration. (Croce, Collingwood, Alexander, Dewey, Maritain, Beardsley, Nahm, Tomas, Vivas)

2. The Significance of Conscious and Non-conscious Thought Processes for Creating
   a. Creating involves purely conscious mental processes. (Nahm)
   b. Creating involves purely unconscious thought processes. (Croce)
   c. Creating involves the interaction of conscious and non-conscious thought processes. (Alexander, Dewey, Maritain, Beardsley, Tomas, Vivas)
Section II: Psychology

A. Theories of Psychologists

1. Ernest Kris (United States, __________)

Kris described the creative process as one involving a shift in psychic levels of energy. Material from below the level of consciousness becomes accessible for conscious manipulation into a creative product. This occurs in a creative person when the barrier between the Id and the Ego becomes permeable enough to allow the Ego to gain access to primary process thoughts from the Id by way of the "preconscious." Kris referred to the process by which preconscious material becomes available for creative productivity as "regression in the service of the Ego." Because one's Ego is flexible and secure, he is able to "travel to the preconscious and return safely with his discoveries."

Kris identified the phase of the creative process during which impulses from the Id are manipulated in the preconscious as inspiration. Inspiration is experienced as an exceptional state of mind in which things and images flow and where ideas occur which were previously unknown.

Inspiration is then followed by a period of elaboration, a time of conscious effort exerted to develop creative ideas. It is during this time that relations are consciously established, connections and patterns created, and communication made possible. Concentration and effort predominate.
The phases of inspiration and elaboration thus constitute the process by which preconscious material is combined into new artistic shapes so that forbidden impulses are made acceptable to the artist and to the community.\textsuperscript{92}

2. Lawrence Kubie (Germany, \\

Kubie's theory stated that the creative process is a matter of: 1) combining ideas and elements in new and unexpected ways and 2) synthesizing these ideas into something new.\textsuperscript{93} This process results from the interaction of conscious, preconscious, and unconscious thinking.\textsuperscript{94} According to Kubie, behavior which responds primarily to unconscious thoughts, expresses conflict and tends to be rigid. To the extent that the unconscious plays the dominant role, the creative process will resemble the neurotic process of transmitting unconscious conflicts into some artistically acceptable form.\textsuperscript{95} Behavior which is dominated by conscious thinking is also considered to be uncreative, although realistic.\textsuperscript{96}

Kubie asserted that the preconscious mental system is of primary significance for the process of creating. In the preconscious memories, ideas and feelings are, in effect, "shaken up and rolled together,"\textsuperscript{97} so that the mind is able to associate freely and put together new combinations, new relations, and new patterns of ideas.\textsuperscript{98}

The second aspect of the creative process involves the conscious selection and evaluation of ideas which have
arisen from the preconscious. It is by conscious thought processes that one re-examines ideas critically, builds associations, rearranges them in logical order, condenses different units, and communicates meanings.99

While recognizing the alliance of conscious and preconscious thinking in the creative process, Kubie contended that the essential requirement of all creative production is the freedom of the preconscious to gather, assemble, compare, and reshuffle ideas without restriction from the unconscious or conscious systems. "... Unless preconscious processes can flow freely, there can be no true creativity."100

3. Abraham Maslow (United States, ______)

Maslow proposed that a strong relationship exists between the process of achieving creative production and that of achieving self-realization. He considered the progression through the primary and secondary stages of creative development to constitute a significant means of achieving self-fulfillment.101

In the primary phase of creating, material which emerges in the preconscious from the unconscious serves as the major source of original thought.102 These ideas become available to the individual as a result of "voluntary regression in the service of the Ego."103 During this time the individual becomes passive, totally absorbed in non-self, and receptive to inspiration.104 Behavior reflecting primary creativity and inspiration is marked particularly by an
However, creativity reflecting the primary phase of development should be distinguished from the working out of one's creative ideas. The secondary phase of the creative process involves the selection, rejection, judgment, and evaluation of those ideas. "After the spontaneous comes the deliberate; after total acceptance comes criticism; succeeding upon intuition comes rigorous thought; succeeding upon daring comes caution; succeeding upon fantasy and imagination comes reality testing." Maslow defined the essential difference between inspiration and the final product as a matter of training, discipline, and hard work.

4. Harold Rugg (United States, d. 1960)

Rugg identified the creative process as one comprising two clearly marked phases, discovery and verification. The act of discovery initially involves a preparatory period of conscious effort and intense concentration. It is a time of deep feeling, of looking and absorbing, of seeing things in unconventional ways, and of gathering oneself for the task.

This period of struggling with material may then be followed by an interlude in which the problem is pushed out of consciousness into the preconscious or "transliminal mind." Rugg described the "transliminal mind" as a "conscious state which has antechamber access to the
It is there on the fringes of consciousness where one's thinking is off-guard and in a state of relaxed tension, that an automatic process is able to sweep across the inner flux of remembered imagery and unconsciously-produced symbols, pick out the significant elements, and weld them into an ordered concept. When this occurs, a sudden, unexpected "flash of insight" emerges as a full-blown conceptual figure. The mode of thinking involved in discovery is described by Rugg as "felt-thought."

In the stage of verification which follows, precise, verbal, and analytical thinking occurs. Rugg contended, however, that such logical thought processes are resorted to only after the flash of insight, and then only for verification, never for discovery.

5. Arthur Koestler (United States, ________)

Koestler stated that the creative process follows a basic pattern which he called "bisociation." "Bisociation" consists of the interaction of two different, previously dissociated, and apparently incompatible "matrices" (patterns of activity), each of which is governed by its own code of fixed rules. The synthesis of previously unconnected matrices of thought was considered by Koestler to take place in the unconscious mind.

However, Koestler also acknowledged the importance of
observation and experimentation for creative production. His position was clearly expressed by the following statement: "Without the hard little bits of marble which we call 'facts or data,' one cannot compose a mosaic. What matters, however, are not so much the individual bits, but the successive patterns into which you arrange them, then break them up, and rearrange them." Therefore, the creative process includes an initial period of observation and accumulation of information. This sensory input is screened, dismantled, reassembled, analyzed, interpreted, and stored along a variety of channels of the mind.

During the period of preparation the individual recognizes a problem and attempts to achieve a solution by conscious, rational thinking. If a solution is not attainable by rational processes, his thinking may regress to "underground layers of the mind."

The temporary relinquishing of conscious control liberates the mind from certain constraints necessary to maintain disciplined routines of thoughts, and at the same time brings into play more primitive levels of mental organization. Thus, the period of incubation allows the mind to discard the straitjacket of habit, shrug off apparent contradiction, and acquire greater flexibility, versatility, and gullibility. Koestler described this essential aspect of the creative process as a "leap in the dark." The "leap in the dark" may result in a
significant "bisociation" and the emergence of the creative discovery. This sudden insight brings with it the immediate release of built-up tension and a gradual dispersion of the self-transcending emotion.

The period of illumination or insight is followed then by a time of verification, elaboration, and consolidation. This comes only after the act of creative discovery is completed. It is regarded by Koestler as the least spectacular and the most exacting, time-consuming phase of the creative process.

Koestler described the creative process as an "act of liberation, the defeat of habit by originality." As such, it may be a significant means of attaining a higher level of mental evolution.

6. Max Schoen (United States, ______)

Schoen described the creative process as a time of adventure and discovery. He regarded creating as a significant milestone in the endless journey toward self-realization.

The adventure consists of two parts: 1) a stage of preparation and 2) a stage of elaboration or maturation. Schoen described the period of preparation as a time in which "the creative mind lays up treasures on earth to utilize in the heavens of creative imagination." According to Schoen, the artistic creator may be compared to an
"aesthetic Midas"—"Everything he touches may at some time in the future turn into artistic gold." Thus, Schoen regarded all of life as a constant state of preparation. "While the creative mind is seeking, it is also finding, each finding being an invitation--a stimulus for further seeking."138

During the period of elaboration or maturation, ideas and material absorbed during the stage of preparation undergo a transformation within the unconscious mind. There, facts and ideas, like seeds planted in the soil of the mind, have time to develop their dormant potentiality.139

The self-searching process of adventure then culminates in a process of discovery during which the stage of inspiration and execution occur. Inspiration is marked by the appearance or emergence into consciousness of a new idea. It springs, like fruit, from the seeds sown in the creative mind.140

However, the enthusiasm of achieving inspiration must give way to the arduous, fatiguing, nerve-wracking labor of execution, in effect, to harvesting the fruits of one's creative thinking.141 The long and sustained labor is directed toward the one ultimate goal, the adequate expression in material form of the significant, unique experience which has evolved during the periods of preparation, maturation and inspiration.142

While acknowledging that both inspiration and
execution are essential to creative productivity, Schoen placed particular emphasis on the role of execution. In his words, "Many are called to inspiration, but few are chosen for execution." He regarded the true mark of the artist to be a ceaseless labor toward mastery of formal material.

7. Max Wertheimer (Germany, d. 1943)

Wertheimer defined the essential aspect of the creative process as the reconstruction of gestalts or patterns. He considered creating not to be a special process, but one characteristic of mental life as a whole. Creating was regarded as a function of everything in the experience of the creator.

The process starts when one recognizes that the inner structure of a situation appears to be incomplete. According to Wertheimer, the "structural strains of the incomplete situation produce tension within the thinker, so that vectors are set up to determine the step by which to restore harmony to the whole."

In Gestalt theory the initial phase of the creative process is essentially one of interaction and goal seeking. Achieving a creative solution requires the manipulation of ideas and information attained by interaction with others. However, sufficient past experience will not guarantee a creative solution unless the material acquired is arranged in a manner which is relevant to the experience of the individual. Subsequent creative or productive thinking...
then results from the meaningful reorganization of acquired cognitive material into a unified whole. The act of envisioning the unique idea is referred to as "insight," i.e., knowledge without reference to previous experience. Insight is then followed by a period of elaboration, skill, and effort. The creation resulting from these stages of mental activities offers evidence of the creative person as a thoroughly and purposefully aroused self, acting intelligently in response to a stimulus of a whole experience.

8. Alexander Osborn (United States, ____________)

Osborn considered creating to be a problem-solving process involving procedures for fact-finding, idea-finding, and solution-finding. These procedures often include some or all of the following phases: 1) orientation, 2) preparation, 3) analysis, 4) ideation, 5) incubation, 6) synthesis, and 7) evaluation.

The first three phases (orientation, preparation, and analysis) may be classified as aspects of fact-finding. Orientation is a matter of pointing up the problem and identifying it clearly. The phase of preparation is a time of gathering together previously stored and newly acquired knowledge relevant to the problem which then may be analyzed to determine significant relationships existing among acquired data.

The phases which contribute to the idea-finding
aspect of creating have been identified as ideation and incubation. Conscious ideation, which Osborn considered to be the most important but most neglected phase of the creative process, calls for thinking up all possible tentative solutions to the problem. This step is vital to creative production because the more ideas one produces, the more likely he is to think up some that are good, and, as Osborn stated, "The best ideas seldom come first."

Incubation is described as a time requiring little or no conscious effort. Ideas seem to "well up" into consciousness. The fact that many bright ideas result from this phase of relaxed attention is perhaps why incubation is said to invite "illumination."

Since the ultimate, creative solution often is achieved by combining or improving the idea first conceived explicitly through ideation or by illumination, the skills of synthesis and evaluation contribute significantly to successful procedures for solution-finding. Synthesizing entails a process of merging several specific ideas into a more general idea. Evaluation calls for making judgments concerning the value and appropriateness of the resulting creative product.

9. E. Paul Torrance (United States, )

Torrance also regarded creative thinking and problem-solving to be significantly related. In the process of creating, a problem which first appears vague and undefined
is solved by unconventional thinking, high motivation, and persistence. The resulting outcome is one that is novel and of value.  

Torrance recognized the creative thinking process as one occurring during the stages of preparation, incubation, illumination, and verification. Mental activity associated with each stage is not restricted to a particular stage, but may overlap.

During the stages of preparation one becomes aware of the problem, senses difficulties or missing links, formulates hypotheses, makes guesses, and manipulates information in an effort to achieve a solution. Those ideas contributing to the creative solution which are not determined consciously may be achieved by unconscious thinking occurring during the stages of incubation and illumination. Verification of hypotheses and creative ideas calls for setting up criteria by which to judge and improve the creative goal. The communication of one's creative solution is also a necessary part of the creative process.

Torrance has formulated an operational definition of creative thinking which deals with the observable aspects of the creative process as described above, i.e., the aspects which may be measured and altered by training. According to Torrance, creative thinking is a process of: 1) sensing gaps or missing elements, 2) forming ideas or hypotheses concerning possible solutions, 3) testing and retesting the
hypotheses, and 4) communicating the results. These aspects of creating call for conscious thinking and the employment of such mental factors as cognition, divergent production, associative thinking, and evaluation.

B. Psychology: Summary

Theories proposed by psychologists regarding the creative process will be compared concerning the topics proposed in summarizing the theories of philosophers. Table 9 serves to indicate the nature and range of positions taken by individual psychologists regarding each topic. A summary and comparison of views endorsed by psychologists as indicated in Table 9 will then be presented.

Summary and Comparison of Factors

A. Definition of Creating

1. Creating is "regression in the service of the Ego." (Kris, Maslow, Kubie)
2. Creating is "problem-solving." (Osborn, Torrance, Wertheimer, Koestler, Schoen, Rugg)

B. Factors Guiding the Creative Process

This topic was not discussed in the theories of selected psychologists.

C. Forms of Creative Expression

1. The creative process is consummated in a material or observable result. (Kris, Kubie, Maslow, Rugg, Koestler, Schoen, Wertheimer, Osborn, Torrance)
### TABLE 9
THE CREATIVE PROCESS: POSITIONS OF PSYCHOLOGISTS

<table>
<thead>
<tr>
<th>A. Definition of Creating</th>
<th>B. Guiding Factor</th>
<th>C. Form of Expression</th>
<th>Psychologist</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Creating is &quot;regression in the service of the Ego&quot;--a shift in psychic levels of energy</td>
<td></td>
<td>Material result</td>
<td>Kris</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Material result</td>
<td>Maslow</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Kubie</td>
</tr>
<tr>
<td>2. Creating is &quot;problem-solving.&quot;</td>
<td></td>
<td>Material result</td>
<td>Osborn</td>
</tr>
<tr>
<td>a. Creating is the reconstruction of gestalts.</td>
<td></td>
<td>Material result</td>
<td>Torrance</td>
</tr>
<tr>
<td>b. Creating is a process of &quot;bisociation.&quot;</td>
<td></td>
<td>Material result</td>
<td>Wertheimer</td>
</tr>
<tr>
<td>c. Creating is a process of &quot;adventure and discovery.&quot;</td>
<td></td>
<td>Material result</td>
<td>Koestler</td>
</tr>
<tr>
<td>d. Creating is a process of &quot;discovery and verification.&quot;</td>
<td></td>
<td>Material result</td>
<td>Schoen</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Rugg</td>
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</tbody>
</table>
### TABLE 9—Continued

<table>
<thead>
<tr>
<th>D. Stages of Creative Process</th>
<th>E. Origin of Mental Activity</th>
<th>Psychologist</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Description</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. A period during which the problem is recognized and facts, materials, and skills are accumulated.</td>
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<td></td>
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<tr>
<td></td>
<td>2. Name of Stage</td>
<td>3. Order in Sequence</td>
</tr>
<tr>
<td></td>
<td>Fact-finding: orientation, preparation, analysis</td>
<td>Stage 1</td>
</tr>
<tr>
<td></td>
<td>Goal-seeking</td>
<td>Stage 1</td>
</tr>
<tr>
<td></td>
<td>Preparation</td>
<td>Stage 1</td>
</tr>
<tr>
<td></td>
<td>Preparation</td>
<td>Stage 1</td>
</tr>
<tr>
<td></td>
<td>Adventure: preparation</td>
<td>Stage 1</td>
</tr>
<tr>
<td></td>
<td>Discovery: preparation</td>
<td>Stage 1</td>
</tr>
<tr>
<td>b. A period during which data and material are manipulated into new combinations.</td>
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<td></td>
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<tr>
<td></td>
<td>Incubation</td>
<td>Stage 1</td>
</tr>
<tr>
<td></td>
<td>Primary stage: incubation</td>
<td>Stage 1</td>
</tr>
<tr>
<td></td>
<td>Discovery: incubation</td>
<td>Stage 1</td>
</tr>
<tr>
<td></td>
<td>Adventure: maturation</td>
<td>Stage 1</td>
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<tr>
<td></td>
<td>Incubation</td>
<td>Stage 2</td>
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<td></td>
<td>(Incubation)</td>
<td>Stage 2</td>
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<tr>
<td></td>
<td>Incubation</td>
<td>Stage 2</td>
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<tr>
<td>D. Stages of Creative Process</td>
<td>2. Name of Stage</td>
<td>3. Order in Sequence</td>
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</tr>
<tr>
<td>1. Description</td>
<td>Idea-finding:</td>
<td>Stage 2</td>
</tr>
<tr>
<td></td>
<td>a) incubation</td>
<td></td>
</tr>
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<td></td>
<td>b) ideation</td>
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<td></td>
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<tr>
<td>c. A period during which the</td>
<td>Inspiration</td>
<td>Stage 1</td>
</tr>
<tr>
<td>creative idea becomes</td>
<td>Inspiration</td>
<td>Stage 1</td>
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<tr>
<td>known.</td>
<td>Primary stage:</td>
<td>Stage 1</td>
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<td></td>
<td>inspiration</td>
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<td></td>
<td>Discovery:</td>
<td>Stage 1</td>
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<td></td>
<td>insight</td>
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<td>Discovery:</td>
<td>Stage 2</td>
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<td></td>
<td>inspiration</td>
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<td></td>
<td>Idea-finding:</td>
<td>Stage 2</td>
</tr>
<tr>
<td></td>
<td>illumination</td>
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<tr>
<td></td>
<td>Insight</td>
<td>Stage 3</td>
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<tr>
<td></td>
<td>Insight</td>
<td>Stage 3</td>
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<tr>
<td></td>
<td>Illumination</td>
<td>Stage 3</td>
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</tbody>
</table>
TABLE 9--Continued

<table>
<thead>
<tr>
<th>D. Stages of Creative Process</th>
<th>2. Name of Stage</th>
<th>3. Order in Sequence</th>
<th>E. Origin of Mental Activity</th>
<th>Psychologist</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Description</td>
<td></td>
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<tr>
<td>d. A period during which the creative idea is developed.</td>
<td>Elaboration</td>
<td>Stage 2</td>
<td>Conscious mind</td>
<td>Kris</td>
</tr>
<tr>
<td></td>
<td>Synthesis</td>
<td>Stage 2</td>
<td>Conscious mind</td>
<td>Kubie</td>
</tr>
<tr>
<td></td>
<td>Secondary phase: elaboration</td>
<td>Stage 2</td>
<td>Conscious mind</td>
<td>Maslow</td>
</tr>
<tr>
<td></td>
<td>Verification</td>
<td>Stage 2</td>
<td>Conscious mind</td>
<td>Rugg</td>
</tr>
<tr>
<td></td>
<td>Discovery: execution</td>
<td>Stage 2</td>
<td>Conscious mind</td>
<td>Schoen</td>
</tr>
<tr>
<td></td>
<td>Solution-finding: synthesis, verification</td>
<td>Stage 3</td>
<td>Conscious mind</td>
<td>Osborn</td>
</tr>
<tr>
<td></td>
<td>Elaboration</td>
<td>Stage 4</td>
<td>Conscious mind</td>
<td>Wertheimer</td>
</tr>
<tr>
<td></td>
<td>Verification</td>
<td>Stage 4</td>
<td>Conscious mind</td>
<td>Torrance</td>
</tr>
</tbody>
</table>
D. Stages of the Creative Process

1. Description
   a. A period of preparation during which the problem is sensed, and material and ideas accumulated is recognized as an essential aspect of the creative process by most psychologists cited. (Osborn, Torrance, Wertheimer, Koestler, Schoen, Rugg)
   b. A period of incubation during which material and ideas are manipulated into new combinations is recognized as an essential aspect of the creative process by all psychologists cited. (Kubie, Maslow, Rugg, Koestler, Schoen, Wertheimer, Osborn, Torrance)
   c. A period of insight or inspiration when the creative idea becomes known is recognized as an essential aspect of the creative process by all psychologists cited. (Kris, Kubie, Maslow, Rugg, Koestler, Schoen, Wertheimer, Osborn, Torrance)

2. Sequence of Stages
   a. The creative process results from mental activities occurring in the following sequences.
      1) preparation, incubation, inspiration, elaboration. (Osborn, Torrance, Wertheimer, Koestler, Schoen, Rugg)
      2) incubation, inspiration, elaboration. (Kubie, Maslow)
3) inspiration and elaboration. (Kris)
b. Mental activity characteristic of individual stages may occur throughout the creative process. (Torrance, Osborn, Schoen)

E. The Nature of Mental Activity Associated with Creating

1. Types of Thought Processes Occurring during Stages
   a. Conscious thinking occurs during the stage of preparation. (Osborn, Torrance, Wertheimer, Koestler, Schoen, Rugg)
   b. Conscious thinking occurs during the stage of elaboration. (Kris, Maslow, Kubie, Rugg, Koestler, Schoen, Wertheimer, Osborn, Torrance)
   c. Nonconscious thinking occurs during the stage of incubation. (Kubie, Maslow, Rugg, Koestler, Schoen, Wertheimer, Osborn, Torrance)
   d. Nonconscious thinking occurs during the stage of inspiration. (Kris, Kubie, Maslow, Rugg, Koestler, Schoen, Wertheimer, Osborn, Torrance)

2. The Significance of Conscious and Nonconscious Thought Processes for Creating
   a. Creating involves the interaction of conscious and nonconscious thought processes. (Kris, Kubie, Maslow, Rugg, Koestler, Schoen, Wertheimer, Osborn, Torrance)
Section III: Music

A. Theories of Composers

1. Roger Sessions (United States,  

Sessions considered the process of creating music to be an activity of the inner nature by which the composer disciplines raw material into artistic form. In his opinion, three factors contribute to the fulfillment of the composer's musical objective. They are: 1) inspiration, 2) conception, and 3) execution.

Inspiration, which often appears as a definite phrase, motif, or chord, may occur gradually or in a flash. Sessions considered inspiration to be the impulse which sets the creative process in motion and which furnishes the energy to keep it going. He felt that the composer's principle problem is to recapture inspiration in every phase of the work and to provide sufficient energy to every detail of his vision of a whole.

Sessions defined the composer's vision of the whole as his "conception." This vision arises from inspiration and is an extension of its logic. As the conception takes on the form of concrete musical material, it assumes a more predominant role. Sessions regarded the artist's conception to be the essential part of creating. He described execution as a matter of listening inwardly to the music as it shapes itself, and of following both inspiration
and conception wherever they may lead.\textsuperscript{182}

Sessions also felt that throughout the creative process the composer is not so much conscious of his ideas as possessed by them. Often he is not aware of his exact musical thoughts until he is through with them.\textsuperscript{183} Nevertheless, a composer's goal is to endow the raw material from his world of sound with a meaning it does not of itself possess.\textsuperscript{184}

2. Arnold Schoenberg (Austria–United States, d. 1951)

The creation of music was described by Schoenberg as the conception and elaboration of a musical idea.\textsuperscript{185} He considered the significant aspect of a composition to be the idea.\textsuperscript{186} "One thinks only for the sake of one's idea."\textsuperscript{187} Schoenberg, describing the creative process as he experienced it, explained this position clearly when he stated:

I get a musical idea for a composition. I try to develop a certain logical and beautiful conception, and I try to clothe it in a type of music which exudes from me naturally and inevitably. I do not consciously create a tonal, or a polytonal, or a polyplanal music. I write what I feel in my heart, and what finally comes on paper is what just coursed through every fibre of my body.\textsuperscript{188}

Inspiration at times reveals to the composer a perfect vision of the whole work.\textsuperscript{189} However, Schoenberg felt that "an artist need not necessarily fail if he started something to which inspiration had not forced him. Often enough inspiration intervenes and gives its blessings undemanded."\textsuperscript{190}

Yet, Schoenberg noted, it is one thing to envision
a work in "an instant of inspiration and another thing to materialize one's vision by painstakingly connecting details until they fuse in an organism." \( ^{191} \) The vision must be molded, formulated, developed, elaborated, carried through, and pursued to its very end. \( ^{192} \)

Thus, the finished work gives evidence of both cerebral activity and spontaneous feeling. \( ^{193} \) In Schoenberg's opinion, "It is not heart alone that creates all that is beautiful, emotional, pathetic or affectionate, nor brain alone which is able to produce the well-constructed, the soundly organized, the logical, and the complicated. . . . Everything of superior value must show heart as well as brain." \( ^{194} \)

3. Igor Stravinsky (Russia-France-United States, __________)

Stravinsky defined composing as the "invention of music." \( ^{195} \) Invention or "making" presupposes imagination, but should not be confused with it. Stravinsky explained that "what we imagine does not necessarily take on a concrete form, and may remain in a state of virtuality, whereas invention is not conceivable apart from its actually being worked out." \( ^{196} \)

Although some artists and composers believe that inspiration sets imagination in motion, Stravinsky asserted that inspiration is in no way a prescribed condition for creating. \( ^{197} \) Elaborating further on this position, he
The uninitiated imagine that one must wait for inspiration. That is a mistake. I am far from saying that there is no such thing as inspiration; quite the opposite. It is found as a driving force in every kind of human activity, and is in no wise peculiar to artists. But that force is only brought into action by an effort, and that effort is work. Just as appetite comes by eating, so work brings inspiration, if inspiration is not discernible at the beginning.\textsuperscript{198}

In fact, Stravinsky went so far as to say: "The idea of work to be done is so closely bound up with the idea of the arranging of material and the pleasure that the actual doing of the work affords us, that should the impossible happen, and my work suddenly be given to me in a perfectly completed form, I should be embarrassed and nonplussed by it, as by a hoax."\textsuperscript{199}

Therefore, Stravinsky declared that the creator's function as an inventor is to sift and control the elements he receives from his imagination. "The more art is controlled, limited, and worked over, the more it is free."\textsuperscript{200}

4. Aaron Copland (United States,\textsuperscript{200})

Copland considered composing to represent the natural unfolding of an inner compulsion.\textsuperscript{201} The process for so doing includes both the reception and fulfillment of a germinal idea.\textsuperscript{202}

Copland identified the moment of inspiration as a time when one becomes conscious of the creative idea which emerges gradually or spontaneously from subconsciousness.\textsuperscript{203}
He stated that at times the moment of inspiration may be compared to a hallucinatory state of mind in which half the personality emotes and dictates, while the other half listens and notates. At other times the germinal idea may take possession of the mind in such a way as to blot out, to a greater or lesser degree, consciousness of the familial sort.

After the moment of inspiration, the composer must develop and perfect his creative idea. Thus, Copland asserted that the process of creating requires not only a strong imagination, but also a critical mind and a mature discipline. The composer must be both a craftsman and a musical thinker, a creator of values which are primarily aesthetic.

5. Paul Hindemith (Germany, d. 1963)

Hindemith identified the basis of all worthwhile composition as inspiration and worthwhile ideas; after that comes technique. According to Hindemith, inspiration should not be regarded as an irrational, entirely uncontrolled mental manifestation, but as one operating within the following bounds: 1) the limitations of the material qualities of the artistic medium, and 2) the composer's state of preparedness. In musical creation, the composer's inspiration is limited materially by a succession of sounds.
Hindemith referred to the composer's creative ideas as "Einfälle," i.e., motifs which "drop in." In the process of creating "something drops into the mind--you know not whence--and it grows--you know not how--into some form--you know not why." From these creative ideas emerges a total creative vision, "a view immensely comprehensive and at the same time immensely detailed." Hindemith's conviction that composers of merit derive their creative vision in this manner led him to assert that, "If we cannot in the flash of a moment see a composition in its absolute entirety, with every pertinent detail in its proper place, we are not genuine creators."

However, Hindemith went on to say that genuine creators must also have the energy, persistence, and skill to bring the envisioned form into existence, so that even after months of work, not one detail of the vision is lost. He felt that in working out the material, the composer must always have the entire picture before his mind's eye. A composer does not arbitrarily select a musical progression, but tries to obey the demands of his vision and find the sole suitable solution.

Hindemith also recognized, however, that the embodiment of the creative idea can be achieved only with the assistance of a great amount of technical skill. He was equally convinced that while skill will never make up for a lack of vision, "a vision will never receive true
materialization if a composer's technique does not provide every means toward this end."  

B. Theories of Music Educators

1. Eric Jensen (United States, )

Jensen defined creative thinking as a type of problem solving, as a growing and evolving process which leads to new tensions and new patterns. Creative thinking is based on imagination, that "function of the mind which represents the highest type of psychological activity."  

Jensen described the creative process as one occurring in the stages of preparation, incubation, illumination, and verification. He reported that these stages are not clearly separated and often overlap. He also noted that, initially, the individual must become a scholar and develop technical skills before becoming a creator. Hence, the period of preparation is characterized by the individual's accumulation of material, by his attitude of doubt and uncertainty, by a period of trial and error, and by the gathering of associations with no coherent theme or formulation.  

During the period of incubation the principal creative idea recurs frequently until it is finally adopted as the subject. This idea often arises during a period of relaxation, or while the individual is engaged in other activities. The first and second stages of the creative
process may be accompanied by feelings of tension, irritability, anxiety, a sense of frustration, discouragement, and sometimes abandonment of the whole problem.\textsuperscript{223}

However, with the third stage comes "a feeling of pleasure and elation, a sense of relief, and a feeling of confidence."\textsuperscript{224} The stage of illumination is marked by the "sudden appearance of inspiration which comes unsought, as a gift, with no conscious effort, but with a feeling of certainty and with an awareness of the idea's vitality and its fitness for expansion, freshness and originality."\textsuperscript{225} Inspiration provides the nucleus from which the work is developed.\textsuperscript{226}

The period of verification is a time during which the elation of receiving the creative idea gives way to the long, hard, detailed labor of perfecting the creative object. The various parts of the creative product are then worked out in detail according to the discipline of the artist.\textsuperscript{227}

In addition to identifying the creative process in terms of the stages described above, Jensen endorsed the operational definition of creative thinking which was proposed by Torrance. According to this definition, creative thinking is a process of sensing deficiencies, of testing and retesting the guesses, and of communicating the results. By focusing upon the observable aspects of creative thinking, this definition may serve as a criterion for identifying creative thinking abilities which may be enhanced.\textsuperscript{228}
2. Neal E. Glenn (United States, ) and Edgar M. Turrentine (United States, )

Glenn and Turrentine also described creativeness as a problem-solving act. They stated that by intuitive thinking, one calls upon past experience, skills, and techniques, knowledge of materials and tools, and component parts of the subject in order to obtain a creative solution or product.

In the portion of their report concerning the stages of the creative process, Glenn and Turrentine concurred with those theorists who cite the stages of preparation, incubation, illumination, and verification as the sequence through which creative thinking progresses. The stage of preparation serves the following two-fold function: 1) to amass general experience and knowledge and 2) to amass specific experience and knowledge. The stage of incubation was described as the actual withdrawal from an act, a step during which some researchers seem to think the subconscious takes over. The period of illumination was identified as a time when the intuitive takes over and provides a course of action which in the stage of verification is tested by analytical thinking. By this process one creates, i.e., brings into being the product of his creative mind and skill.
C. Music: Summary

Theories proposed by composers and music educators will be compared regarding the basic topics outlined in the summaries of the preceding sections. Views of musicians regarding these topics are shown in Table 10. A summary and comparison of views endorsed by composers and music educators as indicated in Table 10 will follow.

Summary and Comparison of Topics

A. Definition of Creating

1. Creating is "making." (Sessions, Schoenberg, Stravinsky, Copland, Hindemith)

2. Creating is "problem-solving." (Jensen, Glenn and Turrentine)

B. Factors Guiding the Creative Process

1. Musical creating results from rational choices made under the guidance of a pervading creative idea. (Sessions, Schoenberg, Stravinsky, Copland)

2. Musical creating results from rational choices made under the guidance of the final goal. (Hindemith)

C. Forms of Creative Expression

1. The creative process is consummated in a material or observable result. (Jensen, Glenn, Sessions, Schoenberg, Stravinsky, Copland, Hindemith)
### TABLE 10

**THE CREATIVE PROCESS: POSITIONS OF MUSICIANS**

<table>
<thead>
<tr>
<th>A. Definition of Creating</th>
<th>B. Guiding Factor</th>
<th>C. Form of Expression</th>
<th>Musician</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Creating is &quot;making.&quot;</td>
<td>Inspiration and conception guide rational choices</td>
<td>Musical composition</td>
<td>Sessions</td>
</tr>
<tr>
<td></td>
<td>Creative idea guides rational choices</td>
<td>Musical composition</td>
<td>Schoenberg</td>
</tr>
<tr>
<td></td>
<td>Inspiration and skill guide rational choices</td>
<td>Musical composition</td>
<td>Stravinsky</td>
</tr>
<tr>
<td></td>
<td>Inspiration guides rational choices</td>
<td>Musical composition</td>
<td>Copland</td>
</tr>
<tr>
<td></td>
<td>Vision of the whole guides rational choices</td>
<td>Musical composition</td>
<td>Hindemith</td>
</tr>
<tr>
<td>2. Creating is &quot;problem-solving.&quot;</td>
<td>Material result</td>
<td></td>
<td>Jensen</td>
</tr>
<tr>
<td></td>
<td>Material result</td>
<td></td>
<td>Glenn and Turrentine</td>
</tr>
</tbody>
</table>

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TABLE 10--Continued

<table>
<thead>
<tr>
<th>D. Stages of Creative Process</th>
<th>E. Origin of Mental Activity</th>
<th>Musician</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Description</td>
<td>2. Name of Stage</td>
<td>3. Order in Sequence</td>
</tr>
<tr>
<td>a. A period during which the problem is recognized and facts, materials, and skills are accumulated.</td>
<td>Preparation</td>
<td>Stage 1</td>
</tr>
<tr>
<td></td>
<td>Preparation</td>
<td>Stage 1</td>
</tr>
<tr>
<td></td>
<td>Conscious mind</td>
<td>Jensen</td>
</tr>
<tr>
<td></td>
<td>Unconscious mind</td>
<td>Jensen</td>
</tr>
<tr>
<td></td>
<td>Unconscious mind</td>
<td>Glenn and Turrentine</td>
</tr>
<tr>
<td>b. A period during which data and material are manipulated into new combinations.</td>
<td>Incubation</td>
<td>Stage 2</td>
</tr>
<tr>
<td></td>
<td>Incubation</td>
<td>Stage 2</td>
</tr>
<tr>
<td></td>
<td>Conscious mind</td>
<td>Jensen</td>
</tr>
<tr>
<td></td>
<td>Unconscious mind</td>
<td>Glenn and Turrentine</td>
</tr>
<tr>
<td>c. A period during which the creative idea becomes known.</td>
<td>Inspiration- conception</td>
<td>Stage 1</td>
</tr>
<tr>
<td></td>
<td>Inspiration</td>
<td>Stage 1</td>
</tr>
<tr>
<td></td>
<td>Inspiration</td>
<td>Stage 1</td>
</tr>
<tr>
<td></td>
<td>Inspiration</td>
<td>Stage 1-2</td>
</tr>
<tr>
<td></td>
<td>Inspiration</td>
<td>Stage 1</td>
</tr>
<tr>
<td></td>
<td>Inspiration: Einfällen</td>
<td>Stage 1</td>
</tr>
<tr>
<td></td>
<td>Illumination</td>
<td>Stage 3</td>
</tr>
<tr>
<td></td>
<td>Illumination</td>
<td>Stage 3</td>
</tr>
<tr>
<td></td>
<td>Unconscious mind</td>
<td>Sessions</td>
</tr>
<tr>
<td></td>
<td>Unconscious mind</td>
<td>Schoenberg</td>
</tr>
<tr>
<td></td>
<td>Unconscious mind</td>
<td>Stravinsky</td>
</tr>
<tr>
<td></td>
<td>Unconscious mind</td>
<td>Copland</td>
</tr>
<tr>
<td></td>
<td>Unconscious mind</td>
<td>Hindemith</td>
</tr>
<tr>
<td></td>
<td>Unconscious mind</td>
<td>Jensen</td>
</tr>
<tr>
<td></td>
<td>Unconscious mind</td>
<td>Glenn and Turrentine</td>
</tr>
</tbody>
</table>
TABLE 10--Continued

<table>
<thead>
<tr>
<th>D. Stages of Creative Process</th>
<th>2. Name of Stage</th>
<th>3. Order in Sequence</th>
<th>E. Origin of Mental Activity</th>
<th>Musician</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Description</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. A period during which the creative idea is developed.</td>
<td>Execution</td>
<td>Stage 2</td>
<td>Conscious mind</td>
<td>Sessions</td>
</tr>
<tr>
<td></td>
<td>Elaboration</td>
<td>Stage 2</td>
<td>Conscious mind</td>
<td>Schoenberg</td>
</tr>
<tr>
<td></td>
<td>Elaboration</td>
<td>Stage 2</td>
<td>Conscious mind</td>
<td>Stravinsky</td>
</tr>
<tr>
<td></td>
<td>Elaboration</td>
<td>Stage 2</td>
<td>Conscious mind</td>
<td>Copland</td>
</tr>
<tr>
<td></td>
<td>Elaboration</td>
<td>Stage 2</td>
<td>Conscious mind</td>
<td>Hindemith</td>
</tr>
<tr>
<td></td>
<td>Verification</td>
<td>Stage 4</td>
<td>Conscious mind</td>
<td>Jensen</td>
</tr>
<tr>
<td></td>
<td>Verification</td>
<td>Stage 4</td>
<td>Conscious mind</td>
<td>Glenn and Turrentine</td>
</tr>
</tbody>
</table>
D. Stages of the Creative Process

1. Description of Stages

a. A period of preparation during which the problem is sensed and material and ideas accumulated is recognized as an essential aspect of the creative process by music educators cited. (Jensen, Glenn and Turrentine)

b. A period of incubation during which materials and ideas are manipulated into new combinations is recognized as an essential aspect of the creative process by music educators cited. (Jensen, Glenn and Turrentine)

c. A period of insight or inspiration when the creative idea becomes known is recognized as an essential aspect of the creative process by all composers and music educators cited. (Sessions, Schoenberg, Stravinsky, Copland, Hindemith, Jensen, Glenn and Turrentine)

d. A period of elaboration during which the creative idea is developed is recognized as an essential aspect of the creative process by all composers and music educators cited. (Sessions, Schoenberg, Stravinsky, Copland, Hindemith, Jensen, Glenn and Turrentine)
2. Sequence of Stages
   a. The creative process results from mental activities occurring in the following sequences:
      1) preparation, incubation, inspiration, elaboration. (Jensen, Glenn and Turrentine)
      2) Inspiration, elaboration. (Sessions, Schoenberg, Stravinsky, Copland, Hindemith)
   b. Mental activity characteristic of individual stages occurs throughout the creative process. (Sessions, Stravinsky, Jensen, Glenn and Turrentine)

E. The Nature of Mental Activity Associated with Creating

1. Types of Thought Processes Occurring During Stages
   a. Conscious thinking occurs during the stage of preparation. (Jensen, Glenn and Turrentine)
   b. Conscious thinking occurs during the stage of elaboration. (Sessions, Schoenberg, Stravinsky, Copland, Hindemith, Jensen, Glenn and Turrentine)
   c. Nonconscious thinking occurs during the stage of incubation. (Jensen, Glenn and Turrentine)
   d. Nonconscious thinking occurs during the stage of inspiration. (Sessions, Schoenberg, Stravinsky, Hindemith, Jensen, Glenn and Turrentine)

2. The Significance of Conscious and Nonconscious Thought Processes for Creating
   a. Creating involves the interaction of conscious and nonconscious thought processes. (Sessions,
Section IV: Comparative Summary

Table 11 serves to indicate the extent of agreement and disagreement existing among philosophers, psychologists, and musicians regarding topics discussed in the summaries of the preceding sections.
### TABLE 11

**THE CREATIVE PROCESS: COMPOSITE COMPARISON OF TOPICS**

<table>
<thead>
<tr>
<th>Topics</th>
<th>Philosophy</th>
<th>Psychology</th>
<th>Music</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Definition of Creating</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Creating is &quot;intuition.&quot;</td>
<td>Croce, Collingwood</td>
<td></td>
<td>Sessions, Schoenberg, Stravinsky, Copland, Hindemith</td>
</tr>
<tr>
<td>2. Creating is &quot;making.&quot;</td>
<td>Nahm, Maritain, Alexander, Beardsley, Dewey, Tomas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Creating is &quot;discovery.&quot;</td>
<td>Vivas</td>
<td>Kris, Maslow, Kubie</td>
<td></td>
</tr>
<tr>
<td>4. Creating is &quot;regression in the service of the Ego.&quot;</td>
<td></td>
<td>Osborn, Torrance, Wertheimer, Rugg, Koestler, Schoen</td>
<td>Jensen, Glenn and Turrentine</td>
</tr>
<tr>
<td>5. Creating is &quot;problem-solving.&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>B. Factors Guiding the Creative Process</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Artistic creating results from creative inspiration.</td>
<td>Croce, Collingwood</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Artistic creating results from rational choices made under the guidance of a pervading creative idea.</td>
<td>Nahm, Maritain, Alexander, Tomas, Beardsley</td>
<td></td>
<td>Sessions, Schoenberg, Stravinsky, Copland</td>
</tr>
</tbody>
</table>
### TABLE 11--Continued

<table>
<thead>
<tr>
<th>Topics</th>
<th>Philosophy</th>
<th>Psychology</th>
<th>Music</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Artistic creating results from rational choices made under the guidance of the final goal.</td>
<td>Vivas, Dewey</td>
<td></td>
<td>Hindemith</td>
</tr>
</tbody>
</table>

**C. Forms of Creative Expression**

1. The creative process is consummated in a mental image.
   - Croce, Collingwood

2. The creative process is consummated in a material result.
   - Nahm, Maritain, Alexander, Beardsley, Tomas, Dewey, Vivas
   - Kris, Maslow, Kubie, Torrance, Osborn, Koestler, Wertheimer, Schoen, Rugg
   - Sessions, Schoenberg, Stravinsky, Copland, Jensen, Hindemith, Glenn and Turrentine

**D. Stages of the Creative Process**

1. Description of stages
   - A period during which the problem is recognized, and facts and materials accumulated.
     - Alexander, Dewey

   - A period during which materials are manipulated into new combinations.
     - Alexander, Dewey, Maritain
     - Kubie, Maslow, Osborn, Torrance, Wertheimer, Rugg, Schoen, Koestler
     - Jensen, Glenn and Turrentine
### TABLE 11--Continued

<table>
<thead>
<tr>
<th>Topics</th>
<th>Philosophy</th>
<th>Psychology</th>
<th>Music</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>c. A period during which the creative idea becomes known.</strong></td>
<td>Croce, Collingwood, Alexander, Beardsley, Tomas, Dewey, Vivas</td>
<td>Kris, Kubie, Maslow, Torrance, Wertheimer, Rugg, Schoen, Koestler</td>
<td>Sessions, Schoenberg, Stravinsky, Copland, Hindemith, Jensen, Glenn and Turrentine</td>
</tr>
<tr>
<td><strong>d. A period during which the creative idea is developed.</strong></td>
<td>Alexander, Dewey, Maritain, Beardsley, Nahm, Tomas, Vivas</td>
<td>Kris, Kubie, Maslow, Osborn, Torrance, Rugg, Wertheimer, Koestler, Schoen</td>
<td>Sessions, Schoenberg, Stravinsky, Copland, Hindemith, Jensen, Glenn and Turrentine</td>
</tr>
</tbody>
</table>

#### 2. Sequence of stages

**a.** The creative process results from mental activities occurring in the following sequences:

1) preparation, incubation, illumination, elaboration

| Alexander | Osborn, Torrance, Wertheimer, Schoen, Rugg | Jensen, Glenn and Turrentine |

2) incubation, inspiration, elaboration

| Dewey, Maritain | Kubie, Maslow |

3) inspiration, elaboration

| Beardsley, Nahm, Tomas, Vivas | Kris |

**b.** Mental activity characteristic of individual stages may occur throughout the process:

| Beardsley, Dewey, Tomas | Osborn, Torrance, Schoen |

| Sessions, Stravinsky, Jensen |
E. The Nature of Mental Activity Associated with Creating

1. Types of thought processes occurring during stages

<table>
<thead>
<tr>
<th>a. Conscious thinking occurs during the stage of preparation.</th>
<th>Alexander, Dewey</th>
<th>Osborn, Torrance, Wertheimer, Rugg, Schoen, Koestler</th>
<th>Jensen, Glenn and Turrentine</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Conscious thinking occurs during the stage of elaboration.</td>
<td>Alexander, Dewey, Maritain, Beardsley, Nahm, Tomas, Vivas</td>
<td>Kris, Maslow, Kubie, Osborn, Torrance, Wertheimer, Koestler, Schoen, Rugg</td>
<td>Sessions, Schoenberg, Stravinsky, Copland, Hindemith, Jensen, Glenn and Turrentine</td>
</tr>
<tr>
<td>c. Nonconscious thinking occurs during the stage of incubation.</td>
<td>Alexander, Dewey, Maritain</td>
<td>Maslow, Kubie, Osborn, Torrance, Wertheimer, Rugg, Schoen, Koestler</td>
<td>Jensen, Glenn and Turrentine</td>
</tr>
<tr>
<td>d. Nonconscious thinking occurs during the stage of inspiration.</td>
<td>Alexander, Dewey, Maritain, Beardsley, Nahm, Tomas, Vivas, Croce, Collingwood</td>
<td>Kris, Maslow, Kubie, Osborn, Torrance, Wertheimer, Koestler, Schoen, Rugg</td>
<td>Sessions, Schoenberg, Stravinsky, Copland, Hindemith, Jensen, Glenn and Turrentine</td>
</tr>
<tr>
<td>Topics</td>
<td>Philosophy</td>
<td>Psychology</td>
<td>Music</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------</td>
<td>------------------</td>
<td>------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>2. The significance of conscious and non-conscious thought processes for creating.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Creating involves purely conscious thought processes.</td>
<td>Nahm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Creating involves purely unconscious thought processes.</td>
<td></td>
<td>Croce</td>
<td></td>
</tr>
</tbody>
</table>
Section V: Conclusion: Implications for Music Education

A statement of the relationship of positions taken by composers and music educators to those proposed by philosophers and psychologists will be noted regarding each topic listed in the comparative summary. An assessment will then be made of the significance of views endorsed by musicians for the promotion of creativity in the secondary school music education program.

A. Topics from Theories

1. Definition of Creating

Composers cited concur with those philosophers who regard creating as the making of art. This position emphasizes the importance of technical skill required to develop the creative idea. To promote creativity as the making of art suggests that students achieving this goal in music must necessarily possess a high level of technical and theoretical mastery of music, a goal which is perhaps beyond the grasp of many secondary school students.

Music educators cited concur with those psychologists who regard creating as a process of problem-solving. Since specific mental skills and procedures have been identified as significantly related to problem-solving, it appears that students may enhance their creative potential by acquiring such problem-solving skills and techniques. The successful
application of these skills to the area of music would seem to require that students possess much musical knowledge and technique, although perhaps not to the degree necessary to produce a musical composition. It would appear that a goal of general creative thinking applied in the area of music may be achieved to varying degrees by many secondary school students.

2. Factors Guiding the Creative Process

Composers cited agree with the position of those philosophers who propose that the selection and rejection of material and ideas during the development of a work is directed by inspiration or by the final goal. Rational choices made under these directions involve analytical thinking and critical judgment in order to fulfill the creative idea.

Music educators and psychologists cited do not discuss the question of which force controls or directs the unfolding of the creative idea. However, these groups do acknowledge that rational choices are made by conscious, analytical thinking during the final stage of the creative process.

While the discussion of the guiding factor may contribute to a greater understanding of the creative process as a whole, the identification of this force does not appear to be essential to the promotion of creativity as a thought process.
3. The Forms of Creative Expression

Composers and music educators agree that the creative process is consummated in a material result. The outcome does not result in mental images only, but can be observed. A goal which is manifested only in the mind lies beyond the scope of education, generally. However, some observable demonstration of creative thinking related to music may be a possible and worthwhile objective of many secondary school music students.

4. Stages of the Creative Process

a. Description of Stages.--Composers and philosophers who conceive of creating as making acknowledge the presence of inspiration and elaboration as essential aspects of the creative process. Music educators and psychologists who regard creating as problem-solving acknowledge the stages of preparation and incubation as well as inspiration and elaboration.

Acceptance of these aspects of the creative process suggests that specific efforts may be made to develop attitudes, skills, and thinking patterns involved during the individual stages. Greater effort may perhaps be made to promote conscious-thought processes if instruction is directed to skills involved in the stage of preparation as well as elaboration. Productive mental activity occurring during incubation and inspiration may not be taught, but
perhaps may be encouraged by a climate of instruction conducive to manipulating ideas in new ways.

b. Sequence of Stages.--Composers and philosophers who recognize the stages of inspiration and elaboration also recognize that these stages seem to occur most often in that order. Music educators and psychologists who acknowledge the stages of preparation, incubation, illumination, and elaboration also indicate that these stages generally occur sequentially during the creative process. Some musicians (Stravinsky, Sessions, Jensen) concur with other theorists who feel that these stages may overlap so that mental activity associated with a particular stage also may occur during another phase of the process.

Acknowledging the flexibility of the creating thinking process would lead to the conclusion that no clearly defined creative thinking sequence can be proposed for every student. However, knowledge of the sequence of stages involved in the creative process, even though flexible, may help both student and teacher to become more conscious of the way by which creative ideas are achieved and developed.

5. The Nature of Mental Activity

Composers and music educators concur with those psychologists and philosophers who believe that inspiration is achieved by unconscious thought processes. Music educators and psychologists also recognize incubation to be a period
of unconscious thinking. The period of elaboration is recognized by all musicians, all psychologists, and most philosophers cited to be a time of conscious analytical thinking. Music educators and some theorists from the disciplines of philosophy and psychology also consider the stage of preparation to involve conscious thinking.

Thus, musicians join the majority of theorists who believe creating results from both conscious and unconscious thought processes. The endorsement of this position would imply that creating so defined is not a totally irrational act, and therefore may be considered as a proper goal of education. The development of conscious, rational thought processes such as are associated with problem-solving may be one approach toward the promotion of creative thinking ability through the secondary music education program.
Notes


4 Rader, op. cit., p. 79.

5 Nahm, op. cit., p. 47.

6 Ibid.

7 Ibid., p. 53.

8 Ibid.

9 Ibid., p. 165.


11 Nahm, op. cit., p. 82.

12 Ibid., p. 51.

13 Ibid.

14 Collingwood, op. cit., p. 8.

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19 Ibid.

20 Ibid., p. 110.
21Ibid., p. 107.
22Ibid., p. 119.
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26Ibid., p. 65.
27Ibid., p. 241.
28Hausman, op. cit., p. 218.
29Maritain, op. cit., p. 145.
30Ibid., p. 134.
31Hausman, op. cit., p. 219.
32Ibid.
33Maritain, op. cit., p. 39.
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43Ibid., p. 67.

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46 Ibid., p. 300.

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50 Ibid., p. 298.

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81 Vivas, op. cit., p. 90.

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83 Ibid.


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112 Ibid., p. 289.
113 Ibid., p. 32.
114 Ibid., p. 52.
115 Ibid., p. 263.
116 Ibid., p. 289.
117 Ibid., p. 290.
120 Ibid., p. 181.
121 Ibid., p. 235.
122 Ibid., p. 526.
123 Ibid., p. 119.
124 Ibid., p. 169.
126 Ibid.
127 Ibid.
128 Ibid., p. 327.
129 Ibid., p. 329.
130 Ibid., p. 226.
131 Ibid.
132 Ibid., p. 95.
134 Ibid.
135 Ibid., p. 53.
136 Ibid., p. 54.
137 Ibid.
138 Ibid., p. 68.
139 Ibid., p. 54.
140 Ibid., p. 55.
141 Ibid., p. 66.
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143 Ibid., p. 71.
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205 Ibid.
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210 Ibid., p. 57.
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220 Ibid.
221 Ibid., p. 36.
222 Ibid.
223 Ibid.
224 Ibid.
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CHAPTER IV

THE CREATIVE OUTCOME

In studies concerning the nature of creativity, attention has been focused upon each of three features involved in creating, i.e., the creative person, the creative process, and the creative product. Previous chapters have dealt with creativity as the appropriate designation for the demonstration of a unique personality style and a unique thought process. The present chapter will deal with creativity as determined by the expression of a unique outcome, a creative product or a creative activity.

With respect to music education, the purpose of this chapter will be: 1) to determine the extent to which musicians agree or disagree with ideas proposed by other theorists; 2) to gain knowledge concerning the modes and levels of creative expression, the basis upon which a response is judged as creative, and the characteristics associated with creative outcomes, and 3) to assess the relevance and significance of knowledge related to creative expression which may be helpful in enhancing the quality of creative responses evoked through the secondary music education program.

Chapter IV will be organized in a manner corresponding
to that of Chapters II and III. Sections I, II, and III of this chapter will consist of selected theories of philosophers, psychologists, and musicians, respectively. Each section will be followed by a summary. Section IV will consist of a comparative summary indicating the extent of agreement or disagreement existing within and among the three disciplines with respect to the major topics discussed. The final section of Chapter IV will include implications for music education drawn from the findings in the comparative summary.

Section I: Philosophy

A. Theories of Philosophers

1. Milton C. Nahm (United States, _____)

Nahm referred to the product of an artist's art as an intelligible form produced in the matter on which he operates by means of his technique.¹ He classified such products as works of art and works of fine art, the latter being considered evidence of truly creative ability.²

Nahm identified a work of art as one which is conceived through inspiration by non-rational powers and which results from free choices made regarding such aspects of a work as theme, medium, form, and technique. In comparison, Nahm described the work of fine art as a product which is conceived in the imagination by the highest powers of
reasoning and which possesses both freedom of choice and freedom of originality. It is both intelligible and novel. 3

Because of the freedoms involved in producing a truly creative work, one may expect a work of fine art to possess the following qualities:

1. complexity--the achievement of form by the process of "making."
2. temporal spread--the existence of a work as an event, a "becoming."
3. unity--the quality which marks off a world from the universe of meanings.
4. internality--the characteristic by which the whole work is seen, and through which its exclusion from the accidental and irrelevant is asserted.
5. order of intervals--the expression of the artist's control of the order and frequency of intervals. 4

These criteria help the perceiver determine the intelligibility and originality of the creative product. 5

According to Nahm, the artist as creator expresses not the work alone, but the "potential aesthetic experience." 6

2. Vincent Tomas (United States, ________)

Tomas felt that the term "creative" in art should be applied only to those activities which result in a product having positive aesthetic or artistic value. 7 In his opinion, "It is the presence of aesthetic order which
results from critical judgments that distinguishes creative art from fantasies, hack work, or expressions of the mentally ill. Tomas also stated that "creative" activity always issues in something that is different in an "interesting, important, truthful, or other valuable way." Tomas mentioned coherence and lucidity as two criteria which identify a work as the product of creative rather than passive imagination. He asserted that without coherence (the unique organization of a work) and lucidity (the unique meaning of a work), an artistic product could not justly be called "creative."


Alexander described the work of art as an expression of a "new reality which possesses or may possess beauty." It is achieved by molding the material of art into a certain form "in order to express a purpose, not the purpose of creating beauty, for that is the last thing the artist thinks of." He aims to express the subject which occupies his mind.

Thus, Alexander regarded the creative product as a material thing "dyed through and through with meanings and sustained and supplied by the appreciating mind." In the resulting work of art the creative mind and material are totally fused. Only when the artist has achieved his goal does he know from hearing or seeing it what the purpose
of his artistic effort was.\textsuperscript{17}

4. Suzanne K. Langer (United States, _____)

Langer's theory of artistic creation deals with the substance and meaning of art.\textsuperscript{18} She stated that "in every work of art the materials are actual, but the artistic elements are always virtual."\textsuperscript{19} Langer identified the materials associated with music as pitch, loudness, timbre, and metronomic length.\textsuperscript{20} She identified the elements of music as figures, colors, space, tensions and resolutions, resting tones, emptiness, and beginnings and ends. Langer regarded such elements as "illusory" qualities which often "swallow up" the musical material. The illusion created with reference to music is one of movement. Music seems to flow, to move as a succession of tones, a progression. Yet there is nothing that is displaced, that has gone from somewhere to somewhere else.\textsuperscript{21} It is the musical elements which an artist composes into an expressive form.\textsuperscript{22}

One perceives a work of art not as having a form, but as being one.\textsuperscript{23} According to Langer, "Music exhibits pure form, not as embellishment, but as its essence."\textsuperscript{24} Therefore, the musically creative product should not be considered as a cause or cure of feeling, but its logical expression. If music has an emotional content, it has it in the same sense that language has its conceptual content, symbolically.\textsuperscript{25} In Langer's opinion, "It does not matter
what feelings are afterward attributed to it. A creator's responsibility is only to articulate the dynamic tonal flow."26

5. John Dewey (United States, d. 1952)

In Dewey's theory a creative outcome may be expressed either in terms of a product or an activity. Dewey defined a creative activity as a behavioral response which is both instrumental and consummatory.29 He further described such a creative response as an act of intelligence in which certain means such as tools, things, materials, gestures, and ideas are ordered to obtain an "end-in-view."28

However, in Dewey's opinion, the full act of intelligence does not occur "unless some increment, some addition, or some newness accrues."29 The element of originality may be new in the history of man or new in the history of a given individual.30

A creative outcome then may result from combining and relating possibilities previously unrealized.31 As such, the creative response represents a skilled and intelligent manner of dealing with aspects of one's experience in order "to intensify, purify, prolong, or deepen the satisfaction they afford."32
B. Philosophy: Summary

Theories proposed by philosophers regarding the nature of the creative outcome deal primarily with the following topics: 1) types of creative outcomes, 2) levels of creative production, 3) the basis for judging the creativeness of outcomes, and 4) the characteristics of creative outcomes. Statements denoting the basic positions taken on the first three topics will be given along with the names of philosophers endorsing each position. A list of characteristics cited by philosophers as being associated with creative outcomes will follow.

A. Topics from Theories

1. Types of Creative Outcomes
   a. A creative outcome is denoted by an observable product. It may be expressed in a variety of media. (Tomas, Nahm, Langer, Alexander, Dewey)
   b. A creative outcome is denoted by a response or activity. It may be expressed in innumerable ways. (Dewey)

2. Levels of Creative Production
   a. The designation "creative" is attributed only to outcomes exemplifying the highest level of achievement. (Tomas, Nahm, Langer, Alexander)
   b. The designation "creative" may be attributed to outcomes exemplifying many levels of achievement. (Dewey)
3. The Basis of Judging the Creativeness of Outcomes
   a. Creativeness is evaluated in terms of universal or group standards. (Tomas, Nahm, Alexander, Langer, Dewey)
   b. Creativeness is evaluated in terms of personal standards which may or may not coincide with the standards of a group. (Dewey)

4. Characteristics of Creative Outcomes
   Novel (Nahm, Tomas, Alexander, Dewey)
   Aesthetic (Tomas, Alexander)
   Pure form (Nahm, Langer)
   Coherence, unity (Tomas, Nahm)
   Integrated, controlled (Tomas, Nahm, Alexander)
   Lucidity, meaning (Tomas, Nahm, Alexander, Langer)
   Beauty (Alexander)

Section II: Psychology

A. Theories of Psychologists

1. Carl Rogers (United States, __________)

   Rogers regarded the creative outcome as a novel construction arising from "the uniqueness of the individual on the one hand and the materials, events, and people or circumstances of his life on the other."33 It is something observable such as may be expressed verbally or in a work of art or invention.34
Rogers also indicated that in almost all creative products one may discern "a definite selectivity and emphasis of important features, an attempt to bring out the essence of the work." According to Rogers, it is this disciplined, personal selectivity that gives the creative product its aesthetic quality.

Rogers did not distinguish between good or bad creative products or between degrees of creativity. In his opinion, "A genuinely significant creative idea or work is most likely to be seen at first as erroneous, bad, or foolish, values which are changed later." He stated, in fact, that "No contemporary mortal can satisfactorily evaluate a creative product when formed."

2. E. Paul Torrance (United States, ________)

Torrance stated that products resulting from the creative process may be categorized as verbal or non-verbal, concrete or abstract. Included among the general types of created products cited by Torrance are the following: a scientific theory, an invention, a literary work, a musical composition, a new design, or a new relationship of elements.

He also noted that while such products may give evidence of various levels of creativity, most contain some element of newness. In Torrance's opinion, products
exemplifying creativity at the highest levels must be true, generalizable, and surprising in light of what was known at the time the idea was produced. However, in products reflecting a lesser degree of creativity, such as the works of children, skill and quality are unimportant, and the creative relationship produced need only be new to the creator.

3. Morris I. Stein (United States, )

Stein defined the creative product as a novel work that is accepted as tenable, useful, or satisfying by a group at some point in time. He also stated that such a product arises from a reintegration of already existing material or knowledge, and when completed contains elements that are new. The degree of novelty depends upon the extent to which it deviates from tradition or the status quo.

A creative work may be regarded as useful in terms of things, as tenable in terms of ideas, and as satisfying in terms of aesthetic experience. A work should be designated as creative only if it is judged so by many persons, and not by the individual himself. Stein also felt that to produce a work which satisfies these criteria, the individual must have available to him the means and media through which to express himself.

4. Brewster Ghiselin (United States, )

Ghiselin defined a creative product as a "configuration of the mind, a presentation of constellated meaning
which at the time of its appearance in the mind was new in
the sense of being unique and without a specific precedent.48
According to the hypothesis proposed by Ghiselin, an invention
or discovery is truly creative to the extent that its coming
into being is really a production of insight, rather than the
reproduction or copying of insight in any degree.49

Ghiselin identified two levels of creative production.50 A creative act of the lower or minor kind occurs by
the relating of known concepts or other elements in accord-
dance with known principles in a way never devised before.
Such a product may serve to extend the range of application
of some known order already developed in the universe of
means, but does not alter it intrinsically.51 Its effect is
"to bring a familiar light to a previously dark area."52

A creative product of the higher or major kind is one
which alters the universe of meaning itself by introducing
into it some new element of meaning, or new order of sig-
nificance, or both.53 The higher sort of creative product
brings into the mind "an unfamiliar light."54

In the minor type of creative action "the mind moves
within an existing order, but moves more expansively than
the uncreative mind, or a mind in uncreative action."55 In
the major mode of creative action the mind transcends exist-
ing order.56
5. Irving Taylor (United States, _ _ _ _ _ _ _ _ _ _ _)

Taylor contended that creative products demonstrate five levels of creativity. He identified these levels as:
1) expressive creativity, 2) productive creativity, 3) inventive creativity, 4) innovative creativity, and 5) emergentive creativity. 57

Expressive creativity is the lowest and most fundamental form of creating. It involves independent expression for which skills, originality, and quality of production are unimportant. The creative works of children which show freedom and spontaneity would be examples of expressive creativity. 58 Productive creativity refers to creative outcomes which show heightened realism, objectivity, and completeness. 59 Products demonstrating inventive creativity reflect ingenuity displayed with materials, techniques, and methods. In such works one may perceive new and unusual relationships between previously separated parts. Products such as inventions and discoveries would be examples of inventive creativity. 60

Innovative creativity refers to works in which improvements are made through modifications after the basic assumptions of a field are sufficiently understood. However, in products demonstrating emergentive, the highest level of creativity, an entirely new principle or assumption emerges at a fundamental and abstract level. One absorbs experiences commonly provided, and from these produces something
In summarizing the essential aspects of this system of classifying creativity, Taylor identified the primary characteristic of expressive creativity as spontaneity. Emergentive creativity involves a high capacity for abstracting and synthesizing. Taylor felt that while either individuals or groups may be capable of creating at the lower levels, only individuals produce results demonstrating emergentive creativity.\(^6\)

6. Phillip W. Jackson (United States, ) and Samuel Messick (United States, )

The theory of Jackson and Messick deals primarily with the criteria by which a product may be judged as creative. These theorists reported that a creative product is one possessing the following characteristics: 1) unusualness, 2) appropriateness, 3) transformation, and 4) condensation.\(^6\) The unusualness or novelty of a work is determined by judging it in relationship to a group norm. Appropriateness is attributed to a work in which the internal elements blend together so that the total work makes sense and fits into the context. These two criteria when applied to scientific products may be referred to as frequency and fit.\(^6\) Jackson and Messick indicated that among those products which are both unusual and appropriate, some exhibit a higher level of creative excellence than others.\(^6\)

Products which combine elements in ways that defy...
tradition and yield a new perspective or force one to see reality in a new way exhibit the third distinguishing characteristic of a creative work, the transformation of materials and ideas to overcome conventional restraints. Transformation involves the creating of new forms, not merely the improvement of pre-existing forms. The degree of transformation which a work possesses is judged in relationship to the strength and nature of the constraints that were transcended.

Jackson and Messick also attributed to creative products the quality of condensation. Such products possess an intensity and concentration of meaning which require continuous contemplation. The total meaning of the work is not divulged on first encounter. According to Jackson and Messick, the difference between condensation and chaotic complexity involves the unity and coherence of meaning derived from condensation as compared with the unrelated and irrelevant meanings derived from disorder. The condensed product is an object worthy of pondering and should therefore be examined slowly, carefully, and repeatedly.

7. Jerome Bruner (United States, _ _ _ _ _ _ _ _ _ _)

Bruner identified the primary criteria of a creative enterprise as "effective surprise." "The contents of the surprise can be as varied as the enterprises in which men are engaged." Surprise is defined by Bruner as "the
unexpected that strikes us with wonder and astonishment."74 From his observation, Bruner noted that what is curious about effective surprise is that "it need not be rare or infrequent or bizarre, and often is none of those things."75 "Effective surprises seem rather to have a quality of obviousness about them where they occur, producing a shock of recognition following which there is no longer astonishment."76

Bruner described three types of effectiveness implicit in surprise. They are: 1) predictive effectiveness, 2) formal effectiveness, and 3) metaphoric effectiveness. Predictive effectiveness refers to surprise which yields high predictive value in its wake.77 Formal effectiveness refers to surprise derived from "the ordering of elements in such a way that one sees relationships which were not evident before, groupings that were not present, and ways of putting things together not before within reach."78 Metaphoric effectiveness is surprise gained by connecting domains of experience that were before apart in a manner that has the discipline of art.79

Bruner explained that all the forms of effective surprise grow out of combinatorial activity, a placing of things in new perspective.80 In his opinion, "The triumph of effective surprise is that it takes one beyond the common ways of experiencing the world."81
B. Psychology: Summary

Theories proposed by psychologists concerning the creative outcome will be compared with respect to topics cited in summarizing the theories of philosophers. Psychologists advocating the basic positions for each topic will also be indicated. A list of characteristics associated with creative outcomes as drawn from the selected theories of psychologists will follow.

A. Topics from Theories

1. Types of Creative Outcomes
   a. A creative outcome is denoted by an observable product. It may be expressed in a variety of media. (Rogers, Torrance, Stein, Ghiselin, Taylor, Jackson and Messick)
   b. A creative outcome is denoted by a response or activity. It may be expressed in innumerable ways. (Bruner, Torrance)

2. Levels of Creative Production
   a. The designation "creative" may be attributed to outcomes exemplifying many levels of achievement. (Rogers, Torrance, Stein, Ghiselin, Taylor, Jackson and Messick, Bruner)

3. The Basis for Judging the Creativeness of Outcomes
   a. Creativeness is evaluated in terms of universal or group standards. (Stein, Ghiselin, Taylor, Jackson and Messick)
b. Creativeness is evaluated in terms of personal standards which may or may not coincide with the standards of a group. (Rogers, Torrance, Taylor, Bruner)

4. Characteristics of Creative Outcomes

Novel (Rogers, Torrance, Stein, Ghiselin, Taylor, Bruner, Jackson and Messick)

Tenable (Stein)

True (Torrance)

Useful (Stein)

Appropriate (Jackson and Messick)

Transformation (Jackson and Messick)

Condensation (Jackson and Messick)

Spontaneity (Jackson and Messick)

Aesthetic (Stein, Rogers)

Generalizable (Torrance)

Surprising (Bruner)

Section III: Music

A. Theories of Composers

1. Arnold Schoenberg (Austria-United States, d. 1951)

Regarding the creative work of art, Schoenberg stated that "music, in so far as it is the product of a truly creative mind, is new."\(^8^2\) His major premise was that "art means new art."\(^8^3\) Schoenberg considered a musical work of art to
be one derived from the highest level of cognition and not intended to reach the masses. In his opinion, "No musician whose thinking occurs in the highest sphere would degenerate into vulgarity in order to comply with a slogan such as 'art for all,' because if it is art, it is not for all, and if it is for all, it is not art."  

Schoenberg believed that creative music consists essentially of ideas and that these ideas or conceptions comprise the totality of the product. Elaborating further upon this position, he stated:

The form of its outline, the characteristics of tempo, dynamics and moods of the main and subordinate ideas, their relations and derivations, their contrasts and deviations—all of these are there at once, although in embryonic state. The ultimate formulation of the melodies, themes, rhythms, and many details will subsequently develop through the generating power of the germs.

Thus, Schoenberg asserted that the aim of an artist is to elaborate profoundly upon his ideas, even if it makes it difficult for his listeners, and that this aim should not be condemned even if the cerebral procedures cause the loss of surface beauty. "Music conveys a prophetic message revealing a higher form of life toward which mankind evolves, and it is because of this message that music appeals to men of all races and cultures."

2. Igor Stravinsky (Russia-France-United States, )

In the art of composition Stravinsky considered a creative product to be a musical "invention" whose construction is initiated by a "foretaste of discovery." The
composition evolves when an entity at first unknown, yet intelligible, takes shape by the action of a constantly vigilant technique. Stravinsky's compositions often contain as a determining creative idea a primary chord called the "spiritual tonic," around which the tonal and rhythmical characteristics of the work are structured. The elements of the creative composition are carefully selected, integrated, and controlled.

In his opinion, "The essential aim of creating was to promote a communion, a union of man with his fellows and with the Supreme Being." Stravinsky also felt that by using one's imagination and intellectual powers a creator may reveal through his works a personal expression of important values.

B. Theories of Music Educators

1. L. Thomas Hopkins (United States, _____)

Hopkins identified a creative response as a new thought, a new idea, a new solution, a new analysis, or a new synthesis. The fact of its newness qualifies an act or result for the category of creation. However, Hopkins indicated that the result need not be new to anyone but the individual concerned. He stated:

So long as it consists of a fresh response, no matter how often a similar response has been used by others, so long as it calls for conscious purposing, initiative, concentration in finding the right color or movement,
so long as it involves testing, acting in light of the self-applied tests and final judgment, the activity is creative.97

A creative activity, representing an organic response to valid experiences in the context of an individual's life, builds up that individual as a self and "knits him into the matrix of society."98

2. James L. Mursell (United States, d. 1963)

Mursell regarded the creative outcome as a response from which comes something new.99 He defined the creative response broadly as "The discovery of unrealized realms of experience."100 "To see the point of a problem, to awaken to unrealizable beauty, to discover success in the perfection of an act is a creative response."101

Mursell also stated that the creative response is not in the least confined to making up songs, and indeed it may not even include this particular activity.102 "What makes responses creative is not their impressiveness, but their quality."103 Therefore, Mursell felt that the music program should be planned to promote creative responses, which are the essence of growth.104

3. Hazel Morgan (United States, ___)

Morgan defined the nature of creative expression very broadly. In her opinion, a musically creative response is any activity which contributes to the musical growth of the child.105 Included among the musical activities cited by
Morgan are the following: 1) sensitive and responsive listening to music, 2) active bodily response to rhythm and mood, 3) individual interpretation or performance, 4) independent judgments regarding music, and 5) composing original songs. According to Morgan, "the major value of creative activity in music is to develop wholesome and integrated personalities."

C. Music: Summary

Theories proposed by composers and music educators will be compared regarding the basic topics outlined in the summaries of the preceding sections. Musicians endorsing each position will be noted. A list of characteristics associated with creative outcomes as indicated in the selected theories of musicians will follow.

A. Topics from Theories

1. Types of Creative Outcomes
   a. A creative outcome is denoted by an observable product. It may be expressed in a variety of media. (Schoenberg, Stravinsky)
   b. A creative outcome is denoted by a response or activity. It may be expressed in innumerable ways. (Hopkins, Mursell, Morgan)
2. Levels of Creative Production
   a. The designation "creative" is attributed only to outcomes exemplifying the highest level of achievement. (Schoenberg, Stravinsky)
   b. The designation "creative" may be attributed to outcomes exemplifying many levels of achievement. (Hopkins, Mursell, Morgan)

3. The Basis for Judging the Creativeness of Outcomes
   a. Creativeness is evaluated in terms of universal or group standards. (Schoenberg, Stravinsky)
   b. Creativeness is evaluated in terms of personal standards which may or may not coincide with those of the group. (Hopkins, Mursell, Morgan)

4. Characteristics of Creative Outcomes
   Novel (Schoenberg, Stravinsky, Hopkins, Mursell, Morgan)
   Pure form (Schoenberg, Stravinsky)
   Unity (Schoenberg, Stravinsky)
   Organization (Schoenberg, Stravinsky)
   Control (Schoenberg, Stravinsky)
   Meaningful (Schoenberg, Stravinsky, Hopkins, Mursell, Morgan)
   Aesthetic (Schoenberg, Stravinsky, Mursell)
   Spontaneity (Mursell)
Section IV: Comparative Summary

Table 12 serves to indicate the extent of agreement and disagreement existing among philosophers, psychologists, and musicians regarding the first three topics discussed in the summary of each section. A composite list of characteristics associated with creative outcomes is shown in Table 13. Characteristics endorsed or proposed by composers are indicated by an asterisk. Characteristics endorsed or proposed by music educators are shown by a double asterisk.
TABLE 12
THE CREATIVE OUTCOME: COMPOSITE COMPARISON OF TOPICS

<table>
<thead>
<tr>
<th>Topics from Theories</th>
<th>Philosophy</th>
<th>Psychology</th>
<th>Music</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Types of Creative Outcomes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. A creative outcome is denoted by an observable product.</td>
<td>Tomas, Nahm, Langer, Dewey, Alexander</td>
<td>Rogers, Torrance, Stein, Ghiselin, Taylor, Jackson and Messick</td>
<td>Schoenberg, Stravinsky</td>
</tr>
<tr>
<td>b. A creative outcome is denoted by a response of activity</td>
<td>Dewey</td>
<td>Bruner</td>
<td>Hopkins, Mursell, Morgan</td>
</tr>
<tr>
<td>2. Levels of Creative Production</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. The designation &quot;creative&quot; is attributed only to outcomes exemplifying the highest level of achievement.</td>
<td>Tomas, Nahm, Alexander, Langer</td>
<td></td>
<td>Schoenberg, Stravinsky</td>
</tr>
<tr>
<td>b. The designation &quot;creative&quot; may be attributed to outcomes exemplifying many levels of achievement.</td>
<td>Dewey</td>
<td>Rogers, Torrance, Stein, Ghiselin, Taylor, Bruner, Jackson and Messick</td>
<td>Hopkins, Mursell, Morgan</td>
</tr>
</tbody>
</table>
### TABLE 12--Continued

<table>
<thead>
<tr>
<th>Topics from Theories</th>
<th>Philosophy</th>
<th>Psychology</th>
<th>Music</th>
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</thead>
<tbody>
<tr>
<td>3. Standards for Judging the Creativeness ofOutcome</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Creativeness is evaluated in terms of universal or group standards.</td>
<td>Tomas, Nahm, Langer, Dewey, Alexander</td>
<td>Stein, Ghiselin, Taylor, Jackson and Messick</td>
<td>Stravinsky, Schoenberg</td>
</tr>
<tr>
<td>b. Creativeness is evaluated in terms of personal standards.</td>
<td>Dewey</td>
<td>Rogers, Torrance, Taylor, Bruner</td>
<td>Hopkins, Mursell, Morgan</td>
</tr>
</tbody>
</table>
### TABLE 13
CHARACTERISTICS OF CREATIVE OUTCOMES

<table>
<thead>
<tr>
<th>Characteristics of General Products and Responses</th>
<th>Characteristics of Artistic Products</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Novel</strong></td>
<td>*Novel</td>
</tr>
<tr>
<td>Tenable</td>
<td>*Pure form</td>
</tr>
<tr>
<td>True</td>
<td>*Coherence, unity, organization</td>
</tr>
<tr>
<td>Useful</td>
<td>*Integration, control</td>
</tr>
<tr>
<td>Appropriate</td>
<td>*Lucidity, meaning</td>
</tr>
<tr>
<td>Transformation</td>
<td>*Aesthetic, beauty</td>
</tr>
<tr>
<td>Condensation</td>
<td></td>
</tr>
<tr>
<td><strong>Spontaneity</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Meaningful</strong></td>
<td></td>
</tr>
</tbody>
</table>

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SECTION V: CONCLUSION: IMPLICATIONS FOR MUSIC EDUCATORS

A statement of the relationship of positions taken by composers and music educators to those proposed by philosophers and psychologists will be noted regarding each topic listed in the comparative summary. An assessment will then be made concerning the significance of views endorsed by musicians for the promotion of creativity through the secondary school music program.

A. Topics from Theories

1. Types of Creative Outcomes

The composers cited concur with the view of psychologists who regard the creative outcome as a product which may be expressed in a variety of media. They agree more particularly with those philosophers who define the creative product as a work of art. This type of goal does not appear to be within the reach of most public school students. Music educators cited concur with theorists who define the creative outcome more broadly as a unique activity or response. When creative outcomes may be expressed in a variety of ways, the probability of many public school students producing a meaningful creative outcome is greatly increased.
2. Levels of Creative Production

Schoenberg and Stravinsky agree with those philosophers who designate an outcome as "creative" only if it represents the very highest order of thinking and achievement. Music educators concur with those theorists who state that many outcomes may be considered "creative" to some extent, and that some are more creative than others. The significance of this position for music education is that students of various creative abilities may achieve a degree of creative expression commensurate with their own potential. Creative productivity then is not limited to the exceptionally gifted, although such individuals may possibly achieve a higher level of creative productivity.

3. The Basis for Judging the Creativeness of Outcomes

Schoenberg and Stravinsky agree with theorists who consider the degree of creativity demonstrated in a creative work of art to be determined by universal or group standards.

Hopkins, Mursell, and Morgan accept the view of theorists who believe that a work may be judged creative if it is unique in the personal experience of the individual, even though the same response or product may have occurred before. Achieving a creative outcome when defined by personal standards may be a more attainable goal for most students. The attainment of a goal so defined perhaps may serve as an incentive toward developing forms of creative
expression which are also unique in the history of man.

4. Characteristics of Creative Outcomes

Musicians and the majority of theorists cited agree that the most distinguishing feature of the creative outcome is its aspect of newness. Schoenberg and Stravinsky generally agree on the characteristics of the creative work of art. Hopkins, Mursell, and Morgan, who define the creative outcome more broadly, do not indicate a great many precise characteristics, but do infer that the mode of creative expression is meaningful to the individual and may contribute to his total growth. Knowledge regarding the characteristics associated with artistic and general types of creative production may help the music educator to understand better the nature of creative expression and to promote activities and projects which display the salient feature of creative outcomes.
Notes

1 Nahm, op. cit., p. 29.
2 Baird, op. cit., p. 113.
3 Ibid., p. 108.
4 Ibid., p. 117.
5 Ibid., p. 116.
6 Ibid.
7 Tomas, op. cit., p. 5.
9 Tomas, op. cit., p. 4.
11 Ibid.
13 Ibid.
14 Ibid.
16 Ibid.
18 Rader, op. cit., p. 248.
20 Ibid., p. 36.
21 Ibid.
22 Ibid., p. 41.
23 Ibid., p. 36.


25 Ibid., p. 218.

26 Langer, "Creation," p. 36.


29 Ibid.

30 Ibid.


32 Ibid., p. 283.

33 Rogers, op. cit., p. 65.

34 Ibid.

35 Ibid., p. 68.

36 Ibid.

37 Ibid., p. 66.

38 Ibid.

39 Ibid.


41 Ibid.

42 Ibid.

43 Torrance, Guiding Creative Talent, p. 40.

44 Torrance, "Creativity," p. 4.

Ibid.

Ibid., p. 116.


Ibid., p. 37.

Ibid., p. 42.

Ibid.

Ibid., p. 43.

Ibid.

Ibid.

Ibid.

Ibid.

Ibid.

Ibid., p. 55.

Ibid., p. 56.

Ibid., pp. 56-58.

Ibid., p. 59.

Ibid., pp. 60-61.


Ibid., p. 2.

73 Ibid.
74 Ibid., p. 19.
75 Ibid.
76 Ibid.
77 Ibid.
78 Ibid.
79 Ibid., p. 20.
80 Ibid.
81 Ibid.
83 Schoenberg, Style and Idea, p. 39.
84 Ibid., p. 51.
85 Ibid., p. 201.
86 Ibid.
88 Schoenberg, Style and Idea, p. 194.
89 Stravinsky, Poetics of Music, p. 49.
90 Ibid.
91 Portnoy, op. cit., p. 45.
92 Stravinsky, Poetics of Music, p. 54.
94 Ibid.
98 Ibid., pp. 159-60.
99 Mursell, Music Education: Principles and Programs, p. 327.
100 Norman, op. cit., p. 271.
101 Mursell, Music Education: Principles and Programs, p. 327.
102 Ibid., p. 328.
103 Ibid., p. 327.
104 Ibid., p. 336.
106 Ibid.
107 Ibid., p. 134.
PART II
THE NURTURING OF CREATIVITY
CHAPTER V

PROMOTING CREATIVITY THROUGH THE EDUCATIONAL PROCESS

The preceding chapters of Part I have dealt with current theories regarding the nature of creativity. Attention will now be focused upon the matter of nurturing creativity. With regard to music education, the purpose of this study will be: 1) to determine the extent to which musicians cited concur with other theorists concerning the role of creativity as an educational objective; 2) to identify the reasons proposed by musicians cited and other theorists to justify creativity as a suitable educational goal; 3) to gain knowledge concerning the emotional and environmental conditions which inhibit and facilitate the promotion of creativity in the classroom situation; 4) to determine the degree to which musicians cited concur with teaching aids proposed by philosophers and psychologists; and 5) to assess the significance of proposed teaching aids for the promotion of creativity through the secondary non-performing music class.

The format of Chapter V will follow that of Chapters II, III, and IV, with theories of philosophers, psychologists, and musicians being presented in Sections I, II, and
A summary comparing major topics of the selected theories will follow each section. In Section IV a comparative summary will indicate the extent of agreement existing within and among the disciplines regarding the topics being compared. Implications for music education will be drawn from these findings.

Section I: Philosophy

A. Theories of Philosophers

1. John Dewey (United States, d. 1952)

Dewey was a major exponent of pragmatism, a philosophy which readily espouses creativity as a proper and valuable objective of education. In Dewey's theory of education the pupil is seen as one engaged in self-realization, the development of his inherent abilities. Creative expression is recognized as a significant contribution to the attainment of this objective.²

The educational principles endorsed by Dewey for promoting creativity through public education are related to his conception of the nature of creativity. As has been noted previously, Dewey regarded creativity to be an act of intelligence in which certain means are organized to achieve an end.³ He also identified an activity as creative if it is both cumulative and consummatory. The creative outcome results from a combinatorial thought process stimulated by an emotional and social environment conducive to flexible
thinking and acting. 4

A major part of the educational process contributing to creative growth is the acquisition of a wide range of knowledge gained through experience. 5 Information and ideas are obtained not for their own sake, but to serve as instruments in managing subsequent experiences and as the basis for reflective thinking and social adjustment. 6 Dewey believed that the most successful way of acquiring knowledge was through the inquiry method. 7 He described this method as a process of problem-solving in which a difficulty is felt, the problem is clarified and defined, clues are sought, suggestions appear and are tried out, suggested solutions are accepted or rejected, and solutions are tested. This process is closely related to that associated with creating. 8

The knowledge or material to be learned should not be rigidly structured or determined by objective values, for, in Dewey's thinking, truth and values are relative and changing. He, therefore, advocated a curriculum and classroom environment which would permit and encourage new ideas. 9 According to Dewey, an important task of the teacher is to guide each student to acquire greater ability to evaluate alternatives, to create new directions, and to share in determining their soundness. 10 To the extent to which an individual achieves an attitude of inquiry, a sense of criticism, and the ability to act with
individuality, he may contribute significantly to the betterment of society. ¹¹

2. Harry S. Broudy (United States, _____)

Broudy's philosophy of education may be classified as an expression of realism. ¹² In his opinion, the purpose of education is to enable each pupil to become "a tolerant and well-adjusted person, in harmony mentally and physically with his physical and cultural environment."¹³ The means to achieving this goal is the acquisition of knowledge.¹⁴

Broudy's theory of knowledge is based upon the belief that values are objective and unchanging. His contention is that if values do not change, neither do the goals of education.¹⁵ Therefore, the curriculum should be comprised of a set of knowledge which everyone should learn.¹⁶ This information would include mainly ideas which have been discovered and organized by others and which are regarded as a significant part of our cultural heritage.¹⁷

Broudy also asserted that the educational process by which this knowledge is attained should be limited to activities which are "deliberate, intentional, and controlled."¹⁸ He designated learning which is unpredictable or which occurs unconsciously or by chance conditions to be outside the function of the formal educational process.¹⁹ In his opinion, irrational modes of knowing, such as toying with ideas, are childish.²⁰ He stated: "One must surrender to
mature, cognitive ways of knowing."\textsuperscript{21}

In Broudy's philosophy, priority is given to the cultivation of reason.\textsuperscript{22} Since rational thinking is an important part of the creative process, an educational approach based upon this philosophy would thus promote this condition of creative functioning.\textsuperscript{23} However, it should be noted that creativity also involves such conditions as non-rational thinking, emotional and environmental openness, and the emergence of unpredictable outcomes. These factors are not positively promoted in Broudy's educational philosophy.\textsuperscript{24}

3. Alfred North Whitehead (England, d. 1947)

Whitehead stated that an individual's ultimate aim of life is to achieve the greatest realization of creativity.\textsuperscript{25} Therefore, he felt it imperative that in an educational setting "the learner be treated in the context of creativity and self-determination."\textsuperscript{26} According to Whitehead, the educational process then becomes one through which students acquire not just cultural heritage, but also "purpose, direction, and values."\textsuperscript{27}

Whitehead, generally regarded as a realist, incorporated both traditional and progressive concepts into his proposals for creative education.\textsuperscript{28} For example, two of the educational principles accepted by Whitehead are not in keeping with the pragmatic view. They are: 1) teach a limited number of subjects, for disconnected, sporadic activities may be interesting to the pupil and yet have no
lasting value; and 2) teach all subject matter thoroughly, since a limited number of good ideas which are meaningful to the learner are of more value than a large store of information superficially surveyed.29

Whitehead also endorsed the idea that subject matter from the past has a valid and significant place in the curriculum. In his opinion, the classics, languages, literature, and humanities make a valuable contribution to the thinking capabilities of students.30 He stated further that these subjects are more effectively taught within an environment reflecting a balance of freedom and discipline.31

However, Whitehead was convinced that knowledge acquired is important only in so far as it can effectively lead to the release of creativity. "If it cannot be used for this purpose, it is inert, dead."32 Therefore, Whitehead was very critical of the traditional concept of education which views pupils as "glasses into which inert ideas are poured by the teacher without a corresponding creative reaction."33 "Education has nothing to do with inert ideas, for it is properly concerned with creative thought."34

In keeping with the pragmatic school of thought, Whitehead stated that pupils must become involved in the process of relating ideas and concepts, not just of memorizing facts.35 He also stated that "The chief criteria of creativity in an individual's life are the objective manifestations in his total development of life preserved, life
lived well, life bettered, of knowledge held, knowledge advanced, and knowledge used effectively in the betterment of social and personal living." By emphasizing both the acquisition of knowledge and the necessity of manipulating these ideas into new relationships, Whitehead's philosophy encourages creative personal and social functioning. 

4. Frederick Mayer (United States, ________)

In Mayer's existential philosophy creativity is recognized as a vital and necessary objective of education. Mayer regarded creativity as a process not reserved for a few elite, but one demonstrated in art, science, and human relationships. His philosophy is based upon the pervading belief that: 1) each person must be free to fulfill his potentialities, to become the person he chooses to become, and 2) one loses himself in conformity. The school should then encourage the growth of free, creative individuality, not adjustment or conformity. The role of the teacher in accomplishing this end is not primarily to impart knowledge, or to be consulted on a problem, or to be emulated, but to assist each student personally in his journey toward self-realization.

However, man's feeling of alienation represents a major obstacle in achieving this goal. This condition is commonly expressed in the inability to have deep feelings, or to derive significant meaning from experience. One becomes alienated from himself by living without knowing why,
or by trying to avoid reality by living in the past or future. One becomes alienated from others by treating them as objects to be manipulated for one's own psychological ends. Alienation from one's environment is manifested by a lack of awareness and sensitivity to his surroundings. Creative education should be directed then toward helping each student to overcome his feeling of alienation and to achieve greater self-recognition and awareness of the possibilities of qualitative living. As Mayer stated, creativity represents an attempt to "live life on a qualitative level." He believed that "education should ultimately enable an individual to understand his culture so thoroughly that he is no longer swayed unconsciously by its premises, but becomes a free agent, knowing when and why he is conforming or dissenting from the rest."

Mayer also favored an educational setting in which students may learn by both reason and insight. In his opinion, the knowledge acquired should be based not so much upon the past as upon the great books and ideas of the present. He stated also that knowledge gained should not serve as an end in itself or as an instrument to prepare the individual for future experiences, but as a means of cultivating his unique self. According to Mayer, creativity is best encouraged by an environment which allows students to become fully attentive to his experiences and permits responses which are both appropriate and unique. Thus,
by recognizing and promoting rational and non-rational thinking and unique, personal responses, an educational program based upon this philosophy of education may contribute to a "dynamic society in which independent thinking is treasured and where the sovereignty of the individual is cherished." 51

5. Ralph J. Hallman (United States, _____)

In Hallman's philosophy, the nurturing of creativity is considered to be a major objective of the educational process. 52 Hallman asserted that creativity is not a supernatural, irrational phenomenon, but the expression of an individual's natural and normal tendency to fulfill his unique personality. 53 As such, creativity can and should be encouraged through an educational program purposefully directed toward self-growth in the direction of psychological health. 54 According to Hallman, psychological health is largely reflected as the capacity to be self-active and self-responsible. 55 Therefore, a central task of educators is to "assist students to take self-initiated action, to be responsible for it, to become self-directive, to adapt flexibly to a situation, and to cooperate effectively." 56

Hallman's approach to this task is based upon the hypothesis that the creative act is most likely to result when certain explicit conditions inextricably associated with creativity are present. The conditions regarded by Hallman as being both necessary and sufficient for
creativity are: 1) connectedness, 2) originality, 3) non-rationality, 4) self-actualization, and 5) openness. Connectedness is a requisite to creativity since the essential factor in the creative process is the combining of elements or ideas into new relations. Originality is the distinguishing criteria by which an outcome is judged as creative. Non-rationality refers to the metaphoric, unconscious, mental operations invariably associated with the production of novel connections. Unless they function, no new connection can occur. Self-actualization and creativity, both identified as expressions of personality change in the direction of fulfillment, are mutually linked so that unless significant transformation occurs in personality during an activity, that activity will fall short of the creative. Openness refers to "those characteristics of the environment, both inner and outer, the personal and social, which facilitate the creative person's moving from the actual state of affairs where he is at a given time toward solutions which are only possible and yet undetermined." Openness is characterized by such traits as sensitivity to things as they are, toleration of ambiguity, self-acceptance, and spontaneity. According to Hallman, an educational program directed toward fostering creativity should promote these underlying conditions. His contention was that not only will the presence of these conditions significantly encourage creative expression, but he went so far as to predict
that "when all five are present, creativeness must of neces-
sity result."64

Hallman recognized, however, that in the traditional
approach to education many of these conditions have not been
consciously advocated or encouraged. In fact, too often the
goals and procedures endorsed by traditional methods have
seriously inhibited creative growth.65 Included among those
traditional attitudes and activities which hinder creativity
are the following: 1) the pressure to conform, 2) authori-
tarian attitudes and environment, 3) ridicule of students'
creative efforts, 4) personality traits marked by rigidity,
5) overemphasis on grades, 6) excessive quest for certainty,
7) overemphasis on success, 8) hostility toward divergent
personalities, and 9) intolerance of the "play" attitude in
connection with school work. Efforts should be taken to
avoid or counteract these obstacles.66

Hallman felt strongly that creativity cannot be forced
or taught by authoritarian methods, but can only be encour-
gaged. He stated that since creativity cannot be prescribed
by a set procedure, the effective teacher must invent his
own creative techniques.67 Hallman proposed the following
principles of creative teaching:

1) Provide for self-initiated learning on the part of
pupils.

2) Set up a non-authoritarian learning environment.
Psychological freedom, experienced in spontaneous
expression, not overly aggressive freedom or license, is a significant condition of creativity.

3) Encourage pupils to overlearn, to saturate themselves with information, imagery, and meanings. Overlearning allows the pupil to detach himself from the material so it may become subject to restructuring.

4) Encourage creative thought processes. This may be done by stimulating pupils to see connections among data, to associate, imagine, think up possible solutions to problems, make wild guesses, hitch-hike ideas, juggle improbably-related statements, express far-out theories, and combine material and notions into new and unexpected patterns. Students should also be motivated to take intellectual risks, speculate on the basis of inconclusive information, and probe for structural and spatial relationships among things.

5) Defer judgment. By minimizing the importance of error and making it clear that mistakes are both expected and necessary, a student may develop better his self-initiative and self-evaluative capacities.

6) Promote intellectual flexibility. This may involve encouraging students to shift the position of his observation, vary his approach to a
problem, or move away from preconceptions about material. Students may be urged to change the function of a commonplace object, or look for new meaning in familiar material.

7) Encourage self-evaluation of individual progress and achievement. Since the criteria for evaluating novelty are personal and aesthetic, the individual's own power to judge values serves as a final standard in determining the worth of a creative result.

8) Help students to become more sensitive persons, sensitive to the moods and feelings of others, to all external stimuli, to social, personal and academic problems, to public issues, to the commonplace and to the unknown.

9) Make effective use of the question. Since the creative act begins with questions, these should be operational, open-ended questions which are meaningful to the student, and which lead to exploration, foster curiosity, and stimulate connotative tendencies.

10) Provide opportunities to manipulate ideas, concepts, tools, and structures. Craftsmanship is an essential ingredient of the creative person.

11) Assist students in coping with frustration and failure. Since the creative person is able to
live with ambiguity and uncertainty, the student who can best handle such a situation is at an advantage in developing his creative potential.

12) Urge pupils to consider problems as wholes, to emphasize total structure rather than additive structure. 68

Hallman was convinced that by the implementation of such teaching techniques teachers may be more effective in assisting students to realize creative potential. 69

6. George F. Kneller (United States, )

Kneller regarded creativity as occupying a proper place in education because it represents a significant way by which one may fulfill himself as a person. 70 In Kneller's words, "It is our task as teachers to conquer in ourselves and in our students the trio of obstacles to fulfilled life--ignorance, fear, and lack of confidence." 71 Since self-realization involves self-knowledge, self-trust, self-direction, openness to experience, and keen perception, a creative educational program should be directed toward helping students to acquire these inner qualities. 72

Kneller also recognized that, in addition to encouraging these attitudes, an educational program conducive to creativity should provide for the development of creative thinking, defined by Kneller as the process of combining knowledge acquired in a given lesson with knowledge drawn
from other areas of experience in a way which produces new patterns of ideas. Creative thinking should not be regarded as a detriment to mental discipline or mastery of subject matter, for, according to Kneller, creativity presupposes mental discipline through mastery of subject matter. Kneller also proposed that, since the combining of ideas not previously linked is generally a product of insight, the teacher should encourage the habit and technique of intuiting, of insight-hunting. The teacher may do so by confronting students with a problem requiring them to conjure up and synthesize ideas out of their subconscious. Creative thinking may also be stimulated by asking provocative questions and by allowing students to take risks or make mistakes without the fear of being ridiculed or penalized.

Other steps by which to promote creativity are: 1) encourage students to think up ideas which are original to them, 2) seek to sustain student delight in novelty, 3) encourage spontaneous experiences and fluency of ideas, 4) help students learn to consider and seek out ideas which challenge their present beliefs, and 5) help students to acquire the stamina to stand by their ideas and the self-discipline required to test them. These procedures, when carried out by a dedicated and enthusiastic teacher, may contribute to greater development of creative abilities.
B. Philosophy: Summary

Theories proposed by philosophers regarding the promotion of creativity deal primarily with the following topics: 1) the endorsement of creativity as an educational objective, 2) reasons justifying creativity as an educational objective, 3) conditions inhibiting creativity, 4) conditions facilitating creativity, and 5) educational principles and procedures contributing to creative growth. Statements denoting the basic positions taken on topics one and two will be given along with the names of philosophers endorsing each position. Table 14 is a compilation of conditions proposed by philosophers as blocks to creativity. Conditions facilitating creativity will be shown in Table 15, a compilation of personality traits to be encouraged, and in Table 16, a compilation of cognitive abilities to be developed. Teaching aids for promoting creativity as suggested by the philosophers cited are shown in Table 17.

A. The Endorsement of Creativity as an Educational Objective

1. The promotion of creativity is acknowledged to be a primary task of education. (Dewey, Whitehead, Mayer, Hallman, Kneller)

2. The promotion of creativity is not acknowledged to be a primary task of education. (Broudy)
B. Reasons Justifying Creativity as an Educational Objective

1. The Value of Creativity
   a. Creativity contributes to personality growth.
      1) Mental health (Mayer, Hallman)
      2) Self-realization (Dewey, Whitehead, Mayer, Hallman, Kneller)
   b. Creativity contributes to productive functioning.
      1) Social living (Dewey, Whitehead)
      2) Educational achievement (Hallman, Whitehead)

2. The Suitability of Creativity as an Educational Goal
   a. Creativity is a trait possessed by all to some degree. (Dewey, Whitehead, Mayer, Hallman, Kneller)
   b. Creativity may be expressed in diverse ways at many levels. (Dewey, Whitehead, Mayer, Hallman, Kneller)
   c. Creativity, as an intellectual process, may be developed through education. (Dewey, Mayer, Hallman, Kneller)
   d. Creativity depends on large amounts of information. (Dewey, Whitehead, Mayer, Hallman, Kneller)
   e. Creativity is positively correlated with inner and outer conditions of openness. (Dewey, Hallman, Kneller, Mayer)
C. Conditions Inhibiting Creativity

TABLE 14

BLOCKS TO CREATIVITY

Pressure to conform
Authoritative attitudes and environment
Alienation from oneself, others, and environment
Rigid personality traits
Ridicule of students' creative efforts
Overemphasis on grades
Excessive quest for certainty
Overemphasis on success
Hostility toward divergent personality styles
Intolerance of "play" attitude in connection with school work

D. Conditions Facilitating Creativity

TABLE 15

PERSONALITY TRAITS TO BE ENCOURAGED

Spontaneity
Openness to experience
Willingness to change
Respect for new ideas
Delight in novelty
Self-knowledge
Self-initiative
Self-trust
Self-discipline
Toleration of ambiguity
Stamina to stand by ideas
TABLE 16

COGNITIVE ABILITIES AND SKILLS TO BE DEVELOPED

A wide range of knowledge
The ability to recognize the problem
The ability to see the problem as a whole
Intellectual fluency
Intellectual flexibility
The ability to connect ideas into new patterns
Independent original thinking
The ability to suggest solutions
The ability to test hypotheses
Skills in criticism and evaluation

E. Educational Principles and Procedures Contributing to Creative Growth

TABLE 17

TEACHING AIDS FOR PROMOTING CREATIVITY

Provide a non-authoritative learning environment
Establish a balance between discipline and freedom of expression
Provide instruction which points, guides, and suggests
Provide opportunities for problem-solving
Permit unique responses
Provide for self-initiated learning
Ask provocative, open-ended questions
Allow students to take risks
Defer judgment of creative efforts
Minimize error
Teach selected material thoroughly

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Section II: Psychology

A. Theories of Psychologists

1. Lawrence Kubie (Germany, _ _ _ _ _ _ _ _ _ _ _ _)

Kubie regarded creativity as being an important and necessary objective of the educational program, for it contributes to the fullest mental and emotional growth. In his opinion, the purpose of education is three-fold: 1) to enable human nature itself to change, 2) to enable each generation to transmit to the next whatever wisdom it has gained about living, and 3) to free the enormous untapped creative potential which is latent in varying degrees in the preconscious thought processes of everyone.

Kubie described creativity as a process of finding new and unexpected connections through the free interaction of conscious and preconscious mental systems. In his opinion, the failure of traditional education to promote the release of creative potential is due in part to neurotic patterns reinforced by educators. One such technique which blocks creative growth is the misuse of drill. Too much drill interferes with the free play of preconscious functions. Kubie stated that "the degree to which learning depends upon repetitious drill is a measure of the degree to which guilt, anxiety, anger, and repression are blocking the assimilative component of education." In his opinion, overemphasis on conscious thinking also tends to interfere...
with the free play of preconscious forces.  

Education for creativity should provide for a flexible, imaginative, and uncommitted attitude of fact-gathering and for flexible preconscious thinking in which dissimilar ingredients may be superimposed into new patterns. Kubie's approach to the promotion of creativity is essentially an indirect one. His contention is that since one cannot be taught to think, the goal of education should not be to teach us how to think creatively, but "to show us how not to interfere with the thinking capacity which is inherent in the human mind."  

2. Harold Rugg (United States, d. 1960)  

Acknowledging the proposition that within each student resides a creative impulse, Rugg asserted that an important task of the public schools is to surround the student with an environment which draws out his creative power. In his opinion, the educational objective is not to help each student to become a creative artist, but a creative person, the highest goal in living. Rugg stated, "It is the production of superior persons that we seek through the incitement of the creative act in our schools."  

Rugg noted, however, that while the creative process involves both discovery and verification, education generally has been concerned only with promoting those conscious, analytical skills involved in the stage of verification. He urged that greater effort be made to facilitate the act of
discovery. Rugg cited the following conditions as being favorable to creative discovery: 1) copious and ordered information, 2) a well-filled storehouse of imagery to guarantee richness and freedom of association, and 3) ordered key concepts to guarantee organization of thought. Rugg also considered the quiet mind of relaxed concentration to be a condition positively related to the act of discovery.

Rugg stated that an educational program conducive to creative discovery is one characterized by two freedoms: 1) freedom to move about and speak, i.e., freedom from external censorship or a repressive, regimental climate of opinion, and 2) freedom to associate ideas freely. Rugg noted that while efforts have been taken within many activity schools to lessen the restriction in the classroom, efforts must yet be taken to promote freedom of the relaxed mind of intuitive discovery.

3. Harold H. Anderson (United States, _____)

Anderson regarded creativity as an expression of individual differences and individual originality which emerges from one's own perceiving, thinking, knowing, feeling, and acting. He also stated that creativity in human relationships is a way of behaving which recognizes one's own uniqueness and dignity and respects that of others. Creative inter-relating requires intelligence, sharp perception,
subtle sensitivities, respect for the individual person, personal boldness to explain one's point of view, and the ability to work with others. Anderson believed that an educational system which encourages these qualities also promotes creative growth.\(^97\)

Anderson noted, however, that educational systems have not always been concerned with encouraging creative expression. Very often traditional education has been characterized by an unpropitious environment for creativity.\(^98\) The traditional or closed system of education has emphasized memorizing, sorting, classifying, and categorizing facts, formulas and beliefs known and agreed upon by our forebears. There was little opportunity afforded for originality, invention, individual discovery, arrangement, or reorganization. In many cases originality and new organizations of material were labeled wrong, bad, or a nuisance. Learning was confined to fixed-answer problem-solving and performance measured by conformity to an examiner's standard. In many instances such procedures contributed to a loss of motivation, conformity, submission, and psychic atrophy.\(^99\)

Anderson considered an open system of education to be a more propitious environment for creativity.\(^100\) He described this system as one that is both stimulating to the development of individuality and receptive to student uniqueness in perception and thinking. Projects contributing to these aims include class discussions, term papers,
original experiments, and student projects. The personally
open system thus permits and stimulates originality, experi-
mentation, initiative, and invention. 101

4. E. Paul Torrance (United States, __________)

Torrance regarded creativity as a valuable resource in coping with life's stresses. 102 In his opinion, crea-
tivity contributes greatly to the attainment of the follow-
ing fundamental human goals: 1) mental health, 2) a fully-
functioning personality, 3) educational achievement,
4) vocational success, and 5) social importance. 103 This
view is based upon recent psychological research regarding creativity. He noted that personality traits associated
with mental health and self-fulfillment are associated with
creative functioning. Research has also indicated that
creative thinking abilities contribute to the acquisition of
information and educational skills. Torrance stated further
that because the individual who thinks and acts creatively
also tends to be one who is responsible, resourceful, and
well-rounded, he is more likely to attain vocational success
and social importance as well. 104

However, despite the importance of creativity to pro-
ductive living, "creative growth has rarely been recognized
as an objective of secondary education." 105 Educational
methods and teaching procedures have more often been di-
rected by those philosophies which emphasize the receptiveness of the mind, rather than the self-acting creative
nature of the mind. For too long the prevailing position has been that creativity is an entirely mystical phenomenon and so must be left to chance. It was assumed that if one has outstanding creative talent, it will somehow flourish in spite of neglect and abuse. Torrance asserted that creativity, although not fully comprehended, is not a completely mysterious phenomenon, for current research has revealed much about the nature of cognitive abilities involved in creative thinking and about emotional and social conditions which facilitate such thinking. His contention is that while heredity places limits upon the development of creative abilities, how these abilities are developed and function may be positively or negatively influenced by cultural factors.

Torrance stated also that the creative response results primarily from a process of sensing gaps, making guesses regarding possible solutions, testing these guesses, and communicating results. This process involves such abilities as evaluation, divergent production, and redefinition. Traditional educational systems have generally emphasized learning by authority which involves such abilities as recognition, memory, and logical reasoning. The fact that not all students can or do learn in authoritarian ways increases the necessity for helping students discover creative ways of thinking and learning.

Torrance pointed out that many principles and
procedures endorsed by traditional education serve more to
block than to promote creativity. He cited the following
attitudes and teaching techniques as obstacles to creativity:
1) excessive concern with success, 2) orientation toward peer
standards, 3) sanctions against questioning and exploration,
4) misapplied emphasis on sex roles, 5) the equation of di-
vergency with abnormality, 6) emphasis on the work-play
dichotomy, and 7) clock orientation.\textsuperscript{113}

Torrance believed that creativity is facilitated
better by a responsive and stimulating environment and by
instructional techniques which encourage and develop creative
thinking abilities. He described a creative classroom en-
vironment as one characterized by alert, sensitive guidance,
receptive listening, and genuine effort to increase satis-
faction derived from creative expression.\textsuperscript{114} Torrance pre-
sented the following suggestions as positive ways to facili-
tate attitudes and abilities conducive to creativity:

1. Establish creative relationships with students.
   This involves permitting one idea to lead to
   another, developing a creative atmosphere, teaching
   students to value creative thinking, and teaching
   students to cope with peer sanctions without sacri-
ficing their creativity. Creative relating may
   also be effected by being adventurous and spirited,
   by being accepting and forgiving mistakes, by not
   being blinded by I.Q. scores, by showing respect
for the privacy of a response, by using criticism carefully, by providing for unevaluated practice, by not equating divergency with mental illness or delinquency, by modifying misplaced emphasis on sex roles, and by using constructive criticism carefully.

2. Provide opportunities for creative activities. This may include original work, self-initiated projects, and problem-solving experimentation.

3. Develop skills of creative learning. This may involve helping students become aware of the creative process, become more sensitive to environmental stimuli, recognize problems, acquire a wide range of knowledge, develop tolerance for new ideas, learn to manipulate objects and ideas, develop the habit of working out the full implications of an idea, and develop skills of constructive criticism.

4. Reward creative thinking. This may be done by recognizing various kinds of creative talent or achievement, by showing respect for unusual questions or solutions, and by giving credit for self-initiated learning.

While these suggestions indicate that the curriculum and teaching procedures should be flexible and oriented toward encouraging creative responses, Torrance stated that
such a program should not be equated with permissiveness or lack of discipline. Order, discipline, organization, guidance, purpose, and direction are not incompatible with creativity. However, they must be flexible enough to permit change. Torrance summarized his view regarding the promotion of creativity when he said:

In education there is a place for both creative learning and learning by authority, for both intelligence tests and tests of creative thinking, for both moral courage and social adjustment, for both mastery of what is known and the creation of new knowledge, for both original and correct answers, for both conforming behavior and non-conforming behavior, for both a responsive and a stimulating environment, for both a respect for common humanness and sex differences of boys and girls, for both discipline and creative behavior.

5. Herbert J. Klausmeier (United States, ) and William Goodwin (United States, )

Klausmeier and Goodwin stated that in recent psychological studies investigating the nature of creativity, much has been learned about the cognitive abilities, personality traits, and environmental conditions which are positively related to creativity. Klausmeier and Goodwin acknowledging these findings, proposed that creativity can and should be encouraged at all educational levels. Accepting this view places them in opposition to those educators who feel that because of the vast amount of subject matter required for creativity, efforts to promote creativity before the Ph.D. level are ineffective.

Since creativity is regarded by Klausmeier and Goodwin as a type of problem-solving, efforts directed toward
developing problem-solving skills would also be valuable for creativity. Among the ways suggested to improve these skills are: 1) activate solvable problems, 2) assist students in stating and delimiting problems, 3) assist students in finding solutions, 4) help students process information, 5) encourage stating and testing of hypotheses, and 6) encourage independent discovery and evaluation. 121

Based upon the available research findings regarding creativity, Klausmeier and Goodwin constructed a model for encouraging creativity. The following principles are indicated as most conducive to achieving this goal:

1) Encourage creativity in many media. Because the typical school curriculum is filled primarily with assignments and other activities through which students are to learn and reproduce what mankind already knows, such a program often does not in itself encourage original expression. In fact, many times creativity is stifled in order for students to devote more time to learning material that is not even new to the learner. The teacher may counteract this situation by displaying creative behavior and by rewarding the creative behavior of students.

2) Foster divergent production. Fluency, originality, and flexibility do not necessarily mean lawlessness or lack of values. They imply a readiness to
make changes in behavior, to meet circumstances that have not previously been met satisfactorily, or an ability to cope with new circumstances. One approach which might inhibit divergent production is that of teaching only one strategy of learning or one method of proceeding as the correct one. Klausmeier and Goodwin also pointed out that motivation is as necessary in nurturing divergent-production abilities as it is for convergent-production abilities.

3) Foster a creative personality. From studies of personality traits associated with creative persons it was found that traits such as conforming, conventional, and dependent do not commonly appear, while traits such as impulsive, sensitive, independent, and unconventional do appear. Klausmeier and Goodwin suggested that teachers become more aware of traits identified with creative persons, examine their attitudes toward the behavior of students, and perhaps encourage a wider range of approved behavior than is currently accepted.

4) Encourage continuing creative expression. Creative efforts should be fostered throughout the school year, rather than just on isolated occasions.

5) Encourage productivity. This involves the
transformation of ideas into a written, oral, artistic, musical or other product.\textsuperscript{122}

6. Alexander F. Osborn (United States, \hspace{1em})

Osborn endorsed the premise that creativity is a valuable, normally distributed personality trait possessed by all to some degree and that creative efficiency varies in ratio to our output of mental energy rather than in ratio to our inborn talent.\textsuperscript{123} Thus, education should be concerned with lessening the gap existing between innate creative talent and actual creative output.\textsuperscript{124} The necessity for promoting creative thinking with all due speed becomes very evident in light of research findings produced in a Columbia University study which indicated that "it takes fifteen years for a new teaching concept to reach 3\% of the nation's schools and fifty years for it to reach all of them."\textsuperscript{125}

Osborn proposed that a program designed to increase creativity give emphasis to those skills and abilities involved in the creative process.\textsuperscript{126} He suggested the following steps as being important for problem-solving: "1) think up all phases of the problem, 2) select a sub-problem to be attacked, 3) think up what data might help, 4) select the most likely source of data, 5) draw up all possible ideas as keys to the problem, 6) select ideas most likely to lead to a solution, 7) think up all the possible ways to test ideas, 8) select the soundest ways to test and verify what seems to
be proved, 9) imagine all possible contingencies, and
10) decide on a final answer."127

The hypothesis that creative problem-solving can be deliberately taught and increased was tested in a four-year study conducted from 1958-1962 by Sidney J. Parnes at the University of Buffalo.128 In this research project involving two groups of students, the experimental group was given a course in creative problem-solving based upon principles and procedures set forth by Osborn in his text, Applied Imagination. At the beginning and end of the experiment both groups were administered tests on creative problem-solving. The results of the tests showed that students in the experimental group made substantial gains on two tests of idea quantity. Students in the control groups showed insignificant gains in quantity of idea production. Students in the experimental group also showed superiority over students in the control group on three tests of idea quality. From these findings it was concluded that creative imagination may be developed deliberately and that creative problem-solving can measurably improve the ability of students of average intelligence to produce good ideas, the criteria being uniqueness and usefulness.129 These conclusions support the contention that the gap between innate talent and actual creative output can be narrowed by deliberate education in creative thinking.130

Osborn also suggested that, in addition to providing
opportunities for students to engage in problem-solving activities, the teacher should promote and exemplify those attitudes and personality traits contributing to effective creative production. One important way to guide creative thinking is to encourage students to guard against being both critical and creative at the same time. Premature judgment may tend to abort ideas which could prove to be the most valuable of all. As Osborn said, "Don't drive with your brakes on!" Creative thinking is also positively effected by acquiring a sense of self-confidence. The full reality of this statement is vividly captured in the motto, "Behold the turtle. He makes progress when his neck is out." Factors which also contribute to the promotion of creativity are the acquisition of a well-filled mind and a spirit of open-mindedness. These procedures constitute positive ways to accomplish the task of developing greater creative imagination.

7. Richard S. Crutchfield (United States, ________)

Crutchfield defined the task of education as that of bringing about optimal development of the whole individual. He further stated that the need to develop creative thinking abilities is particularly important in light of the fact that we are living in a time marked by an astounding information explosion. Crutchfield recognized that because many facts and concepts of today will be obsolete tomorrow, one
cannot pretend to know what or how students should be taught. He proposed, therefore, that students be equipped with generalized intellectual and other skills which will enable them to cope with the world as they will encounter it. Central among those generalized skills is the capacity for creative thinking.  

Crutchfield also stated that training for creativity is primarily a matter of strengthening cognitive skills essential to the creative process and promoting attitudes and dispositions favorable to the use of these skills. To accomplish this end instruction should be directed toward the following goals: 1) enhancing student readiness and capacity to generate many ideas which are unusual and imaginative, yet effectively adaptive to the reality constraints of a particular creative problem; 2) developing student ability to sense problems, to grasp their essentials, to see them in fresh, insightful ways; 3) encouraging students to approach problems intuitively as well as analytically; 4) teaching students how better to bring to bear on the problem what he possesses in the way of concrete knowledge and principles germane to the solution; 5) teaching students to suspend premature criticism of ideas; 6) helping students gain a balance between ideational fluency and self-discipline; and 7) developing student ability to destroy old forms and construct new ones.

Crutchfield also stated that creativity may be
encouraged by fostering the following attitudes: 1) a high regard for creative work, 2) self-confidence in potential ability, 3) independence, 4) willingness to reject ideas or deviate from pre-established ways of thinking, and 5) a passionate commitment to work.\textsuperscript{142}

In Crutchfield's opinion, these skills and attitudes may be effectively increased by the use of a flexible system of programmed self-instruction.\textsuperscript{143} He pointed out, however, that while this approach can be potentially helpful to creative thinking if designed for this purpose, many aspects of programmed instruction may be detrimental to creativity. Among the aspects of programmed instruction which are not conducive to creative thinking are: 1) excessive homogeneity in thought process; 2) failure to arouse and engage searching and striving for meaning; 3) the inhibition of questions or skeptical attitudes; 4) emphasis on the utmost clarity, precision, and definiteness, as opposed to tolerance of ambiguity, complexity and lack of closure, factors associated with creativity.\textsuperscript{144}

Yet, many aspects of programmed instruction may facilitate increased creativity. Among the features cited as being favorable to creativity is the fact that it is self-administered and self-paced, and thus geared to the individual.\textsuperscript{145} According to Crutchfield, programmed instruction may be directed toward creative thinking by designing frames in large steps and by providing opportunities for multiple
responses. These devices reinforce diversity, uniqueness, and individuality of responses.\textsuperscript{146}

A two-year experiment involving 481 children from fifth and sixth grade classrooms in the public schools of Berkeley, California, and vicinity, was conducted by Crutchfield to test the hypothesis that an enormous gap existed between the usual performance of students on creative thinking tasks and the performance of which students are really capable.\textsuperscript{147} Two groups of students were involved in the project. Creative training material used with the experimental group was arranged in programmed self-instruction form. The lessons were geared to enhance the skills and attitudes described above as pertinent for creativity.\textsuperscript{148}

From the results of creative thinking tests administered to both groups at the beginning and end of the experiment it was found that those students who had received creative programmed training produced twice as many acceptable ideas, surpassed controls in quality of ideas produced, were more sensitive in seeing clues and discrepancies in problems, and solved problems better than controls at a ratio of three to one. It was also found that the effects of the training generalized to different types of material. Crutchfield concluded that an auto-instructive program does succeed in improving proficiency in problem-solving.\textsuperscript{149}
Williams proposed that because of its universality as a personality trait, the diversity of ways by which it can be expressed, its nature as an intellectual process, and its dependence on large inputs of information, creativity can serve as a suitable objective of education. According to Williams the essential factors involved in creativity are indicated in the operational definition of creative thinking proposed by Torrance. They are:
1) knowledge; 2) mental processes based on cognition, divergent skills, and associative thinking; 3) evaluative behavior; and 4) communication. Thus, Williams proposed that an educational program organized to foster creativity direct attention toward promoting these conditions. He suggested the following teaching strategies as possible ways to develop creative productivity:
1) Use paradoxes, situations opposed to common sense but true to fact.
2) Use analogies, situations to point out how new information, facts, or principles can be derived by looking at similar settings.
3) Sense deficiencies. Develop skills for sensing gaps, unknowns, or missing links of information and allow time for reflective thinking about inconsistencies in knowledge.
4) Think about possibles or probables in formulating
hypotheses.

5) Ask provocative questions. Structure questions to demonstrate the difference between factual inquiries and those which require greater depth of comprehension.

6) List attributes by pointing out their inherent properties. Develop skills of mentally taking apart the product and thinking about its parts.

7) Explore the mystery of things.

8) Encourage original behavior. Allow and respect unusual questions and ideas.

9) Encourage learning how to expect change. This involves both recognition of its importance and practice in reacting to it.

10) Teach about rigidity fixations and habits. Show how principles and techniques have remained unchanged and unimproved because of habit.

11) Teach the skills of search. Develop skills in historical search (how someone else has done it), descriptive search (describing, comparing, and contrasting several methods), trial and error search, and controlled search.

12) Build a tolerance for ambiguity by setting purposeful blocks in the learning process.

13) Provide opportunities for intuitive expression. Ask students to write or tell their feelings,
intuitions or emotions about something.

14) Teach the process of invention and innovation. Show how inventions have resulted only when original thinking is coupled with sustained, hard work and a great deal of knowledge.

15) Teach students to learn from mistakes. Capitalizing on failure, mistakes, and accidents can lead to the development of worthwhile things.

16) Analyze the traits of creative individuals from the standpoint of their own lives (personal creativity), their interaction with other people (social creativity), and the development of a creative product (productive creativity).

17) Encourage new thinking based on stored knowledge. Let students toy with what they know as well as acquire new information.

18) Teach for cause and effect. Evaluate solutions and answers in terms of their consequences and implications.

19) Develop receptivity to unexpected responses, ideas, or solutions with an alertness to their significance. Teach skills of elaborating upon information or knowledge.

20) Develop skills in reading creatively. Point out differences between an information-acquiring process and reading which leads to idea generation.
21) Develop skills in perceiving creatively. Help students listen for information which leads to other things rather than only to what was heard. Draw attention to shapes, rhythms, textures, and sounds.

These suggestions are offered for the purpose of assisting teachers in guiding students to aspire to novelty, develop fluidity of idea production, possess flexibility in thinking patterns, acquire new dimensions of knowledge and thus more fully realize their creative potential.

B. Psychology: Summary

Theories proposed by psychologists concerning the promotion of creativity will be compared with respect to the topics cited in summarizing the theories of philosophers. Psychologists advocating the basic positions for these topics also will be indicated. The views of psychologists regarding the conditions which block creativity are shown in Table 18. Conditions facilitating creativity are shown in Table 19, personality traits to be encouraged, and in Table 20, cognitive abilities to be developed. Table 21 serves to indicate the teaching aids suggested by psychologists cited.

A. The Endorsement of Creativity as an Educational Objective

1. The promotion of creativity is acknowledged to be a
primary task of education. (Kubie, Rugg, Anderson, Torrance, Klausmeier and Goodwin, Osborn, Crutchfield, Williams)

B. Reasons Justifying Creativity as an Educational Objective

1. The Value of Creativity
   a. Creativity contributes to personality growth.
      1) mental health (Torrance, Kubie)
      2) self-realization (Kubie, Rugg, Anderson, Torrance, Crutchfield)
   b. Creativity contributes to productive functioning
      1) social living (Anderson, Torrance)
      2) educational achievement (Torrance, Klausmeier and Goodwin, Osborn, Crutchfield, Williams)
      3) vocational success (Torrance)

2. The Suitability of Creativity as an Educational Goal
   a. Creativity is a trait possessed by all to some degree. (Kubie, Rugg, Torrance, Klausmeier and Goodwin, Osborn, Crutchfield, Williams)
   b. Creativity may be expressed in diverse ways at many levels. (Kubie, Rugg, Anderson, Torrance, Klausmeier and Goodwin, Williams)
   c. Creativity as an intellectual process may be developed through education. (Kubie, Rugg, Torrance, Klausmeier and Goodwin, Osborn, Crutchfield, Williams)
   d. Creativity depends upon large amounts of
e. Creativity is positively correlated with inner and outer conditions of openness. (Kubie, Rugg, Anderson, Torrance, Klausmeier and Goodwin, Osborn, Crutchfield, Williams)

C. Conditions Inhibiting Creativity

TABLE 18

BLOCKS TO CREATIVITY

An authoritarian environment
Conformity
Submission
Lack of motivation
Neurotic traits
Excessive concern with success
Orientation toward peer standards
Sanctions against questions and exploration
Misapplied emphasis on sex roles
Equating of divergency with abnormality
Emphasis on the work-play dichotomy
Orientation toward speed
Restricting problems to fixed answers
Performance measured by conformity to an examiner's standard
Teaching one method of learning as the correct one
Overemphasis on memorizing, sorting, and classifying facts.
Overemphasis on clarity, precision, and definiteness of response
Premature judgment
Excessive time spent on material which is not new
Originality and rearrangement of material considered wrong
D. Conditions Facilitating Creativity

TABLE 19

PERSONALITY TRAITS TO BE ENCOURAGED

<table>
<thead>
<tr>
<th>Openmindedness</th>
<th>Commitment to work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receptivity to change</td>
<td>High regard for creative work</td>
</tr>
<tr>
<td>Toleration of new ideas</td>
<td>Acceptance of uniqueness</td>
</tr>
<tr>
<td>Curiosity</td>
<td>Toleration of ambiguity</td>
</tr>
<tr>
<td>Aspiration for novelty</td>
<td>Habit of capitalizing on failure</td>
</tr>
<tr>
<td>Self-discipline</td>
<td>Habit of working out the full implications of ideas</td>
</tr>
<tr>
<td>Self-confidence</td>
<td>Freedom from anger, quiet, repression</td>
</tr>
</tbody>
</table>

TABLE 20

COGNITIVE ABILITIES AND SKILLS TO BE DEVELOPED

| A wide range of knowledge |
| Independent thinking |
| Sharp perception and sensitivity to environmental stimuli |
| The ability to sense gaps |
| The ability to take problems apart |
| The ability to delimit problems |
| The ability to generate many ideas |
| Skill in ordering and processing information |
| The ability to associate ideas fully |
| The ability to destroy old forms and construct new ones |
| The ability to find new and unexpected combinations |
| The ability to suggest possible solutions |
| The ability to test solutions |
| Skills of constructive criticism and evaluation |
| Skills of communication |
TABLE 21

TEACHING AIDS FOR PROMOTING CREATIVITY

- Provide freedom from external censorship
- Provide alert, sensitive guidance
- Be adventurous and spirited
- Avoid equating creativity with mental illness or delinquency
- Modify misplaced emphasis on sex roles
- Don't be blinded by I.Q. scores
- Analyze traits associated with creative persons
- Teach the process of innovation and creating
- Provide opportunities for self-initiated projects, term papers, and experimentation
- Provide opportunities for original thinking
- Allow one idea to lead to another
- Use paradoxes and analogies
- Show respect for unusual questions or solutions
- Allow adequate time for projects
- Use constructive criticism carefully
- Provide for unevaluated practice
- Defer judgment
- Evaluate solutions and answers in terms of their consequences and implications
- Be accepting and forgive mistakes
- Reward creative thinking
- Give credit for self-initiated learning
- Use flexible programmed instruction for creative thinking
- Provide for overlearning
Section III: Music

A. Theories of Musicians

1. James L. Mursell (United States, d. 1963)

Mursell stated that the purpose of the music education program is to help students achieve musical growth. Such growth is demonstrated by the gradual clarification and explication of patterns. According to Mursell, it is through a process of synthesis, analysis, and synthesis that ideas are differentiated and integrated into meaningful wholes. Therefore, he advocated that growth may be promoted by increasing musical awareness, musical initiative, musical discrimination, musical insight, and musical skill. Mursell stated that "all activities, musical endeavors, and learnings should be thought of and planned as episodes in a process of musical growth." Mursell also indicated that integral to the achievement of growth is the development of creative potential. He expressed this position clearly when he stated, "The creative response is the essence of growth." According to Mursell, the creative response is not limited to an original product, but may be expressed as the discovery of an unsuspected ability in oneself, in a new and better level of achievement, or in unrealized realms of experience. As such the eliciting of creative responses should be a central aim in all phases of the music program—listening, singing,
reading, rhythmical activities, and performing as well as
original composition. Teaching to evoke the creative
response does not mean imposing tasks, but revealing new
possibilities, avoiding and removing needless frustration,
and stimulating and guiding initiative, choice, and dis-
covery.

2. Russell V. Morgan (United States, c. 1951)
and Hazel Nohovac Morgan (United States, )

In the opinion of these musicians "the primary purpose
in music education is to have human beings thrill to the
power and pleasure of music. . . . Music must become an
avenue of expression and creative experience for every indi-
vidual." Morgan and Morgan stated that creativity in
music may be the expression of original thought or the re-
creation of an already recorded musical thought, i.e., the
giving out of self. The major value of creative activity
in music is its contribution toward the development of
wholesome, integrated personalities.

Morgan and Morgan also indicated that the creative
aspect of music education should not be confined to the
narrow objective of composing melodies, but should be a
basic part of every phase of the music program. For example,
rhythmic activities may contribute to creativity by bringing
about free bodily responses through pulse, accent, and
rhythmic patterns. Listening may be a creative activity by
which the pupil discovers what music says to him and so
begins to develop his powers of judgment. The writing of songs may also be a significant way of expressing creativity. However, as Russell Morgan stated, "... The value in song creation lies not so much in the output as in the activity." 

To promote the creative response through music education attention should be given to providing for two essential conditions: 1) a physical environment which is inspiring, and 2) a rich background of music experience. Creative teaching then becomes a matter of guiding students to express ideas, feelings, and experiences in a discriminating way. While some efforts have been made to promote creative activity at the elementary level, "it remains for music educators to develop as significant a program of creative music for the secondary schools." 

3. Eric Jensen (United States, _____)

Jensen reported that on the basis of available research regarding creativity "it seems evident that creative thinking can lead to mental health, vocational success, and continued learning in our society." Acknowledging these values and the nature of creativity as an aptitudinal trait possessed by most persons to some degree, Jensen asserted that creativity can and should be a significant objective of the music education program. He stated that to nurture creativity, teachers should be able to identify creative
potential in students, be able to use creative techniques and approaches, be willing to experiment, and be imaginative, inquisitive and receptive to new ideas. 171

Jensen, recognizing that creativity is facilitated by a climate which reflects an absence of authoritarianism, but which is based on mutual consent, suggested the following ways by which the teacher may encourage a creative climate:

1) The teacher must be a receptive listener, relieving the fear of the timed and overtaught, and overriding negative criticism.

2) The teacher must make students aware of what is "good" and not discourage sincere efforts or errors, thus enabling students to try again.

3) The teacher should respect individual differences, heighten sensory awareness, and encourage a zest for creative activity. Part of this encouragement should take the form of rewards.

4) The teacher should encourage students to talk in a constructive way about creative efforts, and allow students to engage freely in self-initiated activities.

5) The teacher should develop a genuine respect for students' creative needs and abilities. He must learn to respect unusual questions and imaginative ideas and show that these ideas have value.
6) The teacher should allow students to engage in activities that are "for practice," with no threat of evaluation.\(^{172}\)

Within such an environment, efforts may then be directed toward promoting not only attitudes but abilities and skills related to creative thinking and acting. Jensen indicated that in planning and implementing such a program it should be recognized that creativity and the teaching of facts are not diametrically opposed, for "no creative thinking can be accomplished without the necessary facts."\(^{173}\) Therefore, instruction should include opportunities for students to acquire a wide range of musical knowledge, understanding, and skills. Curiosity should also be encouraged as an important incentive for flexible thinking.

Jensen cited two fundamental conditions which are essential for effective problem-solving. They are: 1) the problem should be sufficiently difficult and 2) the time for solving the problem should not be strictly limited. Elaborating upon the necessity of the latter condition, Jensen stated that adequate time for the absorption and reshaping of information is particularly important to the stages of incubation and illumination, stages traditionally neglected in favor of preparation and elaboration.\(^{174}\)

Other ways by which problem-solving may be encouraged are by helping students not to be blinded by habits, not to repeat slavishly what he's been taught, and not to view...
problems in a piece-meal manner, but as a whole. Students should be encouraged to look for relationships, to penetrate and see inner relationships between form and task, and to illuminate the inner structure. Jensen, in advocating increased efforts to encourage creative behavior, joins those who call for greater humanizing of the self that technology has threatened.

4. Charles John Stark (United States, _ _ _ _ _ _ _ _ _ _ _ _)

Stark proposed that in light of psychological research indicating that creativity is a possible attribute of almost everyone, it may then be encouraged through music education. In discussing the promotion of creativity through music education, Stark directed his attention toward ways by which teachers, by enhancing and applying their own creativity to the task of music teaching, may in turn encourage more creative responses from students.

Stark stated that creativity in teaching flows from an understanding and acceptance of one's self, from continual study of one's professional heritage, and from a willingness to go beyond that heritage. He pointed out that the act of teaching creatively involves three phases, which are: 1) questioning the meaning and limitations of established tradition; 2) improvising to implement, extend, or correct tradition; and 3) communicating to clarify for oneself and make ideas known to others.
In Stark's opinion, teachers who are more successful in promoting creativity are those who know their subject well and who know the class both as a unique group and as individuals. Instructional efforts also are enhanced greatly by an emotional environment which is conducive to creativity. Stark described a creative teaching-learning situation as one fostering such attitudes as spontaneity, ease and effortlessness in perception and response to experience, and freedom from blind acceptance of tradition.\footnote{179}

Within this climate the eliciting of curiosity may be a springboard for discovery. This view is based upon recent studies confirming curiosity as a most effective means of developing the abilities of pupils who can learn creatively.\footnote{180} Stark suggested that instructional approaches such as team teaching, flexible scheduling, small group instruction, and independent studies may also facilitate the development of creative abilities.\footnote{181} Because of the diverse ways by which students learn, creative teaching may be a positive means of helping students attain a fuller measure of creative growth.\footnote{182}

5. Charles Fowler (United States, __________)

Fowler contended that because the thought process stimulated by the discovery method of learning is very similar to the process which occurs during creating, a music program which provides opportunities to learn by discovery
may contribute significantly to the development of creative thinking. He therefore proposed that various musical activities be organized so that students do not just accumulate, memorize, and regurgitate information without the benefit of independent thought, but are able to see the relationship of ideas and information acquired and ways by which they may be used.

Fowler also believed that because music is intrinsically a non-verbal art, it should be taught on a non-verbal level. He indicated that one way to teach on a non-verbal level is by the discovery method. The essential aspect of this approach is that the concepts or information learned are discovered by the student through experience before they are verbally described or explained. Awareness or learning of concepts often involves insight such as occurs in the creative process. Verbalization then follows the discovery of a concept. Fowler, acknowledging the necessity of verbalization for detachment, evaluation, recording, and communicating awareness to others, further emphasized the importance of acquiring concepts by discovery rather than verbally when he stated that "words are vehicles for concepts, but not substitutes for them."

In describing the value of learning by discovery, Fowler noted that "discovery is not only a satisfying experience, but it is a means of learning which brings personal meaning to the material." In his opinion, "The
application of the discovery method could result in the development of an intrinsic, self-motivated, musical interest, in the achievement of deeper aesthetic understanding, and in the growth of independence and judgment.  

6. Charles Leonhard (United States, 

Leonhard recognized that while creativity has been much talked about by music educators, little has been accomplished except at the elementary level. He believed that creativity, "the personal discovery of one's musical ability and the discovery of a higher level of achievement," should be involved in musical instruction at all levels. According to Leonhard, creativity may be facilitated by activities calling for spontaneous expression, more acute listening, and greater freedom with voice and instruments. It may also be encouraged through acquiring functional musical knowledge, the use of notation, and greater musical understanding.

In organizing an effective music education program, Leonhard believed that at the elementary level emphasis should be placed upon helping students grasp essential musical concepts through direct musical experience. At the secondary level attention should be directed toward helping students incorporate into their cognitive structure of fundamental musical concepts an additional body of meaningful, generalizable musical knowledge.
Regarding this objective, Leonhard stated that such knowledge can be acquired more successfully at the secondary level through projects calling for verbal or meaningful-reception learning. In the theory of meaningful-reception learning, as proposed by Ausubel, the content of what is to be learned is presented in its final form to the learner with no involvement in independent discovery on their part. New material is then incorporated into the existing cognitive structure through the process of differentiation. The measure of meaningfulness of the information depends upon the degree to which new material is related to stable elements previously acquired.

It should be noted that Leonhard's preference for this approach to learning places him in opposition to many music educators who argue that non-verbal learning is more meaningful than verbal learning. Leonhard contended, however, that while learning by discovery may increase one's musical satisfaction and sense of musical discrimination, there are two aspects of the discovery approach which make it less successful at the secondary level. The disadvantages of the discovery method are: 1) it is very time-consuming, and 2) it is often so structured that it fails to result in the development of a cognitive structure to which further learnings are relatable.

In Leonhard's approach to music education emphasis is clearly given to the acquisition of much musical
information and skills. In view of the importance of a large store of knowledge and elaborative skills to the creative process, a music program so designed makes available to students greater resources for creative manipulation.\textsuperscript{195}

7. Karl D. Ernst (United States, __________) Ernst joined those music educators who recognize the primary objectives of music education to be those acclaimed by the Tanglewood Declaration which states, "We believe that education must have as major goals the art of living, the building of personal identity, and nurturing creativity."\textsuperscript{196} Ernst, expressing the position of the members of a committee on creativity which was held in conjunction with the Tanglewood Symposium in 1967, stated that "the point of view that each child is born with the capacity for creative response, and that such response can be elicited, emphasizes anew the responsibility of the school to establish a classroom environment and to plan instructional experiences that are consecutive, continuous, and conducive to the many facets of creative expression."\textsuperscript{197}

Acknowledging the strategic importance of the teacher in promoting creativity in every phase of the music program, Ernst also pointed out that "the possibility of using new and different technology in teaching more creatively is limited only by the teacher's imagination and his knowledge of ever-expanding media."\textsuperscript{198} In the opinion of Ernst and
the committee studying the role of creativity in music education, "education in music which emphasizes creative development could make a major contribution to the realization of the potentials of American society." 199

8. Norman Dello Joio (United States, __________)

Norman Dello Joio serves as chairman of the Contemporary Music Project, an organization of musicians working together under the sponsorship of the Music Educators National Conference to bring about conditions favorable to the creation, study, and performance of contemporary music. 200 As part of the Project, pilot studies involving elementary and junior high students were conducted in 1964 in cooperation with school systems in Baltimore, Maryland, San Diego, California, and Farmingdale, New York. The general purpose of these pilot studies was to study approaches to the presentation of contemporary music and to experiment with techniques which help students realize musical talent through creative experiences. 201 Creative experiences were identified in terms of improvising and composing. 202

From these studies it was found that:

1) The experiments using creative techniques for teaching music to young children succeeded in direct proportion to the creative ability of the teachers.

2) In successful pilot projects children developed both an understanding of a musical process and
the skill needed for its execution.

3) The ability of children is often underestimated. Students are challenged by experiences which include creating in conjunction with performance and listening.

4) Although experimentation and discovery are important aspects of creating, the basic tools and skills of making music are also essential.

5) A balance should be achieved between the extremes of a highly developed curriculum with overemphasis on skills of drill and imitation, and one with unrestricted freedom and disregard for the need for self-discipline.

6) Since the creative process would be thwarted by a highly organized procedure or sequencing of material, the teacher should rely on his own inventiveness.

7) Evaluation of creative efforts by adult standards is inappropriate.

In essence, it was found that the interest and motivation evidenced by students participating in the pilot projects suggest that "involvement in the creative process is a stimulating and effective way of learning and should be incorporated as part of the music curriculum."
B. Music: Summary

Theories proposed by musicians will be compared regarding the basic topics outlined in the summaries of the preceding sections. Musicians endorsing each position will be indicated. It will also be noted that specific conditions inhibiting creativity are not stated by musicians. Conditions facilitating creativity are shown in Tables 22 and 23 and teaching aids are indicated in Table 24.

A. The Endorsement of Creativity as an Educational Objective

1. The promotion of creativity is acknowledged to be a primary task of education. (Mursell, Morgan and Morgan, Jensen, Stark, Fowler, Leonhard, Ernst, Dello Joio)

B. Reasons Justifying Creativity as an Educational Objective

1. The Value of Creativity
   a. Creativity contributes to personality growth
      1) mental health (Jensen)
      2) self-realization (Mursell, Morgan and Morgan, Jensen, Ernst, Dello Joio)
   b. Creativity contributes to productive functioning
      1) educational achievement (Jensen, Stark, Fowler, Leonhard, Ernst, Dello Joio)
      2) vocational success (Jensen)
2. The Suitability of Creativity as an Educational Goal
   a. Creativity is a trait possessed by all to some degree. (Mursell, Morgan and Morgan, Jensen, Stark, Fowler, Leonhard, Ernst, Dello Joio)
   b. Creativity may be expressed in diverse ways at many levels. (Mursell, Morgan and Morgan, Jensen, Leonhard, Dello Joio)
   c. Creativity as an intellectual process may be developed through education. (Mursell, Jensen, Fowler, Leonhard)
   d. Creativity depends on large amounts of information. (Mursell, Morgan and Morgan, Jensen, Fowler, Leonhard, Dello Joio)
   e. Creativity is positively correlated with inner and outer conditions of openness. (Mursell, Morgan and Morgan, Jensen, Stark, Leonhard, Ernst, Dello Joio)

C. Conditions Inhibiting Creativity

Musicians cited generally favor a non-authoritarian teaching environment, however, specific conditions blocking creativity are not discussed.
D. Conditions Facilitating Creativity

TABLE 22

PERSONALITY TRAITS TO BE ENCOURAGED

Spontaneous expression
Initiative
Receptivity to new ideas
Curiosity
Openness to change
Freedom from frustration
Freedom from stereotyped behavior
Self-motivation
Self-discipline
Imaginative

TABLE 23

COGNITIVE ABILITIES AND SKILLS TO BE DEVELOPED

A wide range of musical knowledge and skills
Independent thinking
Sensory awareness of problems
Ability to analyze
Ability to see wholes
Ability to produce many ideas
Ability to see relationships between ideas
Ability to synthesize ideas into new patterns
Discriminative judgment
E. Educational Principles and Procedures Contributing to Creative Growth

TABLE 24

TEACHING AIDS FOR PROMOTING CREATIVITY

- Provide for a rich musical background
- Be imaginative, inquisitive, receptive
- Avoid and remove frustration
- Be willing to experiment
- Show respect for individual differences
- Know the class as a group and as individuals
- Provide opportunities for verbal learning
- Provide opportunities for discovery and problem-solving
- Respect unusual questions and ideas
- Don't discourage sincere effort by excessive attention to errors
- Allow time for incubation of ideas
- Allow self-initiated activities
- Reveal new possibilities
- Provide for small group instruction
- Provide for flexible scheduling
- Use the team-teaching approach

Section IV: Comparative Summary

Table 25 serves to indicate the extent of agreement and disagreement existing among philosophers, psychologists, and musicians regarding the endorsement of creativity as an educational objective and the reasons which justify its role in education. A composite list of conditions proposed by philosophers and psychologists as being blocks to creativity are shown in Table 26. Tables 27 and 28 consist of composite lists of factors cited by philosophers, psychologists, and musicians as being conditions which facilitate
creativity. Teaching aids suggested by theorists from the disciplines being investigated are shown in Table 29. In each table the factors endorsed by musicians cited will be indicated by an asterisk.
<table>
<thead>
<tr>
<th>Topics</th>
<th>Philosophy</th>
<th>Psychology</th>
<th>Music</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. The Endorsement of Creativity as an Educational Objective</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. The promotion of creativity is acknowledged to be a primary task of education.</td>
<td>Dewey, Whitehead, Mayer, Hallman, Kneller</td>
<td>Kubie, Rugg, Anderson, Torrance, Klausmeier and Goodwin, Osborn, Crutchfield, Williams</td>
<td>Mursell, Morgan and Morgan, Stark, Fowler, Leonhard, Ernst, Dello Joio, Jensen</td>
</tr>
<tr>
<td>2. The promotion of creativity is not acknowledged to be a primary task of education.</td>
<td>Broudy</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>B. Reasons Justifying Creativity as an Educational Objective</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. The Value of Creativity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Creativity contributes to personality growth</td>
<td>Mayer, Hallman</td>
<td>Torrance, Kubie</td>
<td>Jensen</td>
</tr>
<tr>
<td>2) self-realization</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### TABLE 25—Continued

<table>
<thead>
<tr>
<th>Topics</th>
<th>Philosophy</th>
<th>Psychology</th>
<th>Music</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Creativity contributes to productive functioning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1) social living</td>
<td>Dewey, Whitehead</td>
<td>Anderson, Torrance</td>
<td>Jensen, Stark, Fowler, Leonhard, Dello Joio</td>
</tr>
<tr>
<td>2) educational achievement</td>
<td>Hallman, Whitehead</td>
<td>Torrance, Klausmeier and Goodwin, Osborn, Crutchfield, Williams</td>
<td></td>
</tr>
<tr>
<td>3) vocational success</td>
<td></td>
<td>Torrance</td>
<td>Jensen</td>
</tr>
<tr>
<td>2. The Suitability of Creativity as an Educational Goal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Creativity is a trait possessed by all to some degree.</td>
<td>Dewey, Whitehead, Hallman, Kneller</td>
<td>Kubie, Rugg, Torrance, Klausmeier and Goodwin, Williams, Osborn</td>
<td>Mursell, Morgan and Morgan, Stark, Jensen, Fowler, Leonhard, Ernst, Dello Joio</td>
</tr>
<tr>
<td>b. Creativity may be expressed in diverse ways at many levels.</td>
<td>Dewey, Whitehead, Mayer, Hallman, Kneller</td>
<td>Kubie, Rugg, Torrance, Anderson, Klausmeier and Goodwin, Williams</td>
<td>Mursell, Morgan and Morgan, Jensen, Leonhard, Dello Joio</td>
</tr>
<tr>
<td>Topics</td>
<td>Philosophy</td>
<td>Psychology</td>
<td>Music</td>
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<tr>
<td>----------------------------------------------------------------------</td>
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</tr>
<tr>
<td>c. Creativity as an intellectual process may be developed through education.</td>
<td>Dewey, Mayer, Hallman, Kneller</td>
<td>Kubie, Rugg, Torrance, Klausmeier and Goodwin, Osborn, Crutchfield, Williams</td>
<td>Mursell, Jensen, Fowler, Leonhard</td>
</tr>
<tr>
<td>e. Creativity is positively correlated with inner and outer conditions of openness.</td>
<td>Dewey, Hallman, Kneller, Mayer</td>
<td>Kubie, Rugg, Torrance, Anderson, Klausmeier and Goodwin, Osborn, Crutchfield</td>
<td>Mursell, Morgan and Morgan, Jensen, Stark, Leonhard, Dello Joio, Ernst</td>
</tr>
</tbody>
</table>
### TABLE 26

**COMPOSITE LIST OF BLOCKS TO CREATIVITY**

<table>
<thead>
<tr>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Authoritative attitudes and environment</td>
</tr>
<tr>
<td>Neurotic traits (rigidity, alienation, submission)</td>
</tr>
<tr>
<td>Pressure to conform</td>
</tr>
<tr>
<td>Orientation toward peer sanctions</td>
</tr>
<tr>
<td>Hostility toward divergent personality styles</td>
</tr>
<tr>
<td>Equating divergency with abnormality</td>
</tr>
<tr>
<td>Ridicule of students' creative efforts</td>
</tr>
<tr>
<td>Premature judgment</td>
</tr>
<tr>
<td>Misplaced emphasis on sex roles</td>
</tr>
<tr>
<td>Emphasis on the work-play dichotomy</td>
</tr>
<tr>
<td>Orientation toward speed</td>
</tr>
<tr>
<td>Overemphasis on success, grades, and certainty</td>
</tr>
<tr>
<td>Measuring performance solely by conformity to examiner's standard</td>
</tr>
<tr>
<td>Originality and rearrangement of material considered wrong</td>
</tr>
<tr>
<td>Restricting problems to fixed answers</td>
</tr>
<tr>
<td>Excessive time spent on material that is not new</td>
</tr>
<tr>
<td>Teaching one method of learning as the correct one</td>
</tr>
<tr>
<td>Overemphasis on authoritative learning (recognition, memorization, sorting and classifying facts)</td>
</tr>
<tr>
<td>Overemphasis on learning which calls for excessive clarity, precision, and definiteness of response</td>
</tr>
</tbody>
</table>
D. Conditions Facilitating Creativity

TABLE 27

COMPOSITE LIST OF PERSONALITY TRAITS TO BE ENCOURAGED

- Spontaneous expression
- Openness to experience
- Willingness to change
- Receptivity to new ideas
- Curiosity
- Urge for novelty
- Self-knowledge
- Self-motivation, initiative
- Self-trust, confidence
- Self-discipline
- Commitment to work
- High regard for creative efforts
- Tolerance of ambiguity
- Acceptance of uniqueness
- Freedom from previous habit
- Habit of capitalizing on failure
- Habit of working out the full implications of an idea

TABLE 28

COMPOSITE LIST OF COGNITIVE ABILITIES AND SKILLS TO BE DEVELOPED

- A wide range of knowledge
- Independent thinking
- Sensitivity to environmental stimuli
- Ability to recognize problems
  - Skills in ordering and processing information
- Ability to analyze problems
- Ability to see problems as a whole
- Ability to generate ideas
- Ability to connect and synthesize ideas into new patterns
- Ability to associate ideas freely
- Ability to suggest possible solutions
- Ability to test solutions
- Skills of evaluation and communication

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**E. Educational Principles and Procedures Contributing to Creative Growth**

**TABLE 29**

**COMPOSITE LIST OF TEACHING AIDS FOR PROMOTING CREATIVITY**

- Avoid and remove frustration
- Be imaginative and inquisitive
- Be adventurous and spirited
  - Avoid equating creativity with mental illness or delinquency
  - Modify misplaced emphasis on sex roles
- Show respect for individual differences
- Don't be blinded by I.Q. scores
- Be willing to experiment and deviate from a set procedure
- Analyze the traits associated with the creative person
- Provide for a rich instructional background
- Provide for self-initiated projects, term papers, experiments
- Allow adequate time for projects
- Provide for small group instruction
- Provide for flexible scheduling
  - Provide for flexible programmed instruction
- Teach the process of creating and innovation
- Provide opportunities for problem-solving and discovery
- Reveal new possibilities
- Provide for open-ended discussions
- Ask provocative questions
- Allow one idea to lead to another
- Permit unique responses
  - Defer judgment and provide for unevaluated practice
- Minimize the threat of committing errors
- Use constructive criticism carefully
- Reward creative thinking

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Section V: Conclusion:
Implications for Music Education

A statement of the relationship of positions taken by musicians to those proposed by philosophers and psychologists will be noted regarding the topics cited in the comparative summary. An assessment will then be made of the significance of views endorsed by musicians for the promotion of creativity in the secondary school non-performing music class. The significance of proposals by other theorists, which, although not cited by musicians reported, may be applicable to promoting creativity through music education, will also be discussed.

A. The Endorsement of Creativity as an Educational Objective

Musicians cited concur with the position of most philosophers and all psychologists investigated in this study in stating that creativity should occupy an important role in total education. They therefore acknowledge creativity to be a significant objective of music education at all levels. However, based upon the limited amount of music education literature dealing with the promotion of creativity at the secondary level, it appears that the view of this group of musicians represents the minority position. While there has been much literary support for creative activity at the elementary level, the task of encouraging creative thinking and expression at the secondary level has
been generally neglected or rejected.

With reference to the selected theories of musicians it should be noted that many of the views expressed by Mursell and Morgan and Morgan were stated more than twenty years ago in accordance with the pragmatic philosophy of education for total growth. The positions of other musicians cited were stated subsequent to the recent psychological investigation of creativity. From this group of current proposals by musicians, special significance may be given to the policy position and declaration of musical objectives adopted in 1967 by the Tanglewood Symposium, acknowledging creativity to be a major objective of elementary, secondary, and higher music education. This endorsement made under the sponsorship of the Music Educators National Conference perhaps may encourage many more music educators to promote creativity at the secondary level.

B. Reasons Justifying Creativity as an Educational Objective

1. Value of Creativity

Mursell, Morgan and Morgan, Jensen, Ernst, and Dello Joio concur with philosophers and psychologists who regard creativity as a positive aspect of self-realization. Jensen, like Torrance, states that creativity is indicative of psychological health.

Jensen, Stark, Fowler, Leonhard, and Dello Joio agree with theorists who consider creativity to be significant for
productive living. These theorists are also in agreement with philosophers and psychologists who state that creativity, as a thought process, contributes to better educational achievement. Jensen concurs with Torrance in declaring the value of creativity to vocational success. While no mention is made by musicians cited of the importance of creativity for social interaction, the achievement of this outcome may perhaps be considered as one occurring in association with the attainment of personality growth, educational achievement, or vocational success. In essence, musicians cited generally recognize creativity to be a wholesome and valuable asset which increases one's effectiveness in dealing with himself and others. It thus constitutes a goal worthy to be encouraged within a musical environment.

2. The Suitability of Creativity as an Educational Goal

The reasons given by theorists in support of the proposition that creativity may serve as an appropriate, achievable goal of education are based largely upon the findings of research studies concerning the nature of creativity.

a. Musicians cited concur with those theorists who regard creativity to be an appropriate goal of general education because of its nature as a personality trait possessed by all individuals to some degree. This implies that
since secondary school music students likewise possess potential creative ability, the encouragement of creativity through the secondary music education program is a feasible educational objective.

b. Mursell, Morgan and Morgan, Jensen, Leonhard and Dello Joio agree with the majority of philosophers and psychologists in accepting the view that creativity is a suitable educational goal because it may be evidenced in many ways at many levels. This implies that creative ability may be expressed and increased through musical activities.

c. Mursell, Jensen, Fowler, and Leonhard concur with philosophers and psychologists who contend that because of its nature as an intellectual process, creativity is well within the realm of the educational design of fostering expanded intellectual growth. Cognitive abilities associated with creative thinking may then be developed through musical experiences, activities, and projects.

d. Mursell, Morgan and Morgan, Jensen, Fowler, Leonhard, and Dello Joio are in agreement with theorists who state that creativity is a suitable educational goal because of its dependence upon the acquisition of large amounts of information. Therefore, a music program which provides for the attainment of a broad range of musical knowledge and skills at the secondary level thus increases the resources from which come creative responses.
e. Musicians cited concur with philosophers and psychologists who propose that certain emotional and environmental conditions are positively correlated with creativity. Such conditions may then be facilitated in the secondary music education non-performing class.

C. Conditions Inhibiting Creativity

While theories of musicians indicate that an authoritative environment inhibits creativity, no specific conditions are mentioned. However, since the attitudes and teaching procedures indicated in Table 26 as being blocks to creativity may also occur in a musical classroom situation, avoidance of these conditions may significantly improve the degree to which the creative potential of music students may be realized.

D. Conditions Facilitating Creativity

1. Personality Traits to be Encouraged

From Table 27 it may be observed that musicians cited endorse many of the traits listed as valuable personality assets which contribute to creative behavior. The encouragement of these and the other traits listed in Table 27 through the musical teaching-learning situation may then facilitate greater creative responses through music.
2. Cognitive Abilities and Skills to be Developed

Problem-solving abilities and skills listed in Table 28 are regarded by the majority of philosophers, psychologists, and musicians cited as being of major importance in fostering creative thinking. In the secondary school music program these abilities and skills may be developed as students engage in the various aspects of the music program (reading, listening, playing, singing, analyzing, and interpreting).

E. Educational Principles and Procedures Contributing to Creative Growth

Musicians cited endorse many of the teaching aids suggested in Table 29 as ways to encourage and develop creative abilities and behavior. However, since other recommendations listed in Table 29 may also be applicable to the promotion of creativity in the secondary school non-performing music class, the significance of each teaching aid for achieving the stated objective will be noted.

1) Avoid and remove frustration. Teacher attitudes which are receptive to creative efforts lessen the degree of frustration associated with creating.

2) Be imaginative and inquisitive. Music teaching procedures which are flexible and varied more effectively stimulate the desire for originality.

3) Be adventurous and spirited. Enthusiasm for creative musical projects may also increase student
motivation for creative activity.

4) Avoid equating creativity with mental illness or delinquency. The acceptance of creative thinking as a valuable and normal personality style rather than as evidence of maladjustment increases the degree to which students may desire to participate in and experience creative musical activities.

5) Modify misplaced emphasis on sex roles. Because of the paradoxical nature of traits associated with creative behavior, an instructional attitude which does not restrict certain behavior patterns such as emotional sensitivity to girls or independent thinking to boys is conducive to creativity.

6) Show respect for individual differences. Because creative responses result from the unique intellectual and personality traits of students as individuals, a music program which provides for the development of various levels of creative potential increases the degree of student creative expression.

7) Do not be blinded by I.Q. scores. Research findings showing that one's intelligence quotient does not necessarily indicate a corresponding degree of creative ability should suggest to music educators the possibility of cultivating the latent creative potential of music students of many levels of
general intelligence.

8) Be willing to experiment and deviate from a set procedure. A flexible or original approach to a musical problem reduces the definiteness of a situation and encourages original thinking.

9) Analyze the traits associated with the creative person. Verbal suggestions and behavioral demonstrations of traits contributing to creative behavior may give added insight into the nature of the creative act. (A study of the traits of creative composers which have or have had a positive effect upon their creative output may contribute perhaps to greater understanding of the nature of musical creation.)

10) Provide for a rich instructional background. The acquisition of musical knowledge of many styles, periods, and media may, by broadening the scope of musical experiences, also increase the source from which new ideas and musical associations may come.

11) Provide for self-initiated projects, term papers, and experiments. From such activities students in the secondary non-performing music class may derive added knowledge, skill in manipulating such knowledge into new arrangements, and discriminative judgment in communicating ideas.

12) Allow adequate time for projects. Because creative
ideas often emerge after a period of incubation, provision for sufficient time for new ideas to formulate may contribute to more creative outcomes.

13) Provide for small group instruction. Groups may engage in brain-storming activities to effect a joint creative effort.

14) Provide for flexible scheduling. This approach may enable music students both to meet for individual or group projects and to gain additional time to work on creative projects.

15) Provide for flexible, programmed instruction. The presentation of musical materials in this form when designed to permit multiple appropriate responses may thus contribute to creative thinking.

16) Teach the process of creating and innovation. Knowledge of the nature and sequence of stages found to be associated with creativity may sharpen student awareness of the significance of large amounts of knowledge, of rational and irrational thinking, and of persistent effort for creative productivity.

17) Provide opportunities for problem-solving and discovery. Because of the positive relationship existing between the creative thought process and that involved in problem-solving, musical instruction which involves learning by discovery or...
inquiry contributes to the development of creative thinking.

18) Reveal new possibilities. Music teaching which suggests and directs students to explore a variety of approaches to a problem also facilitates a sense of inquiry and initiative.

19) Provide for open-ended discussions. By affording opportunities for the expression of divergent views, open-ended discussions may be conducive to original thinking.

20) Ask provocative questions. Posing questions of this nature may stimulate not only abilities such as recognition and recall, but also the ability to connect ideas, a primary condition of creative thinking.

21) Allow one idea to lead to another. Because of the significance of fluid and flexible ideation for creative problem-solving, musical instruction which encourages the generation of many diverse approaches to a problem also encourages creativity.

22) Permit unique responses. Acceptance of constructive ideas or solutions which deviate from the usual may build student confidence to think independently.

23) Defer judgment and provide for unevaluated practice. Creative efforts in music are more
forthcoming when the threat of immediate evaluation is removed.

24) Minimize the threat of committing error. Music teaching which accepts some error as part of the process of learning contributes to the willingness of students to deviate from a tried, safe approach.

25) Use constructive criticism carefully. A fair appraisal of creative outcomes in terms of individual potentiality may encourage further creative efforts.

26) Reward creative thinking. Verbal or material acts of praise or recognition for creative ideas or products may reinforce the desire for creative activity.

Because teaching for creativity cannot be prescribed in predetermined or logically organized steps, no attempt has been made to specify a creative program of study for the secondary school non-performing music class. However, music teachers by their own creative initiative and the application of the above recommended teaching aids may better promote attitudes and abilities conducive to creativity. It remains for each music educator to accept the challenge of directing a vital, inspiring, and creative music program in the secondary schools.
Notes

1 Burnett, "Dewey and Creative Education," p. 388.


5 Hall-Quest, op. cit., p. 456.

6 Ibid.


8 Klausmeier and Goodwin, p. 258.

9 Kneller, Introduction to the Philosophy of Education, p. 49.


11 Ibid., p. 388.


13 Kneller, Introduction to the Philosophy of Education, p. 41.


18 Hallman, "Creativity and Educational Philosophy," p. 6.

19 Ibid.

20 Ibid., p. 9.

21 Ibid.

22 Kneller, Introduction to the Philosophy of Education, p. 42.


27 Ibid.


29 Ibid.

30 Wegener, op. cit., p. 204.

31 Ibid., p. 208.


33 Alden F. Shaw, op. cit., p. 68.

34 Wegener, op. cit., p. 204.

35 Ibid.


37 Wegener, op. cit., p. 204.
38 Frederick Mayer, "Education as a Creative Endeavor," Phi Delta Kappan, XXXX (October, 1958), 17.

39 Ibid.


41 Kneller, Introduction to the Philosophy of Education, p. 57.

42 Ibid., p. 67.

43 Bowers, op. cit., p. 225.

44 Mayer, op. cit., p. 8.

45 Ibid.


47 Mayer, op. cit., p. 18.

48 Ibid.


50 Mayer, op. cit., p. 18.

51 Ibid., p. 20.


53 Hallman, "Can Creativity Be Taught?," p. 21.


56 Ibid., p. 312.

57 Hallman, "Creativity and Educational Philosophy," p. 3.


59 Ibid., p. 19.
60 Ibid., p. 21.
61 Ibid., p. 23.
63 Ibid.
64 Ibid., p. 27.
66 Ibid., pp. 325-26.
69 Hallman, "Can Creativity Be Taught?" p. 23.
71 Ibid.
72 Ibid., pp. 90-92.
73 Ibid., p. 96.
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CHAPTER VI

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

This study consisted of an investigation and comparison of theories of selected twentieth-century philosophers, psychologists, and musicians concerning the nature and nurturing of creativity. Implications drawn from findings were directed toward the promotion of creativity in the secondary non-performing music class. The investigation was divided into two parts. In Part I, entitled "The Nature of Creativity," attention was focused upon each of three major factors involved in creating—the creative person, the creative process, and the creative outcome. Part II, entitled "The Nurturing of Creativity," dealt with the task of promoting creativity through the educational process.

Theories of philosophers, psychologists, and musicians were derived from the literature available in the libraries of Louisiana State University, Baton Rouge; Tulane University; the New Orleans Public Library, Main Branch; and the Louisiana State Library, Baton Rouge. In selecting theories concerning aspects of creativity about which theorists were prolific, an attempt was made to
include the most comprehensive and well-formulated theories and to present a wide range of divergent views and approaches to the subject. Concerning aspects of creativity about which only a restricted amount of material was available, a more limited number of theories was presented.

Positions endorsed by theorists regarding major topics identified in chapters dealing with the creative person, the creative process, the creative outcome, and the promotion of creativity were compared. The investigation of the creative person also included findings obtained from empirical studies. The overall purpose of this study was:

1) to ascertain ideas and information from a variety of sources pertaining to the nature and nurturing of creativity;

2) to identify positions proposed or endorsed by selected composers and music educators regarding major topics discussed;

3) to determine the extent to which theories of selected composers and music educators are in agreement with each other and with theories of selected philosophers and psychologists concerning topics being compared;

4) to determine the implications of positions endorsed by selected musicians for the task of encouraging creativity through music education;

5) to discover educational principles and
instructional techniques which contribute to the promotion of creativity in the secondary non-performing music class.

In the remainder of this summary, a statement of the theorists selected, the topics compared, and the outcomes of the comparison will be indicated for each chapter.

Theories dealing with the creative person which were selected from the discipline of philosophy included those proposed by Alfred North Whitehead, Henri Bergson, Jacques Maritain, and Nicolas Berdyaev. Theories of psychologists were proposed by Sigmund Freud, Otto Rank, Carl R. Rogers, Abraham Maslow, and Erich Fromm. Empirical studies related to the nature of the creative person were those conducted by Donald MacKinnon, Frank Barron, J. P. Guilford, Jacob W. Getzels and Phillip W. Jackson, and E. Paul Torrance. Theories of composers pertaining to the creative person included those by composers Arnold Schoenberg, Igor Stravinsky, and Aaron Copland, and those by music educators James L. Mursell, Eric Jensen, Ray Moore, and Neal Glenn and Edgar Turrentine.

The selected theories were compared with regard to the following topics: 1) the normality of creative behavior, 2) the universality of creative behavior, 3) the source of creative power, 4) motivation toward creative behavior, and 5) the expression of creative potential. It was found that diverse positions were stated by theorists concerning these
topics. While the extent of agreement existing between musicians and other theorists regarding these topics was indicated, no attempt was made to determine the significance of these positions by the strength of support. A statement of the different views expressed and the theorists endorsing them follows:

1. The Normality of Creative Behavior

Creative behavior was regarded to be the expression of a normal human response by all philosophers, all musicians, and most psychologists cited. Freud described creative behavior as an expression of mental illness.

2. The Universality of Creative Behavior

Creative behavior was identified by some theorists as an inherent trait possessed by everyone to some degree. Other theorists identified creative behavior as a special ability possessed by only a few individuals. The former position was supported by philosophers Whitehead and Bergson, by psychologists Rogers, Maslow, and Fromm, and by music educators Mursell, Moore, Jensen, and Glenn and Turrentine. The latter position was supported by philosophers Maritain and Berdyaev, by psychologists Freud and Rank, and by composers Schoenberg, Stravinsky, and Copland.

3. The Source of Creative Power

Creative power was attributed to either a natural or a supernatural cause. All theorists cited, with the exception of philosophers Maritain and Berdyaev, stated that
creative power is derived from a natural source.

4. Motivation Toward Creative Behavior

The reasons proposed by theorists to account for the need to create were: a) the need to serve God, b) the need to fulfill oneself, and c) the need to solve a psychological conflict. Proposition a) was endorsed by philosophers Maritain and Berdyaev. Proposition b) was endorsed by philosophers Whitehead and Bergson, by psychologists Rogers, Maslow, and Fromm, and by composer Copland and music educator Mursell. Proposition c) was supported by psychologists Freud and Rank and by composers Schoenberg and Stravinsky.

5. The Expression of Creative Potential

Many theorists stated that creativity is expressed as a creative product. Others proposed that creativity may be expressed as either a product or a lifestyle. Support for the former position was given by philosophers Maritain and Berdyaev, by psychologists Freud and Rank, and by composers Schoenberg, Stravinsky, and Copland. Theorists endorsing the latter position included philosophers Whitehead and Bergson, psychologists Rogers, Maslow, and Fromm, and music educators Mursell and Jensen.

Observations reported in the empirical studies of psychologists dealt with the following topics: 1) creativity and aptitudinal traits, and 2) creativity and non-aptitudinal traits. The endorsement by music educators of empirical findings was noted.
1. Creativity and Aptitudinal Traits

It was found that a positive relationship exists between creativity and intelligence. The result was obtained in separate research studies of creative persons conducted with adults by MacKinnon, with adolescents by Getzels and Jackson, and with children by Torrance. Music educators Jensen, Moore, and Glenn and Turrentine acknowledged this finding. Another significant finding regarding creativity and aptitudinal traits was obtained by Guilford who, by factor analysis, was able to identify a definite group of cognitive abilities involved in creative thinking. This result was endorsed and reported by music educators Moore and Jensen.

2. Creativity and Non-Aptitudinal Traits

Studies conducted by Guilford, MacKinnon, Barron, and Torrance indicated that a wide array of motivational traits are commonly associated with creative persons. Guilford and MacKinnon also reported that motivational and personality traits are important determiners of whether creative potential is realized. The above findings were endorsed by music educators Jensen and Glenn and Turrentine.

From the traits identified in selected empirical studies, Tables 1, 2, and 3 were compiled and presented to indicate more clearly those intellectual, motivational, and personality traits commonly associated with creative
persons. The extent to which musicians concurred with these findings was indicated in Tables 4, 5, and 6.

In Chapter III, an investigation of the creative process, it was determined that since theories pertaining to this topic are basically concerned with the mental operation involved in creating, the selection of theories would include both those dealing with creating which results in art and those pertaining to creating which results in more general outcomes. It was found that selected theories of philosophers and composers discussed the process involved in artistic creating, while psychologists and music educators discussed the process involved in creating, generally.

Theories of the creative process which were selected from the area of philosophy included those by Benedetto Croce, R. C. Collingwood, Milton C. Nahm, Jacques Maritain, Samuel Alexander, Monroe C. Beardsley, John Dewey, Vincent Tomás, and Eliseo Vivas. Theories chosen from the field of psychology were proposed by Ernest Kris, Lawrence Kubie, Abraham Maslow, Harold Rugg, Arthur Koestler, Max Schoen, Max Wertheimer, Alexander Osborn, and E. Paul Torrance. Theories of musicians included those by composers Roger Sessions, Arnold Schoenberg, Igor Stravinsky, Aaron Copland, and Paul Hindemith. Also included were theories by music educators Eric Jensen and Neal Glenn and Edgar W. Turrentine.

Selected theories of the creative process were compared with regard to the following topics: 1) a definition
of creating, 2) factors guiding the creative process, 3) forms of creative expression, 4) stages of the creative process, and 5) the nature of mental activity associated with creating. A comparative investigation of statements proposed by theorists concerning these topics revealed the following results:

1. A Definition of Creating
Theorists proposed five major definitions of creating. Artistic creating was defined as "intuition" by philosophers Croce and Collingwood, and as "discovery" by philosopher Vivas. Composers cited concurred with philosophers Nahm, Maritain, Alexander, Beardsley, Dewey, and Tomas in defining artistic creating as "making." Psychologists Kris, Maslow, and Kubie defined creating as "regression in the service of the Ego." Music educators concurred with psychologists Rugg, Koestler, Schoen, Wertheimer, Osborn, and Torrance in defining creating as "problem-solving."

2. Factors Guiding the Creative Process
This topic was discussed only by philosophers and composers. Three positions stated were: a) artistic creating results from creative inspiration, b) artistic creating results from choices made under the guidance of a pervading creative idea, and c) artistic creating results from rational choices made under the guidance of a final goal. Proposition a) was stated by philosophers Croce and
Collingwood. Proposition b) was endorsed by philosophers who defined artistic creating as "making" and by composers Sessions, Schoenberg, Stravinsky, and Copland. Proposition c) was endorsed by philosophers Dewey and Vivas and by composer Hindemith.

3. Forms of Creative Expression

Most theorists proposed that the creative process is consummated in a material result. This view was stated by all psychologists, composers, and music educators cited, and by selected philosophers with the exception of Croce and Collingwood, who proposed that the creative process is consummated in a mental image.

4. Stages of the Creative Process

Selected theorists proposed that the following stages are associated with the process of creating: a) a period during which the problem is recognized and facts and materials accumulated, b) a period during which ideas and materials are manipulated into new combinations, c) a period during which the creative idea becomes known, and 4) a period during which the creative idea is developed. Although these stages were referred to by many different names, they were most often called the stages of preparation, incubation, inspiration, and elaboration. These terms will be used in this summary when referring to the stages of the creative process.
It was found that all theorists cited acknowledged the stage of inspiration to be an essential aspect of the creative process. The stage of elaboration was acknowledged by all psychologists and musicians cited and by philosophers other than Croce and Collingwood. The stage of preparation was acknowledged by philosophers Alexander and Dewey, by psychologists Osborn, Torrance, Wertheimer, Schoen, Koestler, and Rugg, and by music educators Jensen and Glenn and Turrentine. The stage of incubation was acknowledged by philosophers Alexander, Dewey, and Maritain, by all psychologists with the exception of Kris, and by music educators Jensen and Glenn and Turrentine.

Theorists also proposed that stages involved in creating occur in the following sequences: a) preparation, incubation, illumination, elaboration; b) incubation, inspiration, elaboration; and c) inspiration, elaboration. Theorists who acknowledged that the creative process involves four stages also stated that these stages occur in the order described in sequence a). Sequence b), which involves three stages beginning with incubation, was endorsed by philosophers Dewey and Maritain, and by psychologists Kubie and Maslow. Sequence c), involving only the stages of inspiration and elaboration, was acknowledged by philosophers Beardsley, Nahm, Tomas, and Vivas, and by all composers cited.

With regard to the sequences of stages, some theorists
also proposed that mental activity characteristic of individual stages may occur throughout the process. This contention was stated by philosophers Beardsley, Tomas, and Dewey, by psychologists Osborn, Torrance, and Schoen, and by musicians Sessions, Stravinsky, and Jensen.

5. The Nature of Mental Activity Associated with Creating

Theorists who acknowledged the stages of preparation and elaboration also proposed that conscious thought processes occur during these aspects of the creative process. Theorists who acknowledged the stages of incubation and inspiration proposed that nonconscious thought processes occur during these stages. Concerning the significance of conscious and nonconscious thinking for creating, it was found that all psychologists and musicians, and the majority of philosophers concurred in stating that creating involves the interaction of conscious and nonconscious thinking. Philosophers proposing divergent views included Nahm, who stated that creating involves purely conscious thought processes, and Croce and Collingwood, who stated that creating involves purely nonconscious thought processes.

Chapter IV dealt with the creative outcome as expressed in a creative product or a creative activity. Theories selected from the disciplines of philosophy included those by Milton C. Nahm, Vincent Tomas, Samuel Alexander, Suzanne Langer, and John Dewey. Psychological
theories were proposed by Carl R. Rogers, E. Paul Torrance, Morris I. Stein, Brewster Ghiselin, Irving Taylor, Phillip W. Jackson and Samuel Messick, and Jerome Bruner. Theories from the field of music were proposed by composers Arnold Schoenberg and Igor Stravinsky, and by music educators L. Thomas Hopkins, James L. Mursell, and Hazel Morgan.

Theories selected were compared regarding the following topics: 1) types of creative outcomes, 2) levels of creative production, 3) standards for judging the creativity of outcomes, and 4) characteristics of creative outcomes. The following positions were stated by theorists concerning these topics:

1. Types of Creative Outcomes

The proposition that a creative outcome is denoted by an observable product was stated by all philosophers cited, by composers Schoenberg and Stravinsky, and by selected psychologists with the exception of Bruner. The proposition that a creative outcome is denoted by a response or activity was supported by philosopher Dewey, psychologist Bruner, and by music educators Hopkins, Mursell, and Morgan.

2. Levels of Creative Production

Composers Schoenberg and Stravinsky concurred with philosophers Nahm, Tomas, Alexander, and Langer in asserting that the designation "creative" should be attributed only to outcomes exemplifying the highest level of achievement. The proposal stating that the designation "creative" may be attributed to outcomes exemplifying many levels of
achievement was endorsed by philosopher Dewey and by all psychologists and music educators cited.

3. Standards for Judging the Creativeness of Outcomes

Two positions stated by theorists regarding this issue were: a) creativeness is evaluated in terms of universal or group standards and b) creativeness is evaluated in terms of personal standards. The former position was supported by all philosophers and composers cited and by psychologists Stein, Ghiselin, Taylor, and Jackson and Messick. The latter position was supported by psychologists Rogers, Torrance, Taylor, and Bruner, and by music educators Hopkins, Mursell, and Morgan.

4. Characteristics of Creative Outcomes

Table 13 presented a compilation of characteristics attributed to general creative outcomes and characteristics attributed to artistic products as determined from theories investigated. The extent to which composers and music educators concurred with these characteristics was also shown in Table 13.

In Chapter V theorists dealt with the role of creativity in general education and with conditions and instructional procedures affecting the promotion of creativity. Selected theories of philosophers included those by John Dewey, Harry S. Broudy, Alfred N. Whitehead, Frederick
Mayer, Ralph J. Hallman, and George Kneller. Theories from the discipline of psychology were proposed by Lawrence Kubie, Harold Rugg, Harold H. Anderson, E. Paul Torrance, Herbert J. Klausmeier and William Goodwin, Alexander Osborn, and Frank E. Williams. Theories from the area of music were proposed by music educators James L. Mursell, Russell Morgan and Hazel Morgan, Eric Jensen, Charles John Stark, Charles B. Fowler, Charles Leonhard, Karl D. Ernst, representing the position of the Tanglewood Symposium, and by composer Norman Dello Joio, representing the position of the Contemporary Music Project.

The selected theories were compared regarding the following topics: 1) endorsement of creativity as an educational process, 2) reasons justifying creativity as an educational objective, 3) conditions inhibiting creativity, 4) conditions facilitating creativity, and 5) educational principles and procedures for promoting creative growth. An investigation of proposals of theorists regarding these issues produced the following results:

1. **Endorsement of Creativity as an Objective**

   The promotion of creativity was acknowledged to be a major task of education by all theorists cited with the exception of philosopher Broudy, who did not regard creativity to be a primary task of education.

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2. Reasons Justifying Creativity as an Educational Objective

Reasons proposed by theorists were: a) the value of creativity in contributing to personality growth and productive functioning and b) the suitability of creativity as an educational objective as indicated by research findings concerning the nature of creativity. The view that creativity contributes to personality growth was endorsed by philosophers Dewey, Whitehead, Mayer, Hallman, and Kneller, by psychologists Kubie, Rugg, Anderson, Torrance, and Crutchfield, and by musicians Mursell, Morgan and Morgan, Jensen, Ernst, and Dello Joio. Theorists stating that creativity contributes to productive functioning included philosophers Dewey, Whitehead, and Hallman, psychologists Torrance, Klausmeier and Goodwin, Osborn, Crutchfield, and Williams, and musicians Jensen, Stark, Fowler, Leonhard, and Dello Joio.

The following statements determined by research studies of the nature of creativity were cited by theorists as factors indicating that creativity may serve as a suitable educational goal: a) creativity is a trait possessed by all persons to some degree, b) creativity may be expressed in diverse ways at many levels, c) creativity as an intellectual process may be developed through education, d) creativity depends upon large amounts of information, and e) creativity is positively correlated with inner and outer...
conditions of openness. Endorsement of statement a) as a reason contributing to the suitability of creativity as an educational goal was given by philosophers Dewey, Whitehead, Mayer, Hallman, and Kneller, by psychologists Kubie, Rugg, Torrance, Klausmeier and Goodwin, Osborn, Crutchfield, and Williams, and by all musicians cited. Statement b) was endorsed by all philosophers who regard creativity to be a proper educational objective, by psychologists Kubie, Rugg, Anderson, Torrance, Klausmeier and Goodwin, and Williams, and by musicians Mursell, Morgan and Morgan, Jensen, Leonhard, and Dello Joio. Statement c) was endorsed by philosophers Dewey, Mayer, and Hallman, by psychologists Kubie, Rugg, Torrance, Klausmeier and Goodwin, Osborn, Crutchfield, and Williams, and by musicians Mursell, Jensen, Fowler, and Leonhard. Endorsement of statement d) was given by philosophers Dewey, Mayer, and Hallman, by all psychologists cited, and by musicians Mursell, Morgan and Morgan, Fowler, Leonhard, Jensen, and Dello Joio. Statement e) was endorsed by philosophers Dewey, Mayer, and Kneller, by psychologists Kubie, Rugg, Anderson, Torrance, Klausmeier and Goodwin, Osborn, and Crutchfield, and by all musicians cited.

3. Conditions Inhibiting Creativity

Conditions blocking creativity as proposed by philosophers were presented in Table 14. Blocks to creativity proposed by psychologists were listed in Table 18. No
specific conditions inhibiting creativity were cited in the theories of musicians investigated. A composite list of conditions blocking creativity was presented in Table 26. Conditions listed in Table 26 which were acknowledged by musicians as determined from selected theories were also indicated.

4. Conditions Facilitating Creativity

Personality traits and cognitive abilities associated with creative behavior were cited as factors contributing to the promotion of creativity. Personality traits to be encouraged which were derived from theories of philosophers, psychologists, and musicians were presented in Tables 15, 19, and 22 respectively. Table 27 served as a composite list of traits contributing to creative behavior. Cognitive abilities to be encouraged which were cited by philosophers, psychologists, and musicians as significant for creative thinking were presented in Tables 16, 20, and 23, respectively. A compilation of cognitive abilities and skills significant for creative productivity was shown in Table 28. Traits and abilities with which musicians concurred were also indicated in Table 28.

5. Educational Principles and Procedures for Promoting Creative Growth

Teaching aids contributing to the promotion of creativity as proposed by philosophers were indicated in Table 17. Those recommended by psychologists were presented
in Table 21. Table 24 listed teaching aids proposed by musicians. A composite list of instructional principles and procedures for promoting creativity was shown in Table 29. Suggestions with which musicians concurred were also indicated in Table 29.

Conclusions

Part I: The Nature of Creativity

Many different theories and ideas were proposed by philosophers, psychologists, and musicians to explain the concept of creativity. Of the many views held by theorists the following general concepts of creativity were expressed most often:

1) Creativity is a mental process by which a resulting creative product or activity is produced.

2) Creativity is a personality trait or cluster of traits which is manifested in a unique personality style or a unique product. While this investigation revealed that theorists were not totally in agreement on a single explanation of the nature of creativity, it did indicate that theorists generally acknowledge that creativity involves three essential factors—the creative person, the creative process, and the creative outcome.
A study of the implications of divergent views expressed by theorists regarding the creative person, the creative process, and the creative outcome indicated that some proposals stated support the hypothesis that creativity can and should be promoted through secondary music education. Other proposals were less favorable to this hypothesis. Implications favorable to the promotion of creativity were drawn from the following proposals of theorists. Findings of empirical studies favorable to the promotion of creativity were also indicated. Positions endorsed by composers are shown by a single asterisk. Positions endorsed by music educators are shown by a double asterisk.

A. The Creative Person

** 1. Creative behavior is a normal, wholesome, and desirable human activity. As such, creativity constitutes a worthwhile and valuable educational goal.

** 2. One's creative power has a natural origin. This implies that it is a human potentiality and is within the realm of individual development.

** 3. Everyone has the potential to be creative to some extent. This implies that some degree of creative functioning is a possible attainment for all secondary school students.

** 4. The creative person expresses his creativity as a product or life style. The conception of creativity as a general way of interacting with others may be an attainable
goal for many students.

B. The Creative Process

** 1. Creating is "problem-solving." This implies that mental skills and procedures identified as significantly related to problem-solving may in effect also enhance creative thinking and productivity.

** 2. The creative process involves the stages of preparation, incubation, inspiration, and elaboration. This suggests that instruction which provides for learning to occur by mental activity progressing through these stages may contribute to creativity.

** 3. The creative process is consummated in an observable result. A result which is manifested only in the mind lies beyond the scope of education.

** 4. Creating involves the interaction of conscious and unconscious thought processes. This implies that creativity is not a totally irrational act and therefore may be considered as a proper goal of education.

C. The Creative Outcome

** 1. A creative outcome may be denoted by a variety of responses or activities. When creative outcomes may be expressed in many ways, the probability of many students expressing a creative outcome is increased greatly.

** 2. The designation "creative" may be attributed to outcomes exemplifying many levels of achievement. This
implies that students of various creative abilities may achieve a degree of creative expression commensurate with their creative potential.

** 3. Creativeness is evaluated in terms of personal standards. When so regarded, the expression of a creative outcome may be an attainable goal for many students.

D. Empirical Findings

1. Creativity and intelligence are positively related but are not synonymous terms. Research indicating that students possessing high creative ability are not necessarily those designated as the academically gifted supports the contention that many students of less than superior general intelligence may achieve significant creative results.

2. Specific cognitive abilities are associated with creative thinking. The identification of abilities essential to creativity strengthens the hypothesis that creativity may be promoted through the educational process.

3. Characteristics found to be commonly associated with creative persons are positively related to traits identified by many psychologists as characteristics indicative of mental health. This finding contributes support to the proposition that creative behavior may be an important objective of the educational process.
Implications drawn from the following proposals of theorists were less favorable to the hypothesis that creativity may be promoted through the secondary music education program.

A. The Creative Person

*1. Everyone does not possess the potentiality to be creative. Creative behavior regarded as evidence of a very special talent would be an appropriate goal of only a few persons.

*2. The creative person expresses his creativity as a product. This suggests that since only students possessing creative potential sufficient to produce a product would achieve creative expression, creativity would not be an attainable goal for most students.

B. The Creative Process

*1. Creating is "making." The promotion of creativity as the making of art suggests that students achieving this goal in music must necessarily possess a high level of technical and theoretical mastery of music, a goal which is perhaps beyond the grasp of many secondary school students.

C. The Creative Outcome

*1. A creative outcome is denoted by an observable product. This goal does not appear to be within the reach of most public school students.
2. The designation "creative" is attributed only to outcomes exemplifying the highest level of achievement. This position limits the realization of a "creative" outcome to the exceptionally talented students.

3. Creativeness is evaluated in terms of universal or group standards. The production of a totally unique outcome would be achieved at the secondary level only by students of exceptional creative ability.

Factors discussed in the following proposals of theorists are involved in creating, but a determination of their nature does not appear to affect the proposition that creativity may be promoted through music education.

1. The creative person may respond to a need to fulfill his potentialities or to resolve a psychological conflict. The nature of the source of motivation appears to be less significant than its effectiveness in stimulating creative results.

2. Artistic creating results from rational choices made under the guidance of a pervading creative idea or a final goal. Identification of the force guiding the creative process does not appear to be essential to the promotion of creativity as a thought process.

From a study of the implications for music education drawn from proposals presented above, it was observed that:

1. Music educators and composers are not in agreement on many issues regarding the nature of creativity.
2. A larger number of proposals which imply that 
creativity may be promoted through music education were 
endorsed by music educators than by composers.

3. Scientific studies of creativity provide empiri­
cal support for the following proposals: a) creativity is 
an achievable goal for most students, b) creativity is 
characterized by specific cognitive abilities functioning 
within a unique thought process, and c) creative behavior 
is a normal, wholesome, and desirable human activity.

On the basis of proposals supported by empirical 
studies and proposals which imply that creativity can and 
should be promoted through the educational process, it 
appears that:

1) Creativity, when defined as a normal, natural, 
and common human personality trait expressed as a product 
or an activity unique to the individual, may serve as an 
appropriate educational goal for many secondary school 
music students.

2) Creativity, when defined as a thought process 
closely associated with problem-solving and marked by a 
series of stages involving identifiable cognitive abilities, 
may serve as a suitable goal for many secondary school 
music students.

3) Creativity, when defined as a highly specialized 
talent which is expressed in a unique artistic work of the
highest standards, would not be an attainable goal for most secondary school music students.

Part II: The Nurturing of Creativity

On the basis of the limited amount of available literature by musicians dealing with the promotion of creativity through music education at the secondary level, it appears that creativity has not been widely acknowledged to be a significant or appropriate aim of music education in the secondary schools. However, the recent policy position on creativity accepted by the Music Educators National Conference together with the increased publication of articles endorsing the promotion of creativity at all levels of music education indicate that the assertion that creativity can and should be promoted through music education at the secondary level is beginning to be recognized and acknowledged more extensively by music educators.

A study of the proposals of theorists regarding the role of creativity in education revealed that creativity was regarded to be a significant goal of the educational process for two primary reasons. A statement of these reasons and their implications for music education in the secondary schools follows:

1) Creativity contributes to personality growth and productive intellectual, social, and vocational functioning. This implies that because creativity may be a valuable asset
for increasing one's effectiveness in dealing with himself and others it may be considered a valuable goal to be encouraged through music education.

2) Factors associated with the nature of creativity contribute to its teachability and suitability as an educational objective. The universality of creativity as a personality trait implies that since secondary school music students also possess potential creative ability, the promotion of creative behavior through music education is a feasible goal for most students. The diversity of ways creativity may be expressed implies that creativity may also be expressed and increased through musical activities. The nature of creativity as an intellectual process suggests that creative thinking may also be developed through musical activities and projects. The dependence of creativity upon large amounts of information suggests that the acquisition of a broad range of musical knowledge and skill at the secondary level may increase the resources from which come creative responses. The positive relationship existing between creativity and certain emotional and environmental conditions implies that such conditions may also be facilitated in the secondary school music class.

A study of the implications drawn from the above proposals indicates that justifying creativity as an educational objective on the basis of findings identified or
substantiated by psychological investigations of the nature of creativity strengthens the contention that creativity can and should be promoted through music education at the secondary level.

The following proposals of theorists were found to be significant for the promotion of creativity through the educational process:

1) Authoritarian teaching procedures and environmental conditions may inhibit creativity.

2) Personality traits and cognitive abilities positively associated with creativity may facilitate creativity.

3) Instructional principles and procedures which encourage and enhance personality traits and cognitive abilities associated with creativity are conducive to the promotion of creativity.

A statement of recommended teaching aids contributing to creativity and of their implications for the encouragement of creative expression in the secondary non-performing music class follows:

1. Avoid and remove frustration. Teacher attitudes which are receptive to creative efforts lessen the degree of frustration often associated with creating.

2. Be imaginative and inquisitive. Music teaching procedures which are flexible and varied more effectively stimulate the desire for originality.
3. Be adventurous and spirited. Enthusiasm for creative musical projects may also increase student motivation for creative activity.

4. Avoid equating creativity with mental illness or delinquency. The acceptance of creative thinking as a valuable and normal personality style rather than as evidence of maladjustment increases the degree to which students may desire to participate in and experience creative musical activities.

5. Modify misplaced emphasis on sex roles. Because of the paradoxical nature of traits associated with creative behavior, an instructional attitude which does not restrict certain behavior patterns such as emotional sensitivity to girls or independent thinking to boys is conducive to creativity.

6. Show respect for individual differences. Because creative responses result from the unique intellectual and personality traits of students as individuals, a music program which provides for the development of various levels of creative potential increases the degree of student creative expression.

7. Do not be blinded by I.Q. scores. Research findings showing that one's intelligence quotient does not necessarily indicate a corresponding degree of creative ability should suggest to music educators the possibility of cultivating the latent creative potential of music.
students of many levels of general intelligence.

8. Be willing to experiment and deviate from a set procedure. A flexible or original approach to a musical problem reduces the definiteness of a situation and encourages original thinking.

9. Analyze the traits associated with the creative person. Verbal suggestions and behavioral demonstrations of traits contributing to creative behavior may give added insight into the nature of the creative act. (A study of the traits of creative composers which have or have had a positive effect upon their creative output may contribute perhaps to greater understanding of the nature of musical creation.)

10. Provide for a rich instructional background. The acquisition of musical knowledge of many styles, periods, and media may, by broadening the scope of musical experiences, also increase the source from which new ideas and musical association may come.

11. Provide for self-initiated projects, term papers, and experiments. From such activities students in the secondary non-performing music class may derive added knowledge, skill in manipulating such knowledge into new arrangements, and discriminative judgment in communicating ideas.

12. Allow adequate time for projects. Because creative ideas often emerge after a period of incubation, provision for sufficient time for new ideas to formulate may
contribute to more creative outcomes.

13. Provide for small group instruction. Groups may engage in brain-storming activities to effect a joint creative effort.

14. Provide for flexible scheduling. This approach may enable music students both to meet for individual or group projects and to gain additional time to work on creative projects.

15. Provide for flexible, programmed instruction. The presentation of musical material in this form when designed to permit multiple appropriate responses may thus contribute to creative thinking.

16. Teach the process of creating and innovation. Knowledge of the nature and sequence of stages found to be associated with creativity may sharpen student awareness of the significance of large amounts of knowledge, of rational and irrational thinking, and of persistent effort for creative productivity.

17. Provide opportunities for problem-solving and discovery. Because of the positive relationship existing between the creative thought process and that involved in problem-solving, musical instruction which involves learning by discovery or inquiry contributes to the development of creative thinking.

18. Reveal new possibilities. Music teaching which suggests and directs students to explore a variety of
approaches to a problem also facilitates a sense of inquiry and initiative.

19. Provide for open-ended discussions. By affording opportunities for the expression of divergent views, open-ended discussions may be conducive to original thinking.

20. Ask provocative questions. Posing questions of this nature may stimulate not only abilities such as recognition and recall, but also the ability to connect ideas, a primary condition of creative thinking.

21. Allow one idea to lead to another. Because of the significance of fluid and flexible ideation for creative problem-solving, musical instruction which encourages the generation of many diverse approaches to a problem also encourages creativity.

22. Permit unique responses. Acceptance of constructive ideas or solutions which deviate from the usual may build student confidence to think independently.

23. Defer judgment and provide for unevaluated practice. Creative efforts in music are more forthcoming when the threat of immediate evaluation is removed.

24. Minimize the threat of committing error. Music teaching which accepts some error as part of the process of learning contributes to the willingness of students to deviate from a tried, safe approach.

25. Use constructive criticism carefully. A fair appraisal of creative outcomes in terms of individual
potentiality may encourage further creative effort.

26. Reward creative thinking. Verbal or material acts of praise or recognition for creative ideas or products may reinforce the desire for creative activity.

From an investigation of the above recommended procedures it appears that such teaching aids are both relevant and applicable to the teaching-learning situation in the secondary non-performing music class, and so may constitute a positive approach to the promotion of creativity through music education in the secondary schools.

Recommendations

Based upon the findings of this study the following recommendations seem appropriate:

1. Greater endorsement of the necessity, value, and appropriateness of creativity as an important objective of music education in the secondary schools should be expressed and demonstrated by both music educators who teach in junior and senior high schools and music educators who write the texts which serve as guides to effective music instruction at the secondary level.

2. Greater effort should be made to implement within secondary non-performing music classes the teaching aids recommended in Table 29 as principles and procedures contributing to the promotion of creativity.

3. More attention should be given in teacher-training
programs to the acquiring of knowledge of the following factors essential to the promotion of creativity at all instructional levels: a) the creative process and related creative thinking abilities, b) personality traits positively related to the expression of creative behavior, and c) environmental conditions and teaching procedures which may hinder or facilitate the realization of creative potential.

Recommendations for Further Research

1. An extension of the present study to determine the implications for music education of ideas regarding creativity which are proposed by writers within such disciplines as sociology, anthropology, art, and English literature.

2. A study to determine the significance for secondary music education of findings regarding creativity which were obtained from empirical studies conducted by research psychologists within the last fifteen years.

3. A study to determine the nature of problem-solving and other creative musical projects and activities involving creative thinking abilities which would be suitable for a junior high general music class or a senior high humanities class.
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VITA

Edith Ann Rhodes was born October 16, 1936, in New Orleans, Louisiana. She attended the elementary and secondary schools of Orleans Parish and was graduated in 1954 from Alcée Fortier High School.

She enrolled at Louisiana State University in Baton Rouge in September, 1954, and received a Bachelor of Music Education degree in August, 1958, with a major in both piano education and vocal supervision. She began graduate study at Louisiana State University in the fall of 1958 and was awarded the Master of Music degree in piano in August of 1960. The writer continued advanced graduate work at the above university from the fall of 1960 until August, 1961. During the years of study at Louisiana State University she was a member of Alpha Lambda Delta, freshman honor society; Mu Sigma Rho, honor society; Phi Kappa Phi, honor society; Phi Kappa Lambda, honorary music organization; and Sigma Alpha Iota, music fraternity.

From February, 1962, until June, 1967, she held the position of director of choral music at East Jefferson Senior High School in Metairie, Louisiana. In 1965 she served as chairman of the music textbook committee for Jefferson Parish. During the six years of residence in the New Orleans area the writer also gave private piano
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In June, 1967, she returned to Louisiana State University in Baton Rouge to resume graduate study. While completing the requirements for the doctorate, she sang with University choral groups and played viola with the L.S.U. Orchestra and the Baton Rouge Civic Symphony. She was also the author of "Changing Concepts of Music Education in the Secondary Curriculum," an article published in the March, 1968, issue of the Louisiana Musician (journal of the Louisiana Music Educators Association). The writer is presently a candidate for the Ph.D. degree in Music.
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Major Field: Music

Title of Thesis: A Comparative Study of Selected Contemporary Theories of Creativity with Reference to Music Education in the Secondary Schools

Approved:

Robert F. Shambaugh
Major Professor and Chairman

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EXAMINING COMMITTEE:

Date of Examination: 

(Signatures of committee members)