ASSESSMENT OF EGO FUNCTIONS IN CLASSICAL AND JAZZ MUSICIANS: A STUDY OF PERSONALITY DIFFERENCES

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ABSTRACT

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This research investigation was concerned with one fundamental question: Are classical musicians different from jazz musicians with respect to personality structure? A second, though related, aspect of the inquiry sought to examine the motivational components which underlie the creative musician's particular form expression. These were based on a review of the literature pertaining to music and personality which presented numerous findings of a confusing and inconclusive nature.

To seek answers for these questions, two groups of musicians, classical and jazz, were compared on twelve dependent measures of personality obtained through in-depth clinical interviews. Forty-four subjects, twenty-two in each group, were selected on the basis of their self-reported musical preferences and randomly assigned to one of two groups for interviewing. The subjects were college students majoring in music at Michigan State University who had volunteered to participate.

A screening instrument, designed and pilot tested by the author, was used to differentiate the two groups from a large population of music students. The instrument consisted of an eight item, Likert type scale and was constructed specifically for this purpose using a forced-choice format to discriminate classical and jazz preferences. The final

sample was obtained by selecting those respondents who scored at the extreme ends of the scale which indicated an exclusive or very strong preference for performing either jazz or classical music.

Each interview group was comprised of an equal number of both jazz and classical musicians, randomly assigned and matched for instrument. Two trained interviewer/raters, one per group, conducted individual interviews with each subject and tape recorded the session. Once completed, the interviewer would review the tape and rate it as soon as possible using a thirteen-point scale.

The interviews and ratings were based on the Interview Guide and Rating Manual for the Clinical Assessment of Ego Functions (Bellak, Hurvich, & Gediman, 1973). These semistructured questions were designed to comprehensively assess an individual's characteristic level of functioning on twelve ego functions derived from ego psychological theory.

A multivariate analysis of variance (MANOVA) was conducted to test for main and interaction effects. These effects included differences between jazz and classical musicians, males and females, undergraduate and graduate students, interviewers, and among the various instruments.

Results indicated that no significant differences could be found between jazz and classical musicians for any of the main or interaction effects tested for on these measures. As a result of these findings, the major research hypothesis of this study which proposed that classical musicians would differ from jazz musicians in personality structure was not supported.

Limitations of the study and implications for future research were discussed. A theoretical model for musical motivation was presented which integrates current knowledge of music psychology.

L. Bellak, M. Hurvich, & H. Gediman. Ego functions in schizophrenics, neurotics, and normals. New York: John Wiley and Sons, 1973. Used by permission.

DEDICATION

To my mother,

whose untimely death robbed her of the joy of reading this

ACKNOWLEDGMENTS

Anyone who has ever written a dissertation will know what I mean when I say "Is there life after the dissertation?" Actually, I'm deliriously happy at this point, for you see, a project of this magnitude is frankly indescribable except to those who have been there. Transcending this "rite of passage" has taught me a lot about myself. During this time, I experienced feelings ranging from intense excitement to an anxiety attack lasting approximately seven months. Yet, the moment I saw my prose in print, a magical feeling overcame me in which pride, joy, even ecstasy all affirmed my lengthy endeavor. What I have learned from all this is that research can be fun as well as frustrating.

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CHAPTER I

INTRODUCTION AND REVIEW OF THE LITERATURE

Introduction

Since the earliest times of civilization, the influence of music over human feelings and emotion has been generally accepted and nurtured. Philosophers as well as romantic writers have debated at great length about the meaning of music in relation to the human spirit (Portnoy, 1963). Not until the advent of psychoanalytic theory by Freud and his various followers did any formal attempt emerge at developing a theory of the creative process and then, only with great reluctance. It appears that theories of music grew out of a psychoanalytic theory of art in general although both shared similar concepts (Noy, 1966). Nonetheless, a significant body of literature developed highlighting various aspects of the musical process including functions (Kohut, 1957), its use as a language (Racher, 1951), and studies of personality--often done from either a pathographic viewpoint (Sterba & Sterba, 1954), or as reports on the analytical psychotherapy of musician-patients (Branfman, 1955; Oremland, 1975). Although some of the psychoanalytic literature has explored the personality of the musician, most of these articles have elucidated the emotional life of the creative artist and not the personality structure from a broad viewpoint (Noy, 1967). More recently, investigators have become interested in this area and preliminary studies have highlighted a variety of theoretical perspectives (Wylie, 1963; Kemp, 1971; McDaniel, 1974; Mikol, 1975; Davies, 1978; Shaw, 1979; Kemp, 1981 a & b). While

personality research in this domain has finally begun, it has been confined mostly to studies of classical musicians with little attention paid to other types; for example, jazz performers. A review of the literature shows that with the exception of a single clinical study of jazz performers done twenty years ago (Cambor, Lisowitz, & Miller, 1962), little has been reported and, therefore, not much is actually known about the personality structure of the average "normal" jazz musician. Furthermore, how do jazz musicians differ from classical musicians and might those differences be responsible for engendering their preferred playing styles?

The premise of this research, then, is an attempt to answer that question while at the same time illuminating the personality dynamics which underlie the creative musician's particular form expression.

Purpose

The purpose of this research study was to determine whether those musicians who considered themselves classically-oriented were significantly different in personality structure from those who considered themselves jazz-oriented. The musicians were selected on the basis of their self-reported musical preferences and were compared by analyzing their developmental ego functions obtained through in-depth interviews. The interviews were designed to specifically measure twelve ego functions thought to be representative of healthy adaptive functioning and consisted of a structured series of questions based on the scales and rating manual of Bellak, Hurvich and Gediman (1973).

Besides assessing differences between the two groups in general, specific ego functions were analyzed in order to ascertain whether a distinctive personality profile could be developed for each group. This was

done in order to shed light on the motivational aspects of jazz and classical performance, a variable not fully explored in earlier studies. However, due to the often confusing and inconclusive findings of the relevant literature, no attempt was made to predict specific differences with regard to the dependent measures. Although the author had some hunches as to how these groups might differ, it was decided a test of the null hypothesis would seem most suitable in light of the available evidence.

Overall, the goal in using a descriptive approach to personality assessment was to elicit a richer understanding of the motivational components which comprise not only the musician's personality but the creative personality in general as well.

Importance

The significance of this research can be viewed as threefold. First, a fuller understanding of the creative personality and how it manifests itself through various forms will enable personologists to refine current theories on the psychology of music. An outgrowth of this could be the development of screening instruments which could discriminate and direct talented music students into performance areas more commensurate with their interests and values.

Second, by applying a personality assessment instrument emphasizing a descriptive developmental diagnosis to a normal, highly functioning population, the art of diagnosis can be more highly developed. This is in contrast to the ubiquitous, though often useless, symptom-oriented medical model currently employed. Traditionally, diagnosis has centered on pathology and degree of dysfunction rather than wellness and health.

This research will provide a unique opportunity to investigate a normal healthy population in relation to their adaptive potential. Hopefully, further research will lead to better instrumentation for assessing normal as well as creative individuals.

Finally, the process of being interviewed may provide subjects with a better and more realistic view of themselves so that future career decisions can be made with greater satisfaction.

Review of the Literature

Since the psychology of music is so broad, this section will be divided into three parts. The first will examine the research on music preferences and its relation to personality as well as personality studies in general. The second part will briefly survey the concept of the ego and its functions in psychoanalytic theory in order to help clarify and support the rationale, jargon, and concepts for measurement. Finally, the third part will review the psychoanalytic contributions to understanding musical process.

Musical Preferences and the Personality of the Musician

It is interesting to note that in the recently published Handbook of Music Psychology, there are only two small paragraphs devoted to personality, and this having to do with the interaction of personality and musical taste of the listener (Hodges, 1980). Although many investigators have speculated on the relationship between personality and musical preference, it was not until the pioneering work of Hahn (1954) that anything substantive developed.

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combination of both psychological tests of personality and multiple measures of musical preference, he was able to show that there was a direct relationship between personality and musical preferences. He concluded that further research was warranted to explicate this relationship since his work only represented a technique for investigation.

Payne (1967) hypothesized that people with different temperaments will prefer different types of music. She administered the Maudsley Personality Inventory, a factual questionnaire, and Wing's Test of Musical Aptitude to 151 college-age and adult subjects, all self-described as discriminating (but not professional) music listeners. She felt that people with stable, as opposed to neurotic, temperaments would prefer classical music over romantic music (since classical emphasizes form while romantic emphasizes feelings). Her results yielded moderate support for her hypothesis although the relationship was not strong. She concluded that personality is an important basic factor in the motivation of taste.

It is important to note that while a substantial body of research has accrued on preference responses to music, this has generally been from the viewpoint of the listener and not the performer. Subsequently, this research has employed one of two approaches--either personality traits are used to predict musical preferences (Butler, 1968) or musical preferences are used as predictors of personality characteristics (Cattell & Anderson, 1953).

Butler (1968) measured receptivity for electronic music using the Cattell 16 Factor Personality Test (16PF) and found there was a significant correlation between unconventionality and radicalism and the taste for electronic music. Cattell & Anderson (1953) attempted to develop a test of personality based on musical preferences. Their results

demonstrated the instrument's ability to discriminate between normal and abnormal subjects as well as among various types of abnormalities.

In a comprehensive and critical review of the literature regarding responses to music, Abeles (1980) concluded that "moderate relationships exist between musical preference and certain personality factors (as well as shorter term emotional states) [and that] the specific nature of these relationships has yet to be determined and needs further exploration" (p. 121). Considering the sizeable body of research in this area, it is surprising that very little is actually known about the personality characteristics of the average performing musician.

In 1962, a comprehensive study on the personality of musicians was undertaken by Cambor, Lisowitz and Miller. They interviewed thirty of the world's foremost jazz artists as they toured through Pittsburgh in order to "gain some understanding of the psychodynamic processes of the individual musician, of his interpersonal relationships, and of his integrated identity with the jazz-making culture" (p. 1). Although they were limited in terms of data collection (they had to interview the musicians during breaks in their performing set), they were able to collect a sizeable body of information concerning family dynamics, early experiences with music, and quality of interpersonal relationships.

Most of the musicians came from families in which the mother was overprotective and dominant while the father was passive. Typically, the family environment in childhood restricted normal self-expression (e.g., aggression through sports). Most of the subjects described having difficulty establishing intimacy with others, especially members of the opposite sex. In fact, three-fourths of the musicians felt that only through playing their instrument were they able to feel comfortable with

themselves and communicate their true feelings in a satisfying way. Moreover, most of those interviewed described a turbulent emotional life, beginning with a depressive adolescence that continued into adulthood, marked often by intermittent disruptions, dependence on drugs, and painful self-searching as they tried to "find themselves."

In fact, the use of drugs by jazz musicians has long been held as de rigueur with many of the most accomplished having been addicted at one time or another. Winick and Nyswander (1961) reported on the psychotherapy of 15 successful jazz artists addicted to heroin. In the course of their therapy, a number of common elements emerged which led the authors to hypothesize possible functions of their drug use. Most of the musicians reported feeling angry and depressed during their life and felt that the expression of these feelings was difficult. Subsequently, drugs afforded them additional ego controls to master the underlying rage and violence within. Furthermore, it helped them escape their feelings of loneliness, inadequacy, and dependency--common elements of a depressive personality.

Interestingly, the Cambor et al. (1962) study also found that the emotional crises were usually accompanied by regression and that those musicians who allowed themselves to regress fully were often considered the most creative.

After analyzing their clinical findings, the authors concluded that the musicians' lives were "pervaded by a theme of dependency conflicts and depression" (p. 13), a finding which is in support of Winick and Nyswander's (1961) earlier contentions as well. They attributed this to the following factors:

1. The relentless pressure of the dominant parent--usually the mother--compelled the son to find an identity in a unique position in the community.

2. A high degree of innate musical giftedness was coupled with what seems to be an unusual sensitivity for oral-sensory modes of feeling and expression.

3. Unresolved dependency and Oedipal conflicts, with resultant frustration in peer group relationships, were followed by isolation and withdrawal (p. 13).

In order to feel accepted and valued, the young musicians turned to jazz as a means of defiant identity whereby they could continue their symbiotic childhood, and gratify their dependency needs through a group identity and sense of belongingness. The authors further suggested that by playing jazz, the musicians could avoid many of the demands of social conformity, and prolong normal maturation thereby extending their adolescence. This notion is in accord with Margolis' (1954) contention that the psychology of jazz is really a psychology of adolescence. Margolis hypothesized that jazz, as an expression of cultural protest, embodies the ambivalent nature of the adolescent whose conflicts between id impulses and superego dictates vacillate. If this is valid, one would expect those musicians who choose jazz as a career to display a more prominent adolescent personality profile than say the classical musician whose life is more conforming and disciplined (Kemp, 1981a).

Even with the limitations of the short-term interview method used by Cambor, et al., (e.g., incomplete and/or unconscious distortions of data) it is still the only serious attempt at personality study of the jazz musician done so far and, while it is twenty years old, it nonetheless provides many interesting hypotheses.

In another study utilizing famous jazz artists, Shaw (1979) investigated the relationships between experiential factors and percepts of professional musicians adept at jazz improvisation.

Data was obtained by means of personal interviews in which demographic data, concepts of improvisation, initial improvisational attempts, early experiences, recommendations and current improvisational situations were disclosed. The interviews were then analyzed and conclusions drawn based on similarities of experience or percepts.

Results showed that outstanding jazz artists come from all over the United States, started music study in the public schools at an early age, usually did not complete college because they preferred the stimulation of constant performance, and grew up in an environment where improvisation and jazz music was an everyday experience. More importantly, all of the musicians interviewed indicated an intense desire to create and play music, that is, they are strongly attracted to the practice of composing while they play. Subsequently, in order to perfect their improvising art, they required the constant association of others with whom to play, experiment, and create new ideas.

Since improvisation is the distinguishing feature of jazz music, requiring both spontaneous and creative elements, some effort has been spent exploring this area. McDaniel (1974) investigated the differences between jazz improvisers and non-improvisers with regard to music achievement, musical experience, and background using college freshmen and sophomores.

He reasoned that differences existed between these groups due to the special and complex nature of jazz improvisation. Because the jazz player must be able to "conceive an idea, place it in a tonal perspective, translate it into actual notes for his instrument to play, all this in a

split second" (Baker, 1969, p. 79), he/she is more skilled than non-improvisers. He explained this further by saying that in order to improvise well, the jazz musician must develop a keen sense of hearing since the notes must be "preheard" in the mind before being played.

To investigate this, two instruments were employed as data gathering devices. To measure the subject's power of auditory and visual discrimination, the Aliferis Music Achievement Test (AMAT) was used; to measure musical experience and background, the McDaniel Background Inventory (MBI) was used. The latter was a 125-item author-designed questionnaire developed after adequate pilot testing for reliability and validity. Both instruments were administered to 118 improvisers and 158 non-improvisers at eleven midwestern junior colleges and universities and at three southern universities, all selected because of their highly respected jazz programs.

Results revealed a significant difference between the improvisers and non-improvisers in music achievement as measured by the AMAT. With regard to background variables (family membership, socio-economic status, high school activities, etc.), no differences were found although having a background in jazz and improvisation was found to be a good indicator of later improvisational skill. Significant differences were found, however, in musical experience with five scales found to be fair to good indicators of jazz potential. For example, the ability to improvise well was positively correlated with:

1. having a large record collection and listening mostly to jazz
2. positive parental attitudes towards jazz
3. familiarity and involvement with jazz, especially from an early age
4. jazz instruction during high school
5. higher evaluations of performance on self-assessment measures

Clearly, the results of this study suggest that jazz improvisers are indeed different from non-improvisers if music achievement and experiential factors are used as criterion variables. The validity of these findings are further strengthened by the impressive sampling techniques used as well as the experimental design and analysis. If there are any shortcomings, however, they lie in the area of the measuring instrument. Items chosen for background measures in the MBI were of such a general nature that quite likely, differences were lost in the measurement process itself.

For example, although jazz improvisers may be more musically skilled than non-improvisers in terms of visual-auditory discrimination, this in combination with their different experiences does not explain their preferred playing styles from a motivational viewpoint. Only an assessment of intrapsychic functioning which takes into account motivational aspects of the creative process, conflicts, values, situational factors, and various ego functions can provide these answers. It would have been more fruitful to administer a recognized personality battery or at least correlate the data with a known instrument. With the excellent population available, it's unfortunate that better measures were not employed. Despite these limitations, however, this attempt constitutes a serious effort to understand the nature of jazz improvisation and is a significant contribution to that body of knowledge.

A different approach was undertaken by Wylie (1963) who investigated the creative aspects of jazz musicians vis-à-vis a gestalt perspective. He attempted to differentiate between relatively creative and relatively uncreative jazz musicians through the use of two cognitive-perceptual phenomenon. He also examined the influence of musical training and

experience on the level of creativity and the attitudes of jazz performers toward other jazz musicians as well as nonmusicians.

Thirty local (Detroit) professional jazz musicians were selected as subjects, all of them male and all but one Black. Two basic measures were employed, each with musical and nonmusical tasks. The musical figure-ground tasks were tape recorded improvised jazz solos in which the musician was required to determine the tune from which the improvisation was based. The author hypothesized that the more creative musicians would be able to better utilize these solos and thereby select the original tune--that is to say, they could cognitively articulate the figure (improvisation) from the ground (chord patterns or melody). It was also hypothesized that tension resulting from incompleteness would be reflected by greater recall of incomplete items (the Zeigarnik Effect) on both musical and nonmusical items. Lastly, it was hypothesized that neither the amount of musical training nor extent of professional experience were important in determining the creative proficiency of a jazz musician. To assess attitudes toward fellow musicians and the general public, an interview schedule was administered which contained questions related to attitude and personal background.

The results, although mixed, were certainly interesting. It appears that less creative jazz musicians are not able to articulate figure-ground relationships as well as their more creative colleagues. In addition, they tend to recall more incomplete musical items indicating less ability to resist the tension of incompleteness with musical phrases. Furthermore, musical training and professional experience were not related to the level of creativity of jazz music or to subject performance on figure-ground or Zeigarnik measures as predicted. Concerning the general

nature of the two cognitive-perceptual phenomenon which the author speculated were not necessarily specific to musical tasks, these hypotheses were not supported.

Results of the attitude measures suggest that jazz musicians are concerned with meeting socially appropriate standards of conduct and that they lack the hostility and feelings of alienation so often attributed to them through reviews of their music.

What makes this study so interesting are the provocative findings and their implications. For example, if the level of creativity is not related to musical training or experience, what then determines the creative potential of a musician? Could it be that this attribute has more to do with early emotional experiences between infant and mother than with later life experiences? What of the commonly held perception of jazz artists being rebellious adolescents whose jargon, dress, and proclivity for pleasure seeking preclude conforming to societal norms? Certainly, this study raises some unanswered questions regarding the nature of creativity and the needs of jazz musicians for audience and self acceptance.

Overall, the study was well executed. The experimental design, analysis, and population appear to be appropriate for the stated goals. Although the author discusses the implications of these findings for cognitive theory, it would have been valuable to extend this to the personality and sociological realms as well. For example, is creative ability related to family dynamics or cultural impoverishment? Nonetheless, it is a solid contribution to the literature and one which deserves further follow up though regrettably, this has not occurred.

Knowledge of the classical musician has fared somewhat better although much of this work has occurred only within the last decade. (Kemp, 1971, 1979, 1981 a & b) has attempted to study the personality structure of the performing musician and has reported differences between the various types of instrumentalists (Kemp, 1981a). Prior to this work, there existed a common folklore within the music profession concerning different temperaments within different sections of the orchestra. For example, it has been suggested that brass players are loud and insensitive while string players tend toward sensitivity and introversion. Kemp attempted to measure these claims empirically by drawing on and extending the work of earlier investigators (Cooley, 1961; Kaplan, 1961; Sample & Hotchkiss, 1971; Davies, 1978).

He administered the 16PF questionnaire to 630 full-time music students from 20 British colleges and universities. Subjects were assigned to one of five groups (strings, woodwind, brass, keyboard, and singing) based on their principal instrument. The 16PF raw scores were then subjected to a multivariate analysis of covariance. Results were strongly in support of earlier hypotheses. String players were found to be significantly more aloof than other players, a key factor involved in introversion. Brass players exhibited a distinctive pattern of inhibition and insensitivity, which supported earlier research, as well as displaying a somewhat lower intelligence. Woodwind players displayed traits of shyness and self sufficiency, both also linked with introversion. Keyboard musicians and singers were significantly more extroverted, although keyboardists were also found to be conservative and submissive, a finding Kemp found rather difficult to interpret but which may explain the temperament of accompanists.

Kemp concluded that introversion may be generally linked with the development of instrumental skills but that its level and degree of primary traits differ within the four groups. He ended by saying that his research demonstrates the "existence of only a few of probably several subprofiles existing within the structure of the musical personality which was once thought to be homogeneous" (p. 36).

More recently, Kemp (1981b) has attempted to identify a profile of traits for the performer by assessing personality at three distinct stages of development. He administered the High School Personality Questionnaire to 496 high school musicians, aged 13 to 17, and the 16PF questionnaire to 688 full time college music students as well as 202 professional musicians. It was hoped that a core set of traits could be identified which remained constant across development and at the same time, explore possible shifts in traits as a function of maturation. His control group consisted of 272 secondary school students, 160 non-music college students, and the unpublished 16PF norms for the professional musicians (since recruitment of adult non-musicians was considered problematic).

The results revealed that a stable group of primary factors for the performing musician exist across the whole age span. These primary factors--intelligence, sensitivity, self-sufficiency, and aloofness appear to be linked with the second-order factors of introversion, intelligence, and pathemia (a constellation of imagination, submissiveness, and sensitivity). Kemp suggested that these second-order factors reflect the underlying nature of musical personality insofar as life style, cognitive structure, and work habits are concerned. That is to say, he sees the

musician as having the ability to withdraw into a colorful and imaginative inner mental life while simultaneously incorporating the intellectual resources necessary for the acquisition of technical skills.

It was also found that a number of traits changed across development presumably indicating a maturation function. For example, while the youngest musicians displayed traits of conscientiousness and self-control (a factor of good moral upbringing), these shifted and by the time they reached maturity, traits of shyness and seriousness (desurgency) had replaced them only to be eliminated completely at the professional level. More importantly, however, is the increased prominence of anxiety. It appears that this trait is highly correlated with both exceptional musical talent and increased experience in playing. Why this is so still remains unclear but it suggests that anxiety may be an important personality dynamic in professional musicians, especially the more talented.

Finally, the traits of subjectivity and independence seem to take on a progressive importance as musicians mature. Here again, this may suggest a more consolidated ego identity developed through years of arduous solitary practicing.

Overall, Kemp's work is impressive and well executed. His sample sizes are quite large, and his research design and methodology are solid. Although his research is based on a multivariate theory of personality, (i.e., statistically derived), his work truly represents a beginning attempt at understanding the differences between musicians.

Unfortunately, it appears that his research, as well as that of others, suffers from a major conceptual weakness--they lack a theoretical sub-structure upon which their hypotheses are predicated. In order to develop a personology of musicians, it is essential to build upon a theory whose postulates allow for empirical testing. Such heurism has not been

the case with the evidence so far presented. Furthermore, while differences in personality have been investigated, this has been through either a comparison of their principal instrument (Kemp, 1981a), or trait differences as a function of time and development (Kemp, 1981b) and not their preferred playing styles. Thus, while temperament differences have been shown to exist between instrumentalists as well as musicians at various levels of development, it is highly likely that differences also exist between musicians who prefer or identify with various kinds of music--namely classical or jazz (Margolis, 1954; McDaniel, 1974).

In order to investigate this possiblity, the psychological literature regarding music and personality will be examined, with special attention paid to the contribution of psychoanalytic theory to the meaning of the musical process. Before doing this, some of the concepts in psychoanalytic theory which underlie this literature will be discussed. A brief history of the ego and its functions will be presented as background for the discussion of the psychological literature pertaining to music.

The Concept of the Ego and Its Functions in Psychoanalytic Theory

One of the great attributes of Freud was his quest for knowledge and scientific truth. He supported his theory of psychoanalysis only to the extent that it embraced actual clinical observation. If and when discrepancies occurred, the theory underwent revision in order to accommodate these findings. Consequently, psychoanalysis as a comprehensive theory of personality has undergone many changes in the past eighty plus years since its inception.

Beginning with his magnum opus, The Interpretation of Dreams (1900),

Freud set the foundation for all later theorizing by postulating that the mental apparatus which comprised the mind was really three dynamic systems. This "topographic theory" which attempted to classify mental phenomenon in terms of their relationship to consciousness was represented by the system unconscious (Ucs.), the system preconscious (Pcs.), and the system conscious (Cs.).

Despite the heuristic value of this classification system, clinical observation ultimately proved it to be both inadequate and insufficient due to theoretical ambiguity (Bellak, et al., 1973). Thus, Freud was to abandon this theory and replace it with a structural model of the psychic apparatus. This "structural theory" initiated a new era in psychoanalytic thinking and was defined by its functions rather than its relation to consciousness (Meissner, Mack, & Semrad, 1975). The model hypothesized that the psychic apparatus was composed of three distinct structures--namely id, ego, and superego, and all distinguishable by their different functions.

The ego was conceptualized as that part of the psychic apparatus which mediates between the person and reality and therefore functions primarily in the perception of reality and its adaptation to it (Hinsie & Campbell, 1970). That is to say, it carries out the pervasive role of self-preservation through a variety of tasks including but not limited to perception, motility, thinking, and the inhibition of primary instinctual drives through the mechanisms of defense. This coherent system of functions which must mediate between the instincts and the outside world are collectively termed "ego functions" and comprise the foundation of ego psychology.

Rapaport (1959 in Bellak, et al., 1973) summarized the major developments of ego psychology in four phases. The first phase (up to 1897)

emphasized the introduction of the defenses and the role attributed to external reality.

The second phase (1897-1923) highlighted the role of instinctual drives while de-emphasizing the importance of external reality. During this period, there were three significant contributions which shaped ego psychological theory. The concepts of secondary process and the reality principle were introduced as well as an analysis of the process of repression. Whereas primary process thinking is regulated by the pleasure principle, secondary process is regulated by the reality principle. That is to say, the early child's thought processes are composed of free discharges of tension with delay caused by external circumstances. There is no concept of time, space, symbols or language and discharge of tension is striven for directly. Through increased maturity and ego development, secondary process thinking occurs in which there is trial action before tension discharge. This is essential for adaptation to reality and develops into the use of symbols, language, and abstract thinking. The critical difference here is that secondary process thought involves delay produced by internal controls.

The third phase (1923-1937) conceptualized the ego as a coherent organization of mental processes built on identifications with abandoned or lost objects (loved ones).

The fourth phase (1937-1959) underscored the importance of adaptation and strongly embraced the work of Hartmann and Erickson. Hartmann's influence was widespread since he first emphasized the innate roots of ego development as being independent of instinctual drives. He stressed that adaptation involved a reciprocal relationship between organism and environment and that this can be determined only in relation to an individual's "average expectable environment." Furthermore, he gave

special consideration to the notion that successful adaptation sometimes uses "pathways of regression" (fantasy, play, dreams) which may not be intrinsically adaptive but which indirectly aid its goal.

Now that the ego concept has been briefly summarized, the focus will be turned specifically to the ego functions and their role in ego psychological theory.

Even though Freud defined the ego by its functions, there is no consensus among theorists as to how many actually exist. Subsequently, agreement has occurred mainly through research and historical precedent. Ego functions are theoretical constructs which are based on the observations of behavior and patients' self-reports of their experiences through analysis. For purposes of this research study, the twelve ego functions outlined by Bellak, Hurvich, and Gediman (1973) will be used and described below.

1. Reality Testing--The ability to distinguish between inner and outer stimuli including accuracy of perceptions for both internal and external events.

2. Judgment--The ability to anticipate the likely consequences of intended behavior as well as the ability to discriminate between what is appropriate in a given social context and the extent to which it's manifested.

3. Sense of Reality of the World and of the Self--The ability to to subjectively experience oneself as a unique and separate person from both others and the general physical and social environment. It includes the development of individuality, stable sense of self, stable body image, and self esteem.

4. Regulation and Control of Drives, Affects and Impulses--This includes the ability to tolerate anxiety, depression, disappointment and frustration and the necessity of postponing expected satisfactions. Also, the extent to which delay and control mechanisms operate without being under or overly controlled.

5. Object Relations--This includes the ability to form friendly and loving bonds with others with a minimum of inappropriate hostility and the ability to sustain relationships over a period of time with little mutual exchange of hostility. Relationships are relatively free of maladaptive elements from earlier interactions and focus more on the here and now.

6. Thought Processes--The ability to conceptualize in a clear coherent manner including the extent to which abstract and concrete thinking are appropriate to the situation as well as the degree of adaptiveness in memory, concentration, and attention.

7. Adaptive Regression in the Service of the Ego (ARISE)--This refers to the ability of the ego to initiate a partial, temporary, and controlled lowering of its own functions in order to promote adaptation. It involves a bi-phasic process characterized by a) a relaxation of perceptual and conceptual acuity with a corresponding increase in ego awareness of previously preconscious and unconscious content, and b) the use of primary process thought in the induction of new configurations and the ability to make creative integrations of primary process thought by the use of secondary process. Such regressions result in a relatively free, but controlled, play of the primary process.

8. Defensive Functioning--This includes the ability to regulate and employ defenses such that disturbing elements of mental content, anxiety, and intrapsychic conflict are effectively controlled.

9. Stimulus Barrier--Defined as threshold for, sensitivity to, or registration of external and internal stimuli impinging upon various sensory modalities. The effectiveness of coping is contingent upon the degree of adaptation, organization, and integration of responses to this sensory stimulation and may be observed in either motor behavior, affective or cognitive responses.

10. Autonomous Functioning--Refers to the degree of freedom from impairment of apparatuses of primary autonomy (attention, concentration, memory, learning, perception, motor function, intention) as well as secondary autonomy (disturbances in habit patterns, learned complex skills, work routines, hobbies, and interests). Generally, the impairment results from the intrusion of conflict, ideation, affect, or impulse.

11. Synthetic-Integrative Functioning--This includes the ability to reconcile the often conflicting demands of the id, superego and outside world as well as the incongruities within the ego itself. Both the degree of reconciliation of discrepant information and the active relating together of intrapsychic and behavioral events are involved.

12. Mastery-Competence--A person's subjective feeling of competence in relation to how well they actually perform in accord with their existing capacity to interact with and actively master their environment.

In summary, the purpose of this section was to explore the concept of the ego, its role, and its various functions. This was done through a brief historical account of psychoanalytic thinking leading up to the emergence of ego psychology. The ego functions specified and defined are the result of psychoanalytic theorizing beginning with Freud and constitute a fairly comprehensive system of functions necessary for self-preservation and adaptation.

As a theory of developmental psychology, it was felt measures of these constructs would be good indicators of structural personality differences. They take into account developmental differences among individuals and emphasize these differences in relation to normal, as well as pathological, functioning.

Overall, the psychology of the ego is viewed as an ideal way to assess personality structure. Despite its theoretical nature and ambiguity (e.g., lack of agreement as to how many exist) it has proven to be a most useful construct and, therefore, its application to this research project was incorporated. These concepts will now be integrated into the final section which attempts to review the psychoanalytic contributions to musical process.

Psychoanalytic Contributions to Understanding Musical Process

By far, the most exhaustive and scholarly work to date reviewing the psychological writings pertaining to music were done by Noy (1966-67). Much of this section will be drawn from his work since it encompasses both psychoanalytic and related literature.

For the most part, theories of music during the first thirty years of this century were based on the concept of sublimation as it was

originally formulated by Freud. Artistic expression of any kind was considered as stemming from the transformation of energy arising from the id. Inherent in this is the libido-energetic source, the transformation of unconscious content in analogy with dreams, and the expression of unacceptable impulses in a socially appropriate manner. A major advancement did not take place until the emergence of ego psychology which continued to draw on the work of Freud, while at the same time expanding its ideas through creative innovators like Hartmann, Kris, and Melanie Klein. Hartmann, perhaps more than any other, was responsible for bringing psychoanalysis out of the psychopathological closet and into a normal developmental psychology through his emphasis on adaptation. Now not only was the concept of sublimation broadened by the ego's use of neutralized energy, but the structural theory provided a basis for investigating the function of form in artistic expression.

Most of the theorists within the past twenty-five years have made use of this expanded concept. Nevertheless, attempts at integrating psychoanalytic theory with musical behavior have been fragmentary and incohesive. Authors have approached the topic from many different directions, sometimes focusing on certain avenues at the expense of others or disregarding previous research entirely. Nearly all of the theorizing has accrued from intuition or clinical case extrapolation. With the exception of a few studies cited by Noy (1967), virtually none of the ideas have been tested in a rigorous manner. Perhaps this is due in part to the nature of music itself--for music lacks objective content (as opposed to art or drama). Either way, however, the richness and depth of psychoanalytic theory suggests an integrated approach is possible. In his attempt to bring order out of apparent theoretical chaos, Noy presented

the literature in discrete sections, identified by individual perspective. A brief review will now follow.

One of the ways music has been viewed is through its use as a language (Racher, 1951). In this way, music is seen as a message sent by the artistic performer to the audience (receiver). Most authors agree that this language is symbolic and that depending on one's frame of reference, what gets expressed is either overt feelings and contents (the aesthetic point of view) or unconscious contents (the psychoanalytic point of view). Those authors who regard music as a kind of language generally speak to three distinct aspects: the properties that distinguish it from spoken language, the auditory likeness between music and other forms of meaningful expression, and music as a pattern of symbols which express unconscious content (Noy, 1967).

Music has also been characterized by its effect on emotions, both by its ability to express them as well as arouse them. In this regard, there have been many studies of a physiological and psychological nature (Hodges, 1980). What is generally agreed on by most authors is that music inspires a general mood rather than a specific emotion (Cattell & Anderson, 1953; Noy, 1967; Abeles, 1980). Here again, the contribution of psychoanalytic theory to the understanding of this relationship as well as to the process of emotional arousal has been important. According to Noy "such a relationship cannot be a simple one, but it necessarily depends on the unconscious significance of the music, of the dynamic impact on its impulsive forces, and of its transformation through the functions of the ego" (Noy, 1967, Part II, p. 14).

Another avenue of exploration deals with the development of music as a language. Many authors have speculated on the origins of music,

especially in early childhood. Research with primitive tribes, schizophrenics, and observations of early infant bonding (Kohut & Levarie, 1950; Racher, 1951; Margolis, 1954; Kohut, 1957; Freud, 1963; Diamond, 1981) have suggested that the source of musical activity begins in the first stages of life. For instance, the birth cry is seen as the rudiments of musical expression. Most authors are in general agreement over this fact, but differ in the motivation attributed to this process. One group (Racher, 1951; Margolis, 1954; Freud, 1963), maintained that since music is a language which is both objectless and contentless, its origin is pre-verbal and therefore, a direct expression of narcissistic needs. The human voice is seen as an instrument for the release of bodily tension resulting in pleasurable feelings. On the other hand, music may be seen as an indirect expression of needs whereby it develops as a defensive function in order to master or control the specific external stimuli of early life experiences (Kohut & Levarie, 1950; Kohut, 1957; Friedman, 1960; Nass, 1971).

The relationship between music and ego functioning was initially proposed by Kohut (1957) who suggested a structural interpretation of music. He emphasized one feature which previously had not been touched on--that the sense of hearing, as opposed to vision, cannot be voluntarily turned off by the infant, and, therefore, the infant must absorb acoustic stimulation regardless of internal need state. Because of this constant onslaught of external stimuli, the infant must learn to integrate and master these ubiquitous sounds. This operation is the role of the ego and its defensive functions which ultimately yield pleasure through mastery. The repetition involved in mastering the original threat was a form of working through, and hence, a form of play. Furthermore, in accord with his structural interpretation, Kohut related musical function

to the id and superego as well. He suggested that the tensions which are produced by repressed wishes are allowed vicarious release in the musical emotion, thereby engendering catharsis in the id. Finally, he considered music as an aesthetic experience because it is an expression of rules to which one submits and subsequently fulfills as a task, thereby fulfilling the cultural or superego ideal. Kohut's work was distinctive in that he was the only theorist to apply a structural point of view to the musical process and experience.

A number of authors have conceptualized musical meaning by examining its source intrapsychically. As mentioned earlier, original orthodox analytic formulations centered on the defensive sublimation process fueled by instinctual energy which later gave way to ego analytic theory (à la Hartmann) which emphasized the autonomous, desexualized energy within the ego itself. For example, reference is made to music being a regressive narcissistic libido activity in the service of the id (Margolis, 1954). Much of this work focused on the role of rhythm since rhythm was considered the musical element most characteristic of libidinal tension. Kohut (1957) makes reference to Freud and his concept of infantile sexuality, whereby primitive rhythymic experiences are considered part of the infant's early psychic life (e.g., witness the rocking of disturbed children or schizophrenics). Noy pointed out that what is generally acknowledged as exciting and instinctual music is characterized by strong and fast rhythms and cites jazz as the classic example. Overall, nearly all the authors agreed that music is an activity which originates in the unconscious and is transformed by instinctual energy to the outside where it is discharged. In addition, rhythmical structure and repetition are

viewed as the sensual libidinal components of music giving it its powerful ability to evoke feelings.

If we consider music as stemming from a wellspring of unconscious wishes, how then does it get transformed into the entity which we recognize as musical sound? This question has been addressed by various authors through an analysis of musical structure.

Generally speaking, most psychoanalytic theorists have equated musical structure with that of the structure of dreaming or joking. That is to say, it consists of a two-layered structure, elaborated by the rules of primary process with the manifest or final form conforming to the secondary process. How this transformation occurs, under what circumstances, and how it gets expressed all depend on a particular theorist's conception. For instance, Kohut and Levarie (1950) believed that musical creation follows the rules of play. They saw music beginning with the tonic, then thematically changing and varying until it finally returns again to the tonic. Ehrenzweig (1953) believed the final organization of musical form follows Gestalt-psychological laws and that unity and wholeness govern its manifest structure. Speaking to the two layered structure, Kohut (1957) suggested that the secondary process layer (tune) actually covers up the deeper primary process layer (rhythm).

Friedman (1960) offered what may be the most comprehensive approach to the analysis of primary musical structure yet. He investigated the modes of transformation of musical themes based on the assumption that these transformations conform to primary process thought. He felt musical themes represented various affects which temporarily activate some unconscious conflict. Listening to music results in a temporary regression mediated by the primary process transformation of the thematic material. Through this process, the ego is able to achieve a temporary

mastery over the conflict resulting in an experience of aesthetic pleasure. He illustrated this by drawing on a large number of musical quotations and analyzing them in terms of specific primary process mechanisms (e.g., condensation, fusion, fragmentation, rotation, changes in size and shape). He concluded by saying that music is structured in accord with primary process and that its regression inducing capacity aids the ego in accomplishing mastery. He closed with the interesting notion that the extensive use of primary process elaboration in music may comprise one of the factors which distinguishes serious (i.e., more primary process oriented) from light music.

Aranosian (1981-82) has recently addressed the problem of transformation by examining the source of musical creativity. He began by exploring the nature of creativity from both an individual and musical standpoint, especially as it relates to composition and improvisation. His conception of creativity rests on the foundation that the preconscious and subconscious life of the individual is vitally important. To him, creativity means "the expressing and combining of elements of one's existence" (p. 68). The process by which these preconscious ideas are brought into conscious awareness and expression occurs through "the stream of consciousness--that flow of perceptions, purposeful thoughts, fragmentary images, distant recollections, bodily sensations, emotions, plans, wishes, and impossible fantasies" (Pope and Singer, 1978). Refining this idea further, the author proposed the following hypotheses:

1. The auditory or musical stream of consciousness is that part of the mind at which the preconscious meets the conscious, producing the associative flow of auditory imagery (internalized sounds) which supplies the raw materials from which music is created; and

2. this auditory stream of consciousness and the potential for musical creativity exists in almost all people.

Building on this, he discussed the differences between composition and improvisation, noting that composers prefer to permanently retain the phrases they create by exercising patience and deliberation, while improvisers create only to engender new expressions. The improviser lives only for the moment, opting for freedom and immediacy, and develops ideas spontaneously, without regard for their historical value. Despite these differences though, he viewed the mechanism for creating music to be essentially the same for both expressions. He illustrated this by emphasizing the important and essential need for composers and improvisers to self-monitor while they create. Studies of composers (Bradshaw, 1973; Mikol, 1975; Bennett, 1976; Kemp, 1979) as well as improvisers (Wylie, 1963; McDaniel, 1974; Shaw, 1979) seem to corroborate this notion. It appears that both the composer and improviser must be attuned to the interface between preconscious and conscious ideas in order to simultaneously exercise and monitor the musical stream of consciousness. For example, skilled improvisers know that development of a solo requires thinking ahead, spacing out and anticipating what is to come (Baker, 1969; McDaniel, 1974).

Aranosian summarized his ideas by suggesting that the act of creating music, whether improvised or composed, requires (1) a familiarity and facility with the auditory stream of consciousness; (2) a knowledge of harmonic principles of tonality and atonality; and (3) an ability to think while playing, to retain and/or develop ideas as they emerge from the stream of consciousness.

The ideas presented by Aranosian (1981-82) represent a significant theoretical work in which to comprehend the transformation of imagery into sound. By using a construct which is new and psychologically unexplored, the author provided many avenues for further inquiry.

Although his work is heuristic and stimulating, it seems to focus more on the boundary of preconscious-conscious awareness and not enough on the unconscious origins of creative drive. Why this is so remains unclear as the author acknowledged the importance of the unconscious (he uses "sub-conscious") in the creative process. This is perhaps more a problem of emphasis but one which needs further elaboration. For instance, what determines just which sensation or image will emerge from the stream of consciousness and is this related to motivational needs or conflicts? The author does not adequately address this problem and his cognitive approach may not be suitable.

Nevertheless, the articulate and original way in which the ideas were presented warrant further exploration. Particularly noteworthy is the last section in which Aranosian espoused a more humanistic approach to music education. He concluded by emphasizing the importance and need for nurturing creativity in young students by encouraging them to improvise and compose.

Overall, of those theorists who have looked at musical structure specifically, there seems to be general agreement on two points: (1) that its structure may be conceptualized as following the same rules as dreams and (2) that the raw material of the transformation consists of latent wishes which penetrate from unconscious into conscious expression. Noy (1967) concluded that many unanswered questions still persist regarding the explanation of music in analogy with the dream. For instance, what is the nature of the motives or wishes which seek expression? On what level does the translation process of unconscious content into tonal structure take place, and how does the unconscious wish or need achieve tonal representation? The cogent nature of these questions suggest a good deal of work lies ahead if a comprehensive structure of music is to be elucidated.

Finally, a number of authors have attempted to view music in terms of what it does, that is to say, by its functions. Noy divided these into two broad categories which essentially constitute the same dichotomy used in developing music as a language. The first looked at music as an external stimulus whereby the intrapsychic structure is passive by nature and reacts to the stimulus event typically in the form of regression. The second viewed music as an active process which facilitates coping in the service of the ego. Here, music serves either as a defense against external or internal threat or as a means of mastering by use of the ego's autonomous synthetic process. The latter is not defensive in nature but provides pleasure in and of itself.

Sterba's (1965) ideas are characteristic of the first school in which the function of music is to induce pleasure through regression. He proposed that the element of motion is the quintessential factor in musical enjoyment. He argued that the process of listening to music engenders those early kinesthetic experiences of childhood in which the infant derives bodily pleasure through increased mastery of its own mobility. Not only is the kinesthetic pleasure of infancy re-experienced but also the intense symbiotic sensations or "oceanic feeling" which result when the boundaries between the ego and external world are dissolved. Although Sterba's ideas are interesting, he unfortunately does not explicitly say whether this process is the same for those individuals who are creating the music as well as listening to it. Regardless, what seems important is that music represents an external stimulus which effects specific changes in emotional structure and whose overall purpose is to elicit musical pleasure.

The second school views music as more than just an external stimulus for the ego's synthetic functions must actively cope with it in order to master or control it. This view is more consistent with an ego-psychological approach since music is seen as an ego function (Kohut & Levarie, 1950; Racher, 1951; Kohut, 1957; Friedman, 1960; Nass, 1971; Bradshaw, 1973). In this sense, music is an activity initiated by the ego as a means of attaining various goals (e.g., mastery, need gratification, etc.). Subsequently, no distinction was made between creative activity and passive listening since listening is an active process involved in organizing musical percepts.

As noted earlier, the most eloquent spokesperson for this viewpoint was Heinz Kohut (1957) whose attempts to apply a structural analysis to the musical process were original and heuristic (Nass, 1971; Bradshaw, 1973). In addition to his structural analysis, he further adumbrated the genetic aspects by emphasizing music's capacity to allow subtle regression thereby aiding early psychological organization. Although regression was generally accepted as a passive reaction by the psyche to the auditory stimulus, it now was understood to be a healthy ego function necessary to secure mastery.

Nass (1971) has attempted to extend Kohut's work by examining the relationship between the meaning of the musical experience in early hearing and the development of a cognitive style used by the ego as a means of adapting to and mastering the outside world. Nass contended that the early hearing experiences of the infant elicit a particular kind of cognitive style which allows the infant to adapt to external reality. Music, with its ability to facilitate less structured states of consciousness, permits the development of different, more ambiguous, levels of

cognitive organization within the ego. In this way, the enjoyment of music and its effects is simply an ego creative process attributable to the emergence of less structured, ambiguous cognitive states and their concomitant drive organization.

Although Nass' ideas seem plausible at first glance, deeper scrutiny reveals some important problems. For instance, prior to the development of ego psychology, regression in any manner was considered pathological and therefore in need of correction. Ego psychology helped change this notion with its emphasis on ego functions and their role in adaptation. Regression was now viewed as a healthy and necessary ego function which normally occurs in the form of playing, humor, fantasy, and dreaming. Although it can be pathological if it means the destruction of fuzzy ego boundaries and avoidance of reality in a chronically defensive manner, it is more often normal, enjoyable, and predictable. It serves the higher forms of ego functioning by "getting in touch with" the more primary process elements thereby engendering a sense of symbiotic satisfaction. In addition, it gives a hard-working, secondary process ego a respite and therefore one gets to be a little kid again.

With the above in mind, Nass' (1971) thesis that the enjoyment of music and its effects is simply an ego creative process and not regressive is fundamentally specious. First, he assumes that people who listen to and enjoy music have totally mastered all aspects of development, have basically neurotic/normal ego structures, and therefore consider music from its creative aspects only since they have no need to regress. In actuality, no one, regardless of level of ego functioning, ever completes all aspects of development at each stage. No matter how one views their ego structure (i.e., normal, neurotic, etc.) they still have "unfinished

business" that regression serves in an attempt to revisit and master these tasks. Secondly, he regards the process of regression as pathological (since there is no need to regress) which is inconsistent with an ego psychological orientation. For these reasons, Nass' (1971) position must be regarded as interesting at best but greatly in need of theoretical revision as it currently stands.

Bradshaw (1973) has elaborated Kohut's concepts as well, particularly in the development of rules and ideals in the composer's musical style. He suggested that in order for composers to compose, they must first arrive at a state of consciousness which allows for access to preconscious thought. Through a process of free association, the composer selects, according to certain stylistic rules, which ideas merit expression and which do not. These stylistic rules constitute a so-called "musical superego" which help define and direct the form of musical expression. This musical superego bears some resemblance to the earlier developed moral superego in which important introjects and experiences shape the composers particular style. Bradshaw further suggested that in metapsychological terms, the musical idea arises in the preconscious, highly cathected with either libidinal or aggressive energy derived from the id. It then gets transmitted into recognizable form through a process similar to if not identical with sublimation. Although he is not explicit, one gets the impression that the process of composing involves the transformation of primary process material into secondary process elaboration vis-à-vis the dream mechanism.

As both a composer and psychoanalyst, Bradshaw's ideas possess great potential for the understanding of musical composition from a dynamic viewpoint. But because he focuses almost exclusively on the development of style while ignoring the equally important mechanisms of intrapsychic transformation, he limits his potential contribution and

helps justify the earlier criticisms cited by Noy, (1967). Even so, his contention that musical ideas must first become available through the preconscious suggests that the very nature of creating music necessitates a regression in the service of the ego (Kris, 1962).

Another view of the creative process in music was reported by Mikol (1975) who is also a psychoanalytically-oriented therapist and composer. He attempted an exploratory study of the creative process in music composition utilizing an ego-psychological framework. Specially, he focused on the work methods and motivational factors of nine composers and arrangers, all of whom were chosen on the basis of their clear commitment to musical creativity. Seven of these write for symphonic ensembles, some of whom have received significant prizes and awards including two participants with Pulitzer prizes. The remaining two subjects were world-famous jazz artists, having been active as arrangers and performers for twenty-five years or more. The subjects ranged in age from twenty-six to sixty-three and possessed a wide variety of educational backgrounds. Three had doctoral degrees in composition, two had masters degrees, one had conservatory training, one had a high school education, one never completed high school, and one with an unknown education.

Each subject was interviewed for approximately two hours in order to gain some understanding of how a composer goes about the task of creating a composition, from its germinal idea to its eventual performable product. Additional attention was focused on the motivational factors which effect creativity as well as personal data concerning family influences.

Drawing on his own personal experiences as both a psychologist and musician/composer, Mikol then discussed each of the twelve ego

functions developed by Bellak, Hurvich, and Gediman (1973) for their relevance to music composition. His intention was to determine which ego functions were most important for the process of creating music.

The results of this preliminary study suggest that composers differ on a number of important dimensions concerning work habits and motivational factors. First, it appears that composers differ from each other with respect to what form the initial compositional idea takes. Mikol found that any sensory modality may be operative, for example--auditory, visual or kinetic images, kinesthetic feel, structural ideas or even literary or dramatic inspiration.

Second, composers differ with respect to how they represent this idea to themselves. Some use a piano and tape recorder without the use of a score, some use a score only, and some use pre-compositional charts on blank paper.

Third, composers differ in how they proceed with the compositional process. For instance, free association may be followed by synthesis, an ambiguous global concept may be followed by a refinement of content, musical transitions may be arrived at improvisationally by the composer or may be built in so that the performer can make choices.

In relation to motivational aspects, the author explores three kinds which impact the creative process: situational and economic factors, by-products of the work situation itself, and intrapsychic variables which relate to conflict and commitment.

Some composers try to create a favorable environment in which to work, thereby facilitating their creativity. While economic realities may have a positive effect (e.g., being commissioned to compose a special piece), often the pressure to produce inhibits the creative process dramatically.

In regard to the work situation per se, making exciting discoveries musically or working out a harmonic progression with the resulting anticipation of new ideas appears to be a powerful motivator of the creative process. This appears to be especially true for the jazz artist.

With respect to conflict and commitment, all subjects agreed that depression was perhaps the most serious obstacle to creativity. Most agreed that anger could be channeled creatively while depression seemed to disrupt the process most profoundly. Not surprisingly, a common element emerged which indicated a level of commitment and powerful motivation to create, in spite of numerous emotional and financial deprivations.

Mikol considers all twelve ego functions relevant to the process of creating music but makes special mention of the ability to adaptively regress in the service of the ego. He considers this to be one of the most significant aspects of the whole compositional process and feels it takes many forms. Furthermore, he considers the experiencing and providing of pleasure for others to be an underemphasized and important ego function in and of itself. Pleasure of the highest order, however, is experienced in synthesis resulting from the aesthetic experience of creating. Subsequently, he views pleasure in synthesis as both an ego function and a powerful motive to create.

Finally, the family data revealed that seven of the nine subjects functioned as only children for part of their lives, and while fathers were seen as strong and influential, most of the composers felt closer to their mothers.

Despite the very small sample and preliminary nature of this investigation, there is much to be gleaned from this research. By analyzing a highly select and qualified group of individuals, the author

was able to obtain what may be a unique view of the intricate aspects underlying musical creativity. The fact that composers utilize diverse means of creating their work appears to have considerable support (Bradshaw, 1973; Bennett, 1976; Kemp, 1979; Aranosian, 1981-82). Furthermore, it seems that composers and improvisers share common elements although it is still unclear to what degree (Aranosian, 1981-82). What makes this study noteworthy, however, is the author's attempt to elucidate the process, motivational, and conflictual variables of musical creativity and relate them to a substantial theoretical base (ego psychology). For example, the ability to creatively regress in the service of the ego may be an important determinant of which musicians choose to compose or improvise and which do not.

Overall, this study offers many interesting findings and represents a significant contribution to the understanding of musical creativity. Although it concerns itself primarily with the process of music composition, it is the first study to look at motivational components and how these facilitate or inhibit creative expression in music.

More recently, Noy (1979) used an ego psychological approach to understand the significance of artistic creativity from the point of view of form. He asserted that the creation of form requires the entire gamut of mental functions--that is, the ego functions. He suggested that form creation in art is an expression of these ego functions and that every artist searches for "good form" which he defines as the means used by the ego to facilitate the expression and communication of latent meanings. He differentiated this from "perfect form" which is the means used by the ego to order disparate mental elements and to reconcile opposing wishes as a part of the ego's efforts to maintain the integration and cohesion

of the self. While good form reflects the artist's attempt at communicating to others, perfect form reflects the artist's neverending quest for perfection, harmony, and oneness with eternity. This artistic union, which every creative artists strives for, is really the ego's attempt to accommodate changing experiences into the self. Furthermore, this safeguarding of the self's cohesion and integrity are all functions of the primary process, which emerge through dreams, fantasy, playing, etc. In this regard, what every creative artist endeavors toward is to "find the best form through which he can order the independent and often disparate wishes, ideas, and emotions he expresses in his artistic medium" (Noy, 1979, p. 250).

Noy's (1979) attempt at exploring form creation in art represents an important step towards understanding the ways in which art is actually created. Nearly all of the psychoanalytic theories of creativity have sided in the direction of uncovering latent meanings while ignoring the very process of creativity per se. The author's thesis that two kinds of form exist and that what every creative artist actually strives for (perfect form) is really a function of primary process activity is consistent with an ego psychological approach. Not only are his ideas provocative, but they offer a possible answer to the question of why artists choose the expressive mediums and styles they use.

A final, but unconventional, approach to understanding musical function which departs from analytic interpretations has been proposed by Diamond (1981) who sees the basic purpose of music as therapeutic, to raise the life energy of the listener. The author, who is an Australian

trained psychiatrist now practicing in New York, claims to have spent the last twenty-five years investigating the relationship between music and health. He and his staff at the Institute of Behavioral Kinesiology have tested some 25,000 recordings of classical, popular, and ethnic music of many cultures in order to determine their effect on life energy. Using specific tests on the listeners which indicate muscle-body stress, Diamond has been able to ascertain the degree of life energy enhancing qualities of most composers and performers. Based on these results, he has divided music into five groups which relate to their therapeutic potential:

Group I. Decidedly Untherapeutic--this music activates the "death instinct" and occurs after prolonged exposure to certain rock music.

Group II. Untherapeutic--this music produces stress and lowers life energy.

Group III. Nontherapeutic or neutral--this music neither raises nor lowers the life energy and includes muzak and electronically synthesized music.

Group IV. Therapeutic--this music will raise the life energy of the listener and includes the great body of popular and classical music.

Group V. Transcendental music--this music has the highest energy of all and can reverse the "death instinct." This is the music to use for all healing purposes and is divinely therapeutic.

Diamond devoted the remainder of his work to exploring the healing properties of music and how they apply to everything from the recording engineer to mothers and their infants. Briefly summarizing his findings on music and sound, Diamond believes the following:

1. All sounds have a definite and demonstrable effect on our life energy.
2. All natural unstressed sounds will raise life energy (e.g., animals, musical instruments, breath and heart sounds).
3. All noise, regardless of volume, will have a negative effect on life energy, including regular sounds (e.g., ticking of a clock.
4. All music (except some rock music) raises life energy and reduces stress.
5. Electronic music neither enhances nor reduces life energy.
6. Two separate hearing systems exist, the ear and the acupuncture system of the body.
7. Each acupuncture meridian responds to specific frequencies and tempi of the metronome.
8. Music is primarily a property of the right cerebral hemisphere.
9. Speech is a function of both hemispheres and most people have an imbalance resulting in lowered life energy.
10. The basic purpose of all human communication is to raise the life energy of the listener.
11. There are measurable levels of energy for every performer and composer throughout his life.
12. The group dynamics of performance can be studied to reveal the interplay between conductor and orchestral players.
13. The majority of professional musicians no longer love their instruments nor music due to stress.

There is no doubt that Diamond's (1981) research presents some fascinating ideas. Whether his views will gain public or scientific

acceptance depends to a large extent upon whether his various stress tests are valid. The author claims that his tests are objective and scientific and has numerous research reports and books documenting this. Because his research encompasses ideas not always accepted by traditional Western medicine (thymus energy, acupuncture meridians that hear, etc.), his work is not widely known outside of holistic health arenas, nor is it published in scholarly journals. It is unfortunate that his research makes no mention of jazz music as this would be an important area for exploration.

Despite these minor shortcomings, his fresh and imaginative thinking illustrates the many possible ways that music can be viewed. As such, this research clearly demonstrates the disparity between the wellness model of health and the more conventional models of personality.

Summary

The author's current research investigation is based upon the need for a systematic exploration of the personality differences of musicians who prefer either a classical or jazz idiom for expression. Despite the host of theories and studies presented, very little is actually known about the personality structure of the normal "average" musician from a dynamic viewpoint. This is especially true as it relates to the developmental process and how particular ego structures engender different musical preferences.

It has been shown that differences in temperament exist between instrumentalists (Davies, 1978; Kemp, 1981a), as well as between musicians at different developmental levels (Kemp, 1981b), as a function of success in instrumental study (Sample & Hotchkiss, 1971), achievement in instrumental music (Kaplan, 1961), or ratings of musical ability (Cooley, 1961). Moreover, a number of authors have speculated on personality

either by theorizing (Margolis, 1954; Kohut, 1957; Sterba, 1965; Nass, 1971; Bradshaw, 1973; Noy, 1979; Aranosian, 1981-82) or by interviewing musicians and/or composers (Cambor, Lisowitz, & Miller, 1962; Wylie, 1963; McDaniel, 1974; Mikol, 1975; Bennett, 1976; Kemp, 1979; Shaw, 1979; Diamond, 1981).

Unfortunately, the picture that emerges from the research presented is confusing and inconclusive. Attempts at developing a coherent picture of the jazz or classical musician, for example, have not been fruitful. Those findings reported have approached the subject from many theoretical pathways including psychodynamic, gestalt, factor-analytic, or none at all (i.e., descriptive). Yet, despite this fact, there is enough evidence to suggest that jazz performers may be different from their classical counterparts. For instance, jazz musicians have been shown to demonstrate strong dependency conflicts often accompanied by depression, greater need for freedom and self-expression, ability to fully and creatively regress, feelings of not belonging, strong instinctual drives with less need for control, polydrug use to cope and experiment with, high music achievement, ability to resist the tension of incompleteness, ability to articulate figure from ground relationships, and separation-individuation conflicts with their resultant identity issues (Margolis, 1954; Winick & Nyswander, 1961; Cambor, Lisowitz, & Miller, 1962; Wylie, 1963; Noy, 1967; McDaniel, 1974; Shaw, 1979; Aranosian, 1981-82).

Classical musicians, on the other hand, have been shown to demonstrate intelligence, self-control, sensitivity, self-sufficiency, introversion, aloofness, greater need for control and planning, stress, and anxiety (Cooley, 1961; Kaplan, 1961; Davies, 1978; Kemp, 1979; Diamond, 1981; Kemp, 1981a and b).

To what degree these findings can be integrated depends a lot on further research, for obviously, there are many shared elements which we do not yet comprehend. In light of this fact, the following study was undertaken to better understand the personality dynamics of the creative musician. While differences appear to exist, there has been no attempt by anyone to systematically integrate them. Consequently, this investigation centers around the motivational and descriptive personality characteristics which underly individual musical expression.

CHAPTER II

METHODOLOGY

Hypotheses

The general question of interest in this study was whether those musicians who designated a preference for, or identified themselves with, classical music were significantly different from those who preferred or identified themselves with jazz music. Due to the contradictory and inconclusive nature of the research presented earlier, a single research hypothesis was formulated to test this notion. Stated formally:

> In a population of volunteer music students from the Department of Music at Michigan State University, there will be differences in personality structure between jazz-oriented and classically-oriented musicians as measured by their developmental ego functions.

Definition of Terms

The following definitions were employed to distinguish the two groups used for comparison throughout the study.

> Classical musicians--Those students whose primary interest or preference in performing was based on the interpretation and performance of previously composed music.
>
> Jazz musicians--Those students whose primary interest or preference in performing was based on the use of improvisation or spontaneously created material which was integrated into the pre-existing musical structure.

Population

The subjects of this study were 44 volunteer music students from the Department of Music at Michigan State University. The sample was obtained during the first week of spring term, 1982, and consisted of upper level undergraduate and graduate students pursuing full or part-time study. Because it was not feasible to obtain a random sample from the population of interest, a screening instrument was constructed to discriminate classically-oriented from jazz-oriented musicians. Twelve classes in the music department were selected for this purpose on the basis of their diverse student populations. These included instrumentalists of all types, voice majors, music theory and jazz improvisation classes, symphonic orchestra, two jazz bands, and students from music therapy.

The initial screening was undertaken by first approaching each class and providing the students with a brief description of the proposed study. They were asked to volunteer for a research project concerned with arriving at a better understanding of the attitudes, needs, and values of musicians interested in classical or jazz performance. Each student was then asked to complete both the information-cover letter and screening instrument for music preferences which took approximately five minutes (see Appendix A & B). Upon completion of this task, students were informed that those selected for the study would be contacted by phone and asked to participate further by being interviewed.

A total of 182 students were surveyed in order to secure a researchable sample. Within this group, 48 respondents identified themselves as having exclusively or primarily classical interests while 30 reported having exclusively or primarily jazz preferences. Since the screening instrument was designed to discriminate on the basis of

low (classical) and high (jazz) scores, the 25 lowest and highest scoring respondents were then selected as potential subjects for the study. Each of these 50 people were subsequently contacted by phone and asked to volunteer for a tape-recorded interview lasting approximately one hour. All of the 50 students contacted agreed to become subjects and participate in the study. Prior to the actual interview, each subject was required to read and sign a consent form to participate in the research study as well as provide a return address label for results and feedback once the study was completed (see Appendix C).

Measures

A screening instrument was developed in order to discriminate subjects on a jazz-classical continuum. It was designed to sample preferences in listening, performing, and composition, that is, the domain of musical behavior. A bipolar forced choice format was adopted following pilot testing. This format appeared to give both the best discriminations with the highest reliability (Bass, Cscio, & O'Connor, 1974) as well as face validity. The rating task for the eight-item screening instrument was "circle the word category that best describes or expresses your feelings for the questions below." A seven-point Likert type scale with verbal anchors was selected for the response format. Recent literature on the number of scale points to use suggests that for most purposes five scale points is sufficient and will yield the highest reliability (Lissitz & Green, 1975), but earlier research (Bendig, 1953; Bendig, 1954, Garner, 1960) suggests that reliability increases with the number of scale points within the limits of the subject's ability to discriminate. Because this rating task was the determination of relative levels of interest or occurrence of behavior, the lower scale points and

and the high extreme of any scale format were expected to be used less frequently, reducing the effective scale range. Starting with five scale points may have resulted in a scale with an effective range of two to three points; starting with seven scale points increased the probability of a scale with an effective range of four to five points (see Appendix B).

The instrument chosen to measure the personality constructs relevant to this investigation was "An Interview Guide for the Clinical Assessment of Ego Functions" (Bellak, Hurvich & Gediman, 1973) based on research with schizophrenic, neurotic, and normal subjects. This measure was chosen for several reasons. Following a thorough investigation of objective personality measures in the literature, it appeared no appropriate instrument existed which could reliably and validly measure personality from an ego psychological perspective. Subsequently, it was decided that an interview approach would provide the most useful and representative data at this time. In addition, psychoanalysts have long felt that the classification of mental illness according to the medical model (i.e., by symptom) was not particularly useful nor germane to the understanding and treatment of emotional problems (Nagera, 1963, Blanck & Blanck, 1974). In an effort to circumvent these limitations, Blanck and Blanck have long argued for a descriptive developmental diagnosis in which "the diagnosis is to be made, not from the symptom or symptom cluster, but from appraisal of the structure of the ego in which the symptom is embedded (p. 92)." In accord with this viewpoint, the measurement of personality through a descriptive developmental diagnosis would not only address the research hypothesis directly, but would also advance the science of clinical

assessment through its application to a normal, highly functioning and creative population.

The Interview Guide is intended to be used as a semi-structured interview. There are twelve ego functions, each with its own set of questions designed to assess a particular ego function and its component parts (see Appendix D). There is also a corresponding Manual for Rating Ego Functions From a Clinical Interview. The interview is structured to the extent that it contains sets of specific questions, each set keyed to its corresponding ego functions as put forth in the Rating Manual. It is unstructured in the sense that flexibility and ingenuity are also required of the interviewer, who must be able to recognize and follow up a subject's responses in order to maximize the ratable material. The interviewer is free to use his/her discretion in determining which questions are pertinent for a given population (i.e., neurotic, normal, etc.).

The twelve ego function scales were constructed by first examining the psychoanalytic literature with regard to ego functions and specifying which were the most representative. These were defined earlier and consist of 1) reality testing, 2) judgment, 3) sense of reality, 4) regulation and control of drive, affect, and impulse, 5) object relations, 6) thought processes, 7) adaptive regression in the service of the ego--ARISE, 8) defensive functioning, 9) stimulus barrier, 10) autonomous functioning, 11) synthetic functioning, and 12) mastery-competence. Major dimensions and component factors were then worked out and examples of the most regressed forms were specified. The authors then dimensionalized seven levels of adequacy for each ego function, based on a combination of clinical experience and developmental guidelines. The highest level on

the scale represented unusually adaptive functioning while the lowest level reflected the most regressed. In order to help improve reliability, (due to the acute illness aspects of the hospitalized sample), the raters were asked to assess highest, lowest, characteristic, and current levels of functioning. Since this was based on only one interview, varying degrees of inference and estimation were required.

The authors reported an overall mean interrater reliability of .77 with a range from .61-.88. They also calculated interrater reliability by measuring the extent of disagreement among raters in scale points. This showed that raters agreed on the average within approximately 1.5 scale points considering all ego functions and all groups. In their analyses, significant differences were found in the predicted direction between all three groups. Since the adaptive functioning of schizophrenics was less than that of neurotics which was less than that of normals, the authors cited this as evidence for validity. That is to say, the results supported the interpretation that the rating scales were measuring something related to the adaptive level of ego functioning within this population.

Procedure

Once the subject pool was established, all musicians were matched with respect to their principal instrument and randomly assigned to one of two groups. Recent research indicates that temperament differences exist between different instrumentalists and that this variable needs to be controlled (Kemp, 1981a). The above procedure was an attempt to control for these differences due to instrument. Differences attributed to interviewer style were controlled by randomly assigning an equal number of each group to each interviewer.

The sample characteristics of each group are shown below in Table 1.

Table 1

Sample Characteristics of Subjects Originally Assigned Within Interview Groups

Variable	Group 1 (n=25)	Group 2 (n=25)
Male	13	11
Female	12	14
Undergraduate	18	18
Graduate	7	7
Principal Instrument:		
String	7	7
Woodwind	4	5
Brass	4	4
Percussion	2	1
Keyboard	5	4
Vocal	3	4

Due to the attrition of 6 subjects, however, the sample characteristics changed and these differences are reflected in Table 2. The final group composition consisted of 22 jazz subjects and 22 classical subjects with their respective sample characteristics shown in Table 3.

The interviews were conducted by two research associates chosen on the basis of their extensive clinical experience and knowledge of interviewing skills. One was a graduate student in psychology pursuing doctoral study while the other was a clinical social worker. In no way did either of the interviewers have prior knowledge of the nature or purpose of the investigation. Both agreed to undertake whatever training was necessary in order to conduct and rate the interview tapes.

Table 2

Sample Characteristics of Subjects Within Interview Groups Following Attrition

Variable	Group 1 (n=24)	Group 2 (n=20)
Male	13	9
Female	11	11
Undergraduate	17	14
Graduate	7	6
Principal Instrument:		
String	7	5
Woodwind	4	5
Brass	4	2
Percussion	1	1
Keyboard	5	3
Vocal	3	4

Table 3

Sample Characteristics of Subjects Within Classical and Jazz Groups

Variable	Classical (n=22)	Jazz (n=22)
Male	5	15
Female	17	7
Undergraduate	13	17
Graduate	9	5
Principal Instrument:		
String	11	2
Woodwind	2	7
Brass	0	5
Percussion	0	2
Keyboard	3	4
Vocal	6	2

The training protocol was broken down by a two-step process. First, a training phase was implemented in which the associates were familiarized with the theory and terminology of ego psychology and its relation to ego functions. Each of the twelve ego functions was thoroughly discussed and manuals provided for systematic study. The manual contained some theoretical background information, the interview questions, and rating manual for assessing the level of ego functioning. Once the associates comprehended the concepts, a series of three training tapes was provided for practice at rating the various ego functions. These three tapes were made by the investigator who interviewed volunteer students (nonmusicians) thought to be similar to the actual subjects by virtue of their high level of functioning. By practicing on subjects who were similar, it was hoped that actual conditions could be simulated - thereby maximizing learning and transfer effects. Following each practice session, the ratings were discussed and discrepancies worked out in order to further refine the process and enhance interrater reliability.

After the research associates agreed on what they were rating, a second, or reliability, phase was implemented. The interviewers were then provided with three additional tapes and asked to rate them for purposes of interrater reliability. Reliability was calculated using the Pearson product moment correlation coefficient (Mehrens & Lehmann, 1978) with the resulting values appearing below in Table 4.

Great care was taken in the training process to insure high reliability with minimal experimental bias. Research on the sources of error in rating scales (Mehrens & Lehmann, 1978) suggests that halo effects, errors of severity, leniency, and central tendency, as well as attitude bias may be effectively reduced by careful instrument construction and thorough training sessions.

Table 4

Reliability of Interviewer Ratings
For the Twelve Ego Functions

Ego Function	Reliability
Reality testing	.82
Judgment	.82
Sense of reality	.98
Regulation and control of drive, affect, and impulse	.82
Object relations	.98
Thought processes	.88
ARISE	.88
Defensive functioning	.88
Stimulus barrier	.67
Autonomous functioning	.99
Synthetic-integrative functioning	.99
Mastery-competence	.88
Average reliability across all ego functions	.88

In this study, steps taken to insure against these sources of error included the use of clinically skilled but experimentally blind interviewer/raters, extensive training and practice sessions including a discussion of potential bias effects, a carefully constructed and pilot tested screening instrument, random assignment of matched subjects, and the use of the same individual for both interviews and ratings. The latter was employed due to the significant nature of nonverbal communication which occurs in any interview, but especially where the goal is assessment of overall functioning.

Finally, each subject was individually interviewed. This was

cassette recorded and lasted approximately one to two hours. The interviewer then rated the taped interview as soon as possible and recorded the results on the author-designed rating form (see Appendix E).

Experimental Design

As indicated by the discussion presented, this study constituted a descriptive research design. The intent was to examine two distinct groups with respect to certain measures and characterize or describe their differences. There was one independent variable and twelve dependent variables. Thus, the independent variable of musical preference within musicians was a fixed factor with two levels, jazz and classical, while the twelve ego functions constituted the dependent variables.

A pictorial representation of the proposed design appears in Figure 1 below.

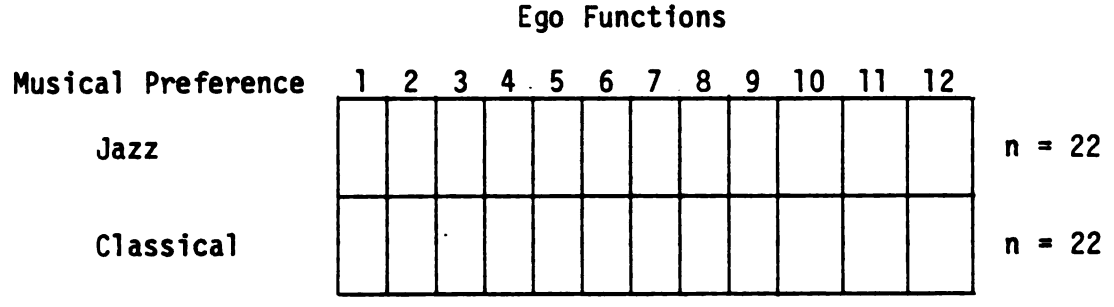


Figure 1. Pictorial representation of experimental design.

Analysis of Data

A one-way multivariate analysis of variance (MANOVA) was conducted using a Hotelling's T^2 statistic. In addition, a discriminant function was run to ascertain which linear combination of dependent variables maximally discriminated between the two groups.

CHAPTER III

RESULTS

The tables on the following pages show the results of both the primary and supplementary statistical analyses employed to test the research hypothesis. The tests for main effects will be presented first followed by the interaction effects. The latter were performed as supplementary analyses.

Two groups, classical and jazz musicians, selected on the basis of their self-reported musical preferences were compared on twelve dependent measures (ego functions) by analyzing their scores on interview ratings. The means and standard deviations for both groups on each of these measures are reported in Table 5. An examination of this table indicates that all of the means were very close, although nine of the twelve scales were scored higher for the jazz group.

In order to test for differences between the two groups, a one-way multivariate analysis of variance (MANOVA) was computed using the Hotelling T^2 statistic. As shown in Table 6, the approximate F value was not significant at the .05 level, resulting in a failure to reject the null hypothesis. That is to say, there were no significant differences found between jazz-oriented and classical-oriented musicians on these measures and therefore, the major research hypothesis of this study was not supported.

In order to test whether differences existed between males and females, student status, or interviewer style, a one-way MANOVA was

Table 5

Cell Means and Standard Deviations for the Classical and Jazz Groups on the Twelve Ego Functions

Ego Function	Classical (n=22)		Jazz (n=22)	
	M	SD	M	SD
Reality	10.95	.95	11.14	.83
Judgment	10.86	.99	11.23	.52
Sense of Reality	11.09	1.06	10.82	1.30
Regulation of Drives	10.59	1.26	10.86	1.13
Object Relations	10.68	1.32	10.73	1.08
Thought Processes	11.14	1.04	11.09	.75
ARISE	10.55	1.26	11.18	1.40
Defensive Functioning	10.64	1.22	10.73	1.31
Stimulus Barrier	11.09	1.01	11.23	.87
Autonomous Functioning	10.82	1.22	11.09	.97
Synthetic-Integrative	10.82	1.33	10.86	1.28
Mastery-Competence	10.73	1.35	10.55	1.40

Table 6

Multivariate Test of Significance for Main Effect Between Classical and Jazz Groups

Test	Value	Approx. F	Hypothesis D.F.	Error D.F.	Significance of F
Hotellings	.52593	1.35866	12	31	.23759

again computed. The results of the analyses for these main effects appear in Table 7. It can be seen that none of the approximate F values for these effects reached the .05 level, thus indicating there were no

Table 7

Multivariate Tests of Significance for Main Effects for Sex, Student Status, and Interviewer

Test	Value	Approx. F	Hypothesis D.F.	Error D.F.	Significance of F
			Sex		
Hotellings	.27350	.70655	12	31	.73333
			Student Status		
Hotellings	.40316	1.04148	12	31	.43839
			Interviewer		
Hotellings	.48647	1.25670	12	31	.29183

significant differences between males and females, undergraduate or graduate students, or interviewers on these measures.

A final test for main effects was done on the six different instrument families through the use of five planned comparisons which consisted of:

Planned Comparison 1--strings, woodwinds, keyboards, and vocals vs. brass and percussion

Planned Comparison 2--brass vs. percussion

Planned Comparison 3--strings vs. woodwinds, keyboards and vocals

Planned Comparison 4--keyboards vs. woodwinds and vocals

Planned Comparison 5--woodwinds vs. vocals

The results of these analyses are shown in Table 8. Although planned comparison 1 appears to approach significance, this does not hold up once the univariate F-tests and discriminant function coefficients are

Table 8

Multivariate Tests of Significance for Main Effects for Instruments

Planned Comparison	Value	Approx. F	Hypothesis D.F.	Error D.F.	Significance of F
1	.93398	2.10145	12	27	.05331
2	.29448	.66258	12	27	.77056
3	.39990	.89978	12	27	.55860
4	.52188	1.17423	12	27	.34847
5	.25603	.57607	12	27	.84197

examined. Once again, no significant differences were found for any of the planned comparisons which suggests that none of the various instrument groups (strings, woodwinds, brass, percussion, keyboards, or vocals) differed from each other with respect to the dependent measures.

Because there were no significant differences found in main effects for any of the variables discussed, secondary statistical analyses were rendered meaningless. Subsequently, computations of univariate F-tests, stepdown F-tests, discriminant function coefficients, post-hoc T-tests, and canonical discriminant function histograms all had to be discarded due to the findings reported.

As a result of these findings, a set of supplementary analyses were performed in order to test for possible interaction effects. It should be pointed out, however, that these effects were not tested for originally due to a concern over the possibility of low or empty cell sizes. Nonetheless, additional MANOVA tests were run to explore the possibility that interactions might exist between jazz and classical music, sex, interviewer, or type of instrument. The results of these analyses appear in Tables 9, 10, and 11.

Table 9

Multivariate Test of Significance for Interaction Effects Between Sex and Type of Music

Test	Value	Approx. F	Hypothesis D.F.	Error D.F.	Significance of F
Hotellings	.44774	1.08205	12	29	.40953

Table 10

Multivariate Test of Significance for Interaction Effects Between Interviewer and Type of Music

Test	Value	Approx. F	Hypothesis D.F.	Error D.F.	Significance of F
Hotellings	.35341	.85407	12	29	.59852

Table 11

Multivariate Test of Significance for Interaction Effects Between Instrument and Type of Music

Test	Value	Approx. F	Hypothesis D.F.	Error D.F.	Significance of F
Hotellings	1.57866	.95012	36	65	.55749

An examination of the data reveals that all three of the approximate F values failed to reach a .05 level of significance. Consequently, no significant interaction effects were found between jazz or classical music and sex, interviewer, or instrument type.

CHAPTER IV

DISCUSSION

Overview

This research investigation was concerned with one fundamental question: Are classical musicians different from jazz musicians with respect to personality structure? A second, though related, aspect of the inquiry sought to examine the motivational components which underlie the creative musician's particular form expression. These were based on a review of the literature pertaining to music and personality which presented numerous findings of a confusing and inconclusive nature.

To seek answers for these questions, two groups of musicians, classical and jazz, were compared on twelve dependent measures of personality obtained through in-depth clinical interviews. Forty-four subjects, twenty-two in each group, were selected on the basis of their self-reported musical preferences and randomly assigned to one of two groups for interviewing. The subjects were college students majoring in music at Michigan State University who had volunteered to participate.

A screening instrument, designed and pilot tested by the author, was used to differentiate the two groups from a large population of music students. The instrument consisted of an eight item, Likert type scale and was constructed specifically for this purpose using a forced-choice format to discriminate classical and jazz preferences. The final sample was obtained by selecting those respondents who scored at the extreme

ends of the scale which indicated an exclusive or very strong preference for performing either jazz or classical music.

Each interview group was comprised of an equal number of both jazz and classical musicians, randomly assigned and matched for instrument. Two trained interviewer/raters, one per group, conducted individual interviews with each subject and tape recorded the session. Once completed, the interviewer would review the tape and rate it as soon as possible using a thirteen point scale.

The interviews and ratings were based on the Interview Guide and Rating Manual for the Clinical Assessment of Ego Functions (Bellak, Hurvich & Gediman, 1973). These semistructured questions were designed to thoroughly assess an individual's characteristic level of functioning on twelve ego functions derived from ego psychological theory. This measure was chosen for several reasons: its constructs were comprehensive and based on psychoanalytic developmental psychology, it was applicable to a normal population, and it emphasized adaptation in healthy, as well as pathological, functioning.

A multivariate analysis of variance (MANOVA) was conducted to test for main and interaction effects. These effects included differences between jazz and classical musicians, males and females, undergraduate and graduate students, interviewers, and among the various instruments.

Results indicated that no significant differences could be found between jazz and classical musicians for any of the main or interaction effects tested for on these measures. As a result of these findings, the major research hypothesis of this study which proposed that classical musicians would differ from jazz musicians in personality structure was not supported.

Limitations

Before considering the conclusions and implications of the present investigation, it is appropriate to review some of its limitations. As this study was unable to find significant differences of any kind, it will be important to explore the obvious conclusions as well as any potential sources of error. Due to the highly interactive and complex nature of human personality, measurement and meaningful interpretation of its structure is often difficult. Any investigator entering the domain of personality research must be prepared for unexpected findings. In this study, it appears that many factors may have been responsible for the observed results, though problems in the sample and instrumentation may largely have accounted for the lack of differences.

First and foremost, the lack of significant statistical differences between jazz and classical musicians on the various ego function measures in this study would suggest that, in reality, there are no differences between these two groups. That is to say, that any assumption of differences between classical and jazz musicians is perhaps more an artifact of the imagination or bias of the investigator rather than any true differences between these groups. However, in the spirit of scientific research, one must be careful in generalizing from the results found on one sample to that of the population as a whole. While it is possible that jazz and classical musicians may be more alike than different, it is not possible to make that conclusion from this research. Because this study was a preliminary investigation using a select, non-random sample, the findings obtained cannot be generalized beyond this level. Subsequently, the reader cannot have the privilege of understanding how the results of this study might accurately reflect the true nature of personality that really

exists between the total populations of classical and jazz musicians. Any general statement of similarities or differences between these two groups is, at best, rudimentary and must be interpreted as such. Since this study was the first attempt to differentiate jazz from classical musicians on the basis of a clinical assessment of ego functions, (Bellak et al., 1973), any conclusions or extrapolations must await cross validation or replication with similar samples. This constitutes an obvious and important limitation within this study as it currently stands.

The decision to use students for subjects in this study was a necessary compromise, reflecting the difficulty involved in recruiting professional musicians for research purposes. Although the subjects displayed an obvious commitment to their education, identity formation at this stage of development is relatively undeveloped and immature. That is not to say, however, that many of the musicians did not know what they wanted for their careers, but rather, they are still under the pervasive influence of superego demands.

These subtle influences, which are generally unconscious, are reflected when the students play music which is acceptable and pleasing to significant others (e.g., parents, parent substitutes such as the conductor or band leader, or even societal norms) more than pleasing themselves. This is a normal outcome for individuals still in school, but changes dramatically with professional experience. Not until individuals reach middle age or later is identity reasonably consolidated and more ego directed. Since the assessment of ego functions is necessarily a

measure of identity, the data obtained reflect constructs which are still fluid to a certain extent for most of the subjects. This may account for the greater overlap observed within the sample, even though the sample was dichotomized. Differentiating subjects on the basis of their self-reported musical preferences may not be an accurate indicator of professional identity within this age group. Moreover, the emphasis on education within the music school is primarily classical in nature, with jazz as a supplementary area of study. This would suggest a more homogeneous group despite self-reported preferences to the contrary. While students may enjoy listening and/or performing jazz music, this does not preclude their interests and motivation in pursuing classical study as well. Subsequently, what possibly occurred was a comparison of primarily classical musicians with another group of classical musicians who also loved jazz.

It is also quite likely that the variable of music composition may have confounded the results as well. It appears that musicians who compose music share many similarities with those who improvise (Aranosian, 1981-82). As this study made no attempt to control for this effect, it is possible that additional sample overlap was occurring. If this were true, those musicians who composed could belong to either group again resulting in subjects being more alike than different.

Overall, it appears that problems in the sample may have partially contributed to the observed nonsignificant results. A combination of relatively young, inexperienced musicians plus the potential confounding effects of musicicians who compose are postulated to have made it difficult to discriminate between classical and jazz musicians in this study.

In addition to the limitations just cited, a significant problem was encountered with the ego function measures. This pertains to the construction of the rating scales and specifically, a ceiling effect.

As initially conceived, Bellak, et al. (1973) conceptualized overall functioning as ranging from the most maladaptive (scored 1) to optimal (scored 13). They constructed the instrument using an ordinal scale and specified a score of 11 as average. They defined average as having "less to do with the statistical norm of functioning of some known population group and more with a meaning denoting the sense of absence of any notable maladaptation or pathology, yet short of optimal" (p. 437).

This is obviously a broad definition open to wide interpretation. Just what constitutes "short of optimal" and where one draws the line remains highly speculative. However, the major deficiency lies in the limited range of scale points available for scoring individuals who are above average in functioning. There is no doubt that the range of functioning between average and optimal is expansive and highly diverse. What this means, essentially, is that the assessment of high level to superior functioning will be poorly differentiated, due to a ceiling effect as evidenced by the high number of full scale scores (see Appendix H). Consequently, the investigator believes this limitation had significant ramifications for the findings reported. Not only were most of the subjects tested reasonably healthy, but many were functioning at extraordinary levels of adaptation. Given this fact, it would be difficult to find differences between the two groups as the richness and diversity of creative behavior were "washed out" in the measures. Although the investigator acknowledged this limitation prior to the study, it was not fully realized how extreme the ceiling effect was nor how superior many of the musicians would be in terms of their overall functioning.

The other problem germane to the instrumentation centered on the original research population used to develop and norm the rating scales. Bellak, et al. (1973) reported that 50 schizophrenics, 25 neurotics, and 25 normals were used for purposes of scale development. Since many of these patients were hospitalized and taking medication, what effect would this have on the interview ratings? Assuming that the original sample was interviewed in a normal state (i.e., medicated), this would restrict the overall spread of means and standard deviations of the three groups. If it were possible to interview all subjects without the aid of medication, the mean of the schizophrenic group would be significantly lower than the others, thereby expanding the scale. As it was, many of the subjects required the benefits of medication in order to function and therefore tested higher than their premorbid level. A further complication resulted from the fact that some of the subjects used medications regularly, some intermittently, and some not at all. Thus, the variable of medication would need to be controlled for in constructing a rating scale which could be generalized beyond the research sample, a problem not forseen by the authors.

From a clinical standpoint, the methodology employed by Bellak, et al. was probably the best available given the broad range of functioning the authors were assessing. But from a research standpoint, it presents measurement problems for a population that is significantly different--in this case, highly functioning, creative musicians.

In selecting this instrument for assessing personality structure, the investigator assumed the interview questions and rating scales could easily generalize to a normal population. Based on the results of this study, this may not be accurate. The instrument is strongly biased in

the direction of pathology and is meant to test individuals concomitant with their medication.

Finally, there remains the general problem of interview technique. Sources of error inherent to this have been well documented (Mehrens & Lehmann, 1978) and include bias, response set, and unconscious distortions of feelings or perceptions. Whenever data are collected through the perceptions of others than those being measured, individual differences are likely to occur.

Although the Interview Guide was structured to the extent that individual questions were clearly specified, interviewers were encouraged to follow up interesting leads whenever possible. Despite the extensive training sessions employed, it is quite likely that differences existed between the raters which were subtle, but significant, yet failed to show statistically. This would result in inaccurate assessments since the "intuitive feel" for particular individuals would be contingent upon their familiarity and "working knowledge" of the theory.

Since one of the two raters had no previous exposure to ego psychological concepts prior to the training sessions, the probability of his ratings accurately reflecting a subject's underlying ego structure is uncertain. While both raters achieved high reliability initially with the training tapes, changes may have occurred over time, thereby altering the reliability in subtle ways. As this limitation is restricted to the author's speculation, it is not clear to what degree, if any, this may have occurred nor what effect it would have contributed.

In summary, it is the author's impression that problems in the sample and instrumentation were largely responsible for the nonsignificant findings reported. The combination of professionally inexperienced musicians, potential confounding effects of composers, and poor precision

in the measuring instrument are thought to be the main reasons contributing to the lack of significant results. Additional interactions may have also occurred through problems in the rating scale norms and different educational backgrounds of the raters.

Conclusions and Implications

In regard to the fundamental question examined by this study--"Are classical musicians different from jazz musicians with respect to personality structure?"--the results of this investigation offer no definitive conclusions. Due to the limitations previously cited and resultant non-significant findings, no credible descriptions of differences are possible with respect to this data.

On the other hand, there is room for speculation and "improvising" in order to guide future research interests. Thus, an attempt will be made to explore the second question of inquiry which concerned the motivational components that underlie the creative musician's form expression.

While no significant differences were found between the two groups of musicians, distinctions were observed and reported retrospectively by each of the interviewer/raters. These were discussed during the debriefing session which followed the data collection. Each interviewer was informed of the mission and purpose of the research study and asked to discuss his personal perceptions of the interview experience. Although each had unique feelings, there was general agreement on a number of points.

First, the degree of discipline and commitment the musicians demonstrated towards their music was nothing short of extraordinary. It was not uncommon for most of the subjects to work fifteen-hour days as a routine way of life. This included constant practicing, classes, and possibly some performing, in addition to basic needs and social life.

Second, those subjects who were rated the highest functioning were at one time, or currently are, working professionally. This would include local gigs on weekends, nightclub dates, special occasions, etc. It appears that the level of ego functioning and, therefore, identity is highly correlated with professional experience as previously postulated.

Third, those musicians who preferred classical performance were generally more introverted, anxious, sensitive, and concerned with approval as perceived by the raters. Often, this need for approval was manifested by an excessive concern in what others thought about them. This was in contrast to the jazz player who appeared more extroverted and independent.

Additional observations, though not necessarily shared by both raters, suggested some interesting trends. For instance, those musicians who were primarily interested in classical performance and who did not compose, often described themselves as being more religious, conventional, and generally idealistic. Many did not consider their playing creative but, rather, technically skilled. They tended to follow rules, were often highly self-critical, and valued conforming to the status quo, possibly to avoid their own self-punitive tendencies.

In contrast, those musicians interested in jazz performance were described as being more into the "here and now," more playful and comfortable with others, and possessing an intense energy level which was nearly hypomanic, yet capable of concentrating to a remarkable degree. In addition, they were able to regress easily and often without much concern for what others thought, were highly excitable, and tended to be more autonomous in their life style.

When jazz players discussed their feelings about improvising, some interesting findings emerged. Most agreed the process of improvisation

is an intensely emotional experience in which pure affect and feelings get expressed. Some reported losing all feelings of self awareness as if they were totally un-selfconscious. That is to say, there was no awareness of doing something and only a dim awareness of the audience listening. They described these feelings as merging with their instrument, becoming one with it in order to communicate to themselves and their listeners. One musician described it roughly as follows: "On a good night, when the band is real tight and I'm feeling with it, really hot, I feel so emotional, so spiritual that I no longer play the music, I am the music." This perception appears to be common among jazz musicians and speaks eloquently to the regressive experience.

When asked where the creative ideas came from, the subjects offered many sources. For example, it may begin as a feeling, or an image which is heard or visualized. It may be fantasy or wish fulfillment, anger, love, or other emotions. In any event, what seemed most significant was not the origin of the idea but being able to communicate this to the audience.

Clearly, what appears to be a distinguishing feature between non-composing classical musicians and improvising jazz musicians is the concept of regression in the service of the ego. It seems that classical subjects not only allow themselves to regress less often, but less deeply as well. This underscores, in the author's opinion, the essential difference between the two groups and provides a framework for understanding the distinctions between performers, composers, and improvisers.

For example, in describing those classical musicians who also enjoyed composing, the raters noted an increased ability to regress, and be playful. This extended into their interpersonal sphere as well, as

indicated by their outgoingness, less rigid defenses, and generally overall ease of relating. While composers were observed to regress with ease, they apparently are more selective about when they do it. Subsequently, they tended to produce more with their regressions in contrast to jazz musicians who produced less but did it more frequently. That is to say, while composers may not regress as often, they are very productive when they do (many were artists, dancers, poets, etc., besides musicians). This is in contrast to the jazz performer whose regression consists of composing while playing which leads to more frequent but focused (i.e., spontaneous and intense) productions.

In retrospect, certain differences between jazz and classical musicians were noted by the raters and these were described. Although speculative in nature and based on perceptions and intuition, it is quite possible that better instrumentation may have verified these observations. In order to further understand the possible distinctions between performers, composers, and improvisers, a hypothetical model will now be presented. It will attempt to account for the motivational influences which guide musicians into their preferred playing style by integrating theory with current research.

The author considers the ego function of regression in the service of the ego to be an ideal analogue for understanding motivation. This concept, which was previously discussed, is thought to be the single best measure for predicting the eventual form of musical expression.

This is because the ability to regress is a direct indicator of primary process functioning--playfulness, spontaneity, creativity, and child-like behavior. As such, it represents a useful construct for predicting various degrees of creative production. If this is true, then

those musicians who enjoy frequent and intense regressions will most likely find jazz improvisation appealing. In a like manner, those musicians who have trouble "letting go," or who find it difficult to play and be spontaneous, will probably not enjoy jazz at all. Instead, they will prefer the security of previously written notes in which the boundaries for creative regression are more clearly demarcated. Finally, those individuals attracted to composing music will probably fall somewhere in between, as they share common elements with both. A pictorial representation of the model is depicted below in Figure 2.

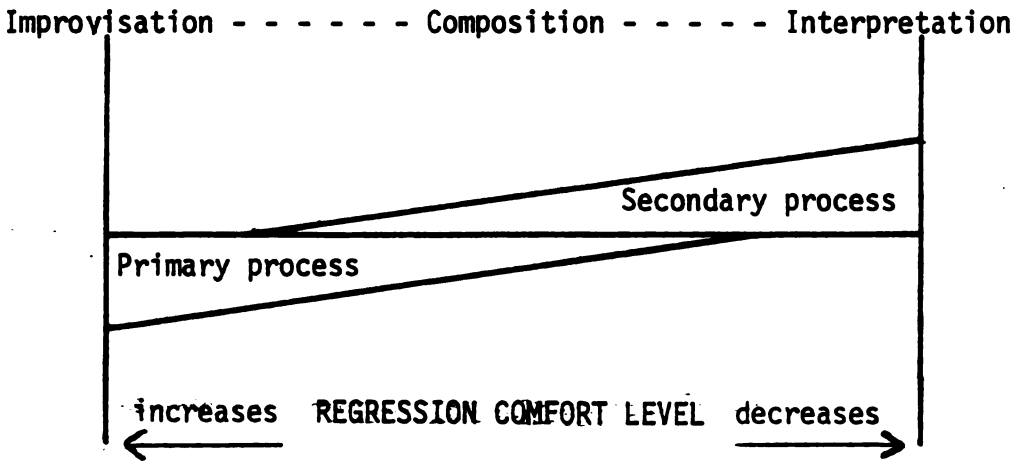


Figure 2. A Hypothetical Model of Musical Motivation

The model may be interpreted as follows: a continuum is represented in which all individuals fall between the two anchors. Each anchor constitutes a minimum or maximum level of regression consonant with the use of secondary or primary process functioning respectively. Individuals whose regression comfort level is high are more likely to use and enjoy primary process functioning and therefore pursue musical forms emphasizing playful and creative elements (e.g., improvisation). As the regression comfort level decreases, the individual gets progressively

more secondary process oriented and therefore engages in behavior requiring more structure and less spontaneity. For example, a musician who enjoys performing classical music will fall towards the right end of the continuum, thus indicating secondary process dominant functioning with occasional but shallow regressions. Their needs are satisfied by the structure of written notes with the opportunity to creatively interpret them within clear limits.

Those musicians who not only perform music, but compose it as well, will lie more towards the center of the continuum. This would suggest a moderate level of regression comfort in which creating new music satisfies primary process needs and allows for deeper and more frequent regressions with less structure than the classical performer. Finally, the jazz improviser approaches the left side of the continuum indicating a strong preference and joy for frequent and intense regressive episodes. These are manifested by a greater predominance of primary process functioning over secondary process functioning in which the music created is done so only for the moment, and in a playful, spontaneous manner.

It must be pointed out, however, that there are many musicians who play both jazz and classical, or who compose and perform as well. The model accounts for this by postulating that as an individual's regression comfort level increases (i.e., moves from right to left), he or she tends to demonstrate freedom in choosing any expression that is personally suitable. Subsequently, jazz players may choose to compose or interpret music, but it is unlikely that classical musicians who choose only to perform the work of others could improvise their own.

The model presented appears to stand up to the research literature reasonably well. For example, Cambor, Lisowitz & Miller (1962) reported

that those jazz musicians who allowed themselves to regress the most deeply were considered the most creative. Both Margolis (1954) and Cambor et al. (1962) made reference to jazz being a regressive narcissistic libido activity and emphasized the childlike qualities of playing it. Many studies have pointed out the common theme underlying jazz musicians as being an intense desire to create and improvise new musical configurations (McDaniel, 1974; Shaw, 1979; Aranosian, 1981-82). Bradshaw (1973) and Mikol (1975) both presented evidence suggesting the importance and need for composers to regress in order to create. The work of Aranosian (1981-82) highlighted the similarities between composers and improvisers insofar as allowing oneself to be open to the musical stream of consciousness.

Research on classical musicians by Kemp (1981 a & b) showed that aloofness, introversion, self-control, and anxiety were prominent personality characteristics typical of this group. This would tend to support the model further since these traits suggest a more serious, controlled, and rigid character structure. Finally, the observations of the interviewer/raters of this study, while not scientific, seem to further corroborate the ideas presented.

Based on the limitations of the present research investigation as well as the proposed model of musical motivation, a number of implications for future research seem warranted.

First, any research concerned with the assessment of personality, and especially measures of identity should attempt to use professional musicians rather than students. Identity formation in college age students is not sufficiently developed for research of this nature.

Second, due to the similarities between composers and improvisers,

additional research is needed to better understand both the differences and shared elements of these two groups. Personality investigators seeking to understand the differences in musicians must control for this effect if meaningful comparisons are to be made.

Third, while the ego function scales used in this study were comprehensive for the assessment of personality structure, they are inadequate as they currently stand for the measurement of normal or superior functioning populations. Additional research is needed to expand the upper range of the rating scale to eliminate the ceiling effect. While the interview questions possess great utility for personality research, they are still heavily loaded for psychopathology and are in need of revision. The extent to which the instrument can be applied and generalized to a normal population is somewhat uncertain.

Fourth, better measures are needed for the assessment of creative populations like musicians. Researchers interested in this area should develop or use instruments designed specifically for this purpose. A valuable contribution would be achieved if reliable and valid measures of ego regression were developed in order to test for creativity. The model presented in this study would lend itself well to this area of inquiry.

Fifth, investigators wishing to pursue further research with the ego function scales used in this study should use interviewer/raters who are highly versed in the literature and theory of ego psychology. Moreover, these individuals should be immersed in doing therapy with this kind of model and be sufficiently skilled in assessing individuals through a descriptive developmental diagnosis.

Finally, current research findings offer little of a substantive nature with respect to the motivational factors which influence and direct musicians in their musical preferences and eventual careers. An investigation into the situational, cultural, and intrapsychic variables which underlie form expression would greatly add to the understanding of musicians and their music.

APPENDICES

APPENDIX A

STANDARD COVER LETTER FOR EXPLANATION AND INFORMATION TO PROSPECTIVE SUBJECTS

Dear Music Student:

I am a graduate student in Psychology working under Dr. Dale Bartlett, Professor of Music here at Michigan State University. My research aims at developing a better understanding of the attitudes, needs, and values of musicians interested in classical and jazz performance. In order to do this, I am asking for volunteers from the School of Music. All that is required is completing the enclosed survey which should take no more than a few minutes. Based on the results of this survey, some of you will be contacted for interviews. Because your participation is greatly appreciated, we will be pleased to send you a summary.of the results, if desired, once the project is completed. Thank you for your cooperation.

Sincerely yours,

Steven Fisch, Graduate Student
Dale Bartlett, Ph.D., Research Sponsor

PLEASE RESPOND TO THE ITEMS BELOW:

NAME _____

HOME PHONE _____ WORK PHONE _____

Declared Major Instrument or Voice:

(check appropriate box)

☐ STRINGS

☐ WOODWIND

☐ BRASS

☐ PERCUSSION

☐ KEYBOARDS

☐ VOCAL

Student Status:

☐ UNDERGRAD

☐ GRADUATE

APPENDIX B

SCREENING INSTRUMENT FOR MUSIC PREFERENCES

INSTRUCTIONS: Circle the word category that best describes or expresses your feelings for the questions below.

****

PLEASE NOTE: C = CLASSICAL MUSIC

J = JAZZ MUSIC

****

1. Of the time I spend listening to music, I prefer:

exclusively C	primarily C rarely J	usually C occasionally J	equal amounts of both	usually J occasionally C	primarily J rarely C	exclusively J

2. If classical and jazz was <u>always</u> available for listening to, I would choose:

exclusively C	primarily C rarely J	usually C occasionally J	equal amounts of both	usually J occasionally C	primarily J rarely C	exclusively J

3. Given a limited number of selections from a juke box that plays only classical and jazz, I would choose:

exclusively C	primarily C rarely J	usually C occasionally J	equal amounts of both	usually J occasionally C	primarily J rarely C	exclusively J

4. If I were given a gift certificate for record albums, I would purchase:

exclusively C	primarily C rarely J	usually C occasionally J	equal amounts of both	usually J occasionally C	primarily J rarely C	exclusively J

5. When I attend concerts, they are:

exclusively C	primarily C rarely J	usually C occasionally J	equal amounts of both	usually J occasionally C	primarily J rarely C	exclusively J

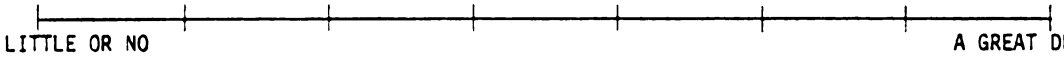
6. If I could perform any type of music I wanted without having to worry about making a living, I would play:

exclusively C	primarily C rarely J	usually C occasionally J	equal amounts of both	usually J occasionally C	primarily J rarely C	exclusively J

7. Indicate the point that best represents how strongly you associate or feel identified with either classical or jazz musicians:

CLASSICAL JAZZ

8. Indicate the point that best represents how strongly you enjoy creating or improvising music:



LITTLE OR NO CREATING OR IMPROVISING

A GREAT DEAL OF CREATING OR IMPROVISING

APPENDIX C

SUBJECT CONSENT FORM TO PARTICIPATE IN RESEARCH

CONSENT FORM TO PARTICIPATE IN RESEARCH

I, _____ agree to participate in a research project being conducted by Mr. Steven Fisch, who is a graduate student at Michigan State University. I understand the purpose of this project is to arrive at a better understanding of the attitudes, needs, and values of musicians who are interested in classical and jazz performance. I understand that it will be necessary to participate in a structured interview with a research associate trained by Mr. Fisch and that the interview will be cassette recorded for purposes of evaluation only. I have been assured that this material will be treated with the utmost confidentiality and only Mr. Fisch and his two research associates will have access to this information. I understand that upon termination of this project, all test materials will be destroyed or coded in such a way that my identity cannot be determined from any of these materials. Upon completion of this study, results and feedback will be made available to me upon request.

I have been given the opportunity to ask any questions that concern me about this project and I understand all risks involved to my satisfaction.

I understand that participation in this research project is strictly voluntary, and that I can withdraw from this project at any time.

Signed _____ Date _____

Witness _____ Date _____

APPENDIX D

AN INTERVIEW GUIDE FOR THE CLINICAL ASSESSMENT OF EGO FUNCTIONS

I. REALITY TESTING

a 1. Do you ever have trouble deciding whether something really happened or if it was a dream?
a 2. Have you ever wondered if a thing only happened in your mind?
a,b 3. Have you ever been surprised to find that what you thought was going on really wasn't?
b 4. Do you sometimes feel that you see what you want to see rather than what's really there? Like an ostrich burying his head in the sand?
b 5. Do you ever read into other people's behavior things that really aren't there? Has anyone ever told you that you do this?
b 6. Do you have the feeling that you're out of touch? Is it important for you to be in touch with everything about you? (Or: Does it upset you when you don't know what's going on?)
b 7. Have you ever been confused about things? Have people ever told you you're confused about things? Do you get confused easily? Disoriented? (Time, place, people)
a,b c 8. Have others ever told you that you're not with it? Out of step with the rest of the world? Do you think they're right?
b 9. Do people often misunderstand what you are trying to tell them?
a,b 10. Have you ever been told by people that what you say doesn't make sense? That your ideas are way off?
a 11. Have you ever been convinced of the reality of something even though everyone around you disagreed? Has this been about things you saw? heard? thought?
c 12. When you distort and misinterpret things, are you able to correct those notions?
a,c 13. Have you ever heard strange sounds in your ears that you couldn't account for on a physiological basis? Ever heard voices? What about visual experiences? In such cases, have you known that the voice (or whatever) couldn't be real even though it seemed real at the time?
a 14. Have you ever hallucinated?
c 15. How did you eventually find out that you had been hallucinating?
c 16. Do you pay attention to what goes on inside of you, like emotions, aches and pains? Possibly too much attention?

II. JUDGMENT

c 1. What are some of the things you've done which have shown poor judgment?
c 2. Do you care what other people think of you?
c 3. Have you ever felt awkward socially? Have you ever put your foot in your mouth or offended someone without intending to?
a,c 4. Are you good at sizing people up? At anticipating their responses to you?
c 5. Have you had the experience of being shocked or surprised that something you did had rubbed people the wrong way?

Source: L. Bellak, M. Hurvich, and H. Gediman, Ego Functions in Schizophrenics, Neurotics, and Normals, New York: John Wiley and Sons, 1973; reprinted by permission of John Wiley and Sons, Inc., 1982.

c,a 6. Do you ever find that you misjudge people?
a,b 7. Are you ever too trusting of people?
a 8. How do you go about making decisions? (Like taking a new job, quitting school, breaking up with a girlfriend/boyfriend, getting married?) Do you consider all the angles or do you act without thinking too long about things?
a 9. Are you a planner in that you think a lot about the consequences of what you might do? Do you have trouble estimating how long it would take or how much work is required in getting something done?
a,b 10. Are you an impulsive person? Are you careless with yourself or your health?
b 11. Are you a daredevil? Do you like to take chances? What if other people are involved?
a,b 12. Have you ever felt that you could get away with things that the average person couldn't? Like doing something risky that could get you into trouble? Like applying for a job for which you had no proper skills or training? Like speeding or driving without a license? If you get away with it, is it luck or something else?
b 13. Do you ever do dangerous things, like walking around the city at night (unaccompanied)? Opening your door to strangers before you know what they want? Riding in a car with defective brakes?

III. SENSE OF REALITY

a 1. Most people sometimes have the experience that things are happening that have happened before, like a déjà vu. Have you ever had this experience? Like you had been a certain place before, or heard, thought, or said something, even though you knew it couldn't possibly be so? Did you wonder if it really happened or was just your imagination?
a 2. Do people and things around you sometimes feel unreal to you? As though they really weren't there, or couldn't have happened?
a 3. Do people and things sometimes look foggy or as though seen through a haze, or perhaps as though there were a glass wall between you and the rest of the world?
a 4. Have people and things ever looked closer or further away, larger or smaller than you know them actually to be?
b 5. Have you ever felt as though you were walking around in a trance?
b 6. Have you ever felt that you were not real?
b 7. Have you ever had strange feelings in various parts of your body that there was no physical explanation for? (As if electricity was going through you; as if your head, tongue, or some other part of your body was feeling much bigger or smaller than usual; as if some part of your body is changing shape; or as if you were literally physically empty or had a hole in your stomach?)
a 8. Have you ever had a physical subjective feeling or sensation as though the world were going to collapse or fall apart? As though you could cause it, for example, by some act, thought, dream?
c 9. Do you spend much time thinking about the question, "Who am I?"
d 10. Have you every had trouble feeling yourself to be a person separate and independent from other people?
c,d 11. Describe yourself.

c 12. Do you have special ways to make yourself feel good about yourself?
c 13. What kinds of things make you feel humiliated?
c,d 14. Are you more affected in your opinions about yourself if someone says you're great or if someone says you're doing terribly?
c,d 15. Can you tell me of any times when you feel important or good living through someone else's accomplishment? Because they are perhaps intelligent, good-looking, popular, or very successful? When they're not around, do you get depressed or feel generally bad?
d 16. Is it very important for you to feel as though you were in special communication with someone else? Feeling merged or fused together? Do you feel you can read someone's mind, or they yours? Have you ever believed you possessed a capacity for ESP?
a,b c,d 17. Do you smoke pot or take other drugs? What kinds of feelings does this give you? Do they effect any of the things we've just discussed? Even after the effect of the drug has worn off?

IV. REGULATION AND CONTROL OF DRIVE, AFFECT, AND IMPULSE

a 1. Do you have a lot of drive to be physically active? Do you have to be on the go all the time? Or do you ever find it hard to get going?
a,b 2. Do you tend to be emotional and excitable about things, or are you relatively calm and detached? Do you consider yourself to be an undercontrolled or an overcontrolled person? What do other people think about you?
b 3. Do you ever have rapid changes in your mood--going from high to low rather quickly?
b 4. Have other people ever told you that you were overdramatizing or overreacting to something?
a,b 5. Are you a defiant or rebellious person? Are you spiteful? Do you tend to be well behaved? Polite?
b 6. Are you a patient or impatient person?
b 7. If you don't get your way or what you want immediately, how do you react? Are you easily frustrated? Can you stand frustration for any length of time?
b 8. How well do you think you tolerate feelings of anxiety when there is no immediate way of getting rid of them? How do you get relief from anxiety?
a,b 9. Do you feel much inner pressure to act? Pressure to talk?
a 10. Do you find it hard to be frank and direct about the way you feel? About something you want?
a 11. Do you spend much time daydraming about things you want or about things you'd like to be? Do you find daydreaming more pleasant or satisfying than reality?
a,b 12. What sort of things make you angry? How angry do you get?
A. How are these feelings expressed? Do they come out directly or do you do something else with them? Think? Dream? Daydream?
B. Do you argue? Throw things? Hit people? Ever wanted to kill someone?
C. Do you think you control these feelings too well or not enough?

a,b 13. What sort of things make you sad, blue, depressed? Are you sad a lot or a little?
   A. What do you do when you are feeling depressed?
   B. Do you cry a lot? Ever wish you would die? Did you ever think about committing suicide? Ever actually try it?
   C. How well or poorly do you think you control emotions like these?

a,b 14. A. What are the usual outlets for your sexual feelings? How frequently does this occur?
   B. How often do you masturbate? Under what circumstances? Any fantasies?
   C. In general, do you think a lot or a little about sex? Do you dream or daydream about sex? Do these thoughts or feelings ever worry you?
   D. Under what circumstances have your sexual urges been stronger than is usual for you? Weaker?
   E. Have you ever had the urge to do certain things sexually that you've thought it would be better not to do? Or that you wouldn't dare do?
   F. Do your sexual feelings ever get out of control? Or do you feel that you control them too much?

V. OBJECT RELATIONS

a,b 1. What was your father like? Your mother? How was your home life?
c,d Your current home life?

a,b 2. How do you get along with your girlfriend/spouse/boss/parent?
c,d

b 3. Have you discovered that no matter how hard you try to avoid them, the same difficulties crop up in most important relationships?

b 4. Do you keep getting involved with the same kind of person? Like even when you thought he/she was going to be different?

a,d 5. Do you generally prefer to be close to people or keep your distance? How do you feel most comfortable, with intense relationships or cool ones? Which kinds for which sorts of things?

a,d 6. Is it hard to get close? To stay close? What are the kinds of things that make you want to retain distance? In close relationships do you often reach a point where things are getting too intimate? So that you've wanted to or actually have broken it up?

a,d 7. Have you ever run away from or broken up a relationship for fear of getting hurt if you got too close? Or do you find it hard to let go even when things are going bad?

d 8. Did you ever feel that someone rejected you or a friend abandoned you?

d 9. How easily are your feelings hurt? Are you sensitive to criticism? To being left out of things? Do you often feel you've been rejected or abandoned?

a,d 10. Have you been hurt a lot in your life? Have you felt it's your fate to always be on the losing end? When you are hurt, do you have ways of trying or wishing to get back?

a,d 11. Have there ever been times in your life when you had to live alone? Or wanted very much to live along? How do feel when "X" (whomever patient lives with) is away for the weekend? Or longer?
a,d 12. Have you ever gone to a restaurant or movie alone?
c 13. How well do you understand other people? How well do they understand you?
c 14. Have you felt that things would be all right if only he/she/they would change?
c 15. Do you try to change the way people are and how they act so that they'd be the way you'd like them?
c 16. How do you get what you want from other people?
c 17. What kinds of things do you do to make people pay attention to you? (Life of the party, crying, temper, dressing well, etc.)
c 18. Do you enjoy exercising power over other people? Is that a secret pleasure?
a 19. Who handles what in your household? Like making major decisions. (Who's responsible for the caring of children? Who handles finances?) Who <u>really</u> runs things?
a 20. Who usually makes the initial approaches for sex, you or your girlfriend/boyfriend/spouse? Immediately after sex, what do you like to do?
a 21. Have you ever been involved in love affairs or involved sexually with more than one person at a time? Is this (or would this be) difficult for you to sustain emotionally, or do you (or do you think you would) prefer it that way?
22. Do you play games like "cat and mouse" with people close to you?

VI. THOUGHT PROCESSES

a 1. Do you have trouble keeping your mind on what you're doing? For example, when reading a book or newspaper, do you find yourself being distracted by noises or find your attention wandering?
a 2. How well do you concentrate? Is it ever difficult for you? When? Do you ever find that you have so many thoughts racing through your mind that you can't concentrate on any particular thing?
a 3. Do you ever think of yourself as a forgetful person?
a 4. If you think as far back as you can, what's the earliest thing you remember? What are the most significant things you remember about your early years?
a,b 5. Are you ever troubled by thoughts that seem to stick in your mind so that you can't get rid of them? Do they ever seem to run on by themselves without your control? Tell me about them. What ideas do you have about how they got there?
b 6. Do you ever have thoughts that you think others would not understand? Tell me about them.
b 7. What's foolish, or does not make good sense, about these:
A. They put a cake of ice on the stove to keep it from melting.
B. As he crossed the finish-line ahead of his rivals, he saw them still running in front of him.

a,b 8. What are these sayings supposed to mean?
A. You catch more flies with honey than with vinegar.
B. Strike while the iron is hot.

9. In what way are an orange and a banana alike? A coat and a dress? An axe and a saw? A dog and a lion? North and West? Eye and Ear? Air and Water? A table and a chair? An egg and a seed? A poem and statue? Wood and alcohol? Praise and punishment? A fly and a tree?

VII. ARISE

a,b 1. What do you do when you're alone and have nothing to do?

a,b 2. Do you daydream? What about? Are they more like fantasies, or do they involve thoughts and plans about actual things you may be doing?

a,b 3. Describe one of the most creative ideas you've ever had.

a 4. Are you ever able to let go and think strange and "nutty" thoughts without being upset or frightened? Describe one of the wildest, most fantastic ideas you've ever had. Do you ever get so carried away by your own ideas that it's hard to come back "down to earth?"

a,b 5. What is one of the most creative things you've ever done? What is the most spontaneous thing you've ever done? Are you generally spontaneous?

a,b 6. When you listen to the kind of music you enjoy, what's it like? What about art? Poetry? Literature? Making things? Inventing things.

7. Do you like to cook? Do you usually follow recipes or do you prefer making things up as you go along?

VIII. DEFENSIVE FUNCTIONING

b 1. Do things easily upset you? Which things? Do you ever feel restless or jumpy and not know why? How long do these feelings last? Do you have any special ways of getting rid of such feelings?

b 2. Are you an anxious person? Describe your feelings.

b 3. Do you feel you have ways to protect yourself from too many worries and anxieties?

b 4. Have you ever felt that you were falling apart? Rocky? Cracking up?

a 5. When things throw you, how well are you able to pull yourself together afterwards?

a 6. Do you ever find that you don't catch on to jokes that everyone around you is laughing at? Or that you miss the point of things?

b 7. Do you ever have strange or frightening thoughts? Nightmares? Tell me about them.

a 8. Do you have any special fears? Like claustrophobia, fear of travel, fear of crowds?

a 9. Have you ever been concerned about what other people are saying about you?

IX. STIMULUS BARRIER

a 1. Are you especially sensitive to anything like light, sound, or temperature?
b 2. Have you ever been irritable or jumpy when there's too much noise around you?
b 3. What do you do if you are bothered (by the above)? Accept it? Grin and bear it? React in some way to show how uncomfortable you are? Tune it out yet still not leave the scene?
b 4. Do you ever seek solitude when outside irritants get to be too much?
b 5. Do you ever feel like "jumping out of your skin" if things get too much for you?
a 6. Do you have particularly sensitive skin? Any itching that nobody found a satisfactory explanation for?
a,b 7. How long does it usually take you to fall asleep? What seems to keep you up? Anything like light or sound or things outside of yourself?
a,b 8. Are you easily awakened by traffic noises? Lights if the shades aren't down all the way? Any other sleep problems?
a,b 9. (For women) Just before your menstrual periods, do you ever feel particularly bad? (Tense, depressed, irritable?) What do you do about it? (Go about your business? Stay in bed? Keep away from people as much as possible?)
a,b 10. Are you sick often? Can you feel an illness coming on, or does it usually get pretty advanced before you realize that you are sick?
a,b 11. Do you get headaches often? What brings them on?
a 12. Have you ever been regarded as the "Princess on the Pea" (or male equivalent)--extremely sensitive, fragile, delicate, to be treated with kid gloves?
a 13. Do you get bored when things aren't exciting enough? Does excitement rattle you?
a,b 14. After being in some peaceful state (like being away in a quiet place, as for a weekend or a vacation) how do you feel getting back to the pace, din, noise of everyday life?

X. AUTONOMOUS FUNCTIONING

a 1. Does reading ever make you tense? Have you ever had trouble with hearing or vision that you know is not caused by any physical illness or defect? When you are upset or excited, do you forget things that are ordinarily easy to remember?
a 2. Do you ever get tongue-tied? Does your speech ever get garbled when you are self-conscious or embarrassed?
a 3. Are you physically awkward? Is this generally true or only in special situations?
a,b 4. Have you ever had trouble with routine things, like getting dressed, walking down steps, or carrying on with your usual work routine?
a 5. Do you ever get lost in the middle of what you're doing so that you have to stop and think about what the next step is?

a,b 6. How is your energy or drive level? Have you ever felt so lacking in energy that you couldn't carry through with things you ordinarily do? Have you ever had any work blocks?
b 7. Is it hard to get going on something that you want to do? Are you at all lazy? About what sort of things?
b 8. When you get some free or leisure time, do you get to carry out the things you had just thought about when you were too busy or do you procrastinate?

XI. SYNTHETIC-INTEGRATIVE FUNCTIONING

b 1. Can you adapt easily to change or does it throw you out of gear? Like changes in your usual routine, or where you suddenly have to change plans?
a,b 2. When you're busy doing one thing and then something else comes up that needs to be done, can you continue doing what you were originally doing? Can you do both at once?
a 3. Do you think it's only possible to do one major thing well? For instance, can a person be both a leader and a follower? A student and a teacher? Can you imagine being both a leader and a follower yourself?
a 4. (For women) Can you imagine (How do you find) being a mother and holding down some job? How might you accomplish this?
a 5. (For men) Can you imagine being in charge of things at home but mostly following instructions at work? Can a man really be both ways? How might you accomplish this?
a 6. Can you imagine a serious job being fun, or do you think that work is work and play is play?
a 7. Do you often find yourself doing or saying things that seem very unlike you? When you don't really feel or act like yourself? Do you feel surprised?
b 8. How well organized are you in your daily life? What sorts of things disorganize you?
b 9. Do you like to live from day to day or do you prefer planning for the future? To what extent?
b 10. Are you bothered by having bits and pieces or loose ends around? To what extent do you need to tie things together and how well are you able to do this? How well can you stand things being left undone and up in the air?

XII. MASTERY AND COMPETENCE

a 1. Do you function as well as you believe you are capable of functioning? If not, what do you think gets in the way?
a 2. Do you feel that you generally stay on top of things? Do you like to be in charge of things?
a,b 3. Do you live up to your own expectations of yourself? Have you ever felt that you could make more of yourself and your life than you have thus far?
b 4. Do you ever feel that you are missing out on life? Why do you think this is so?

b 5. Do you feel very much at the mercy of events, or do you feel that you are master of your own fate? Do you feel that you could effectively alter your life or influence the people around you to get what you want and need?

SUPEREGO QUESTIONS

1. Does your conscience bother you a lot or a little? Are you strict with yourself or lenient?
2. Do you feel guilty a lot or a little? Do you sometimes feel guilty about things that you know aren't your fault?
3. Do you often stew over something you have said or done and wished you had not said or done it?
4. How often do you get feelings of unworthiness or of being just no good?
5. What are your expectations of how you ought to be? Are you a person who expects too much of yourself? Too little? Do you live up to the expectations of your parents?
6. Are you particularly concerned about the meaning of right and wrong? Whether a thing is moral, ethical, proper?
7. Do you think people are generally responsible?
8. Do you believe our society permits too much or too little sexual expression? What about expression of angry feelings?
9. To what extent would you be willing to step on others' toes to achieve something really important?

EGO FUNCTIONS AND COMPONENT FACTORS

1. Reality testing
   - A. Distinction between inner and outer stimuli.
   - B. Accuracy of perception and interpretation of external events including orientation to time and place.
   - C. Accuracy of perception and interpretation of internal events. Includes reflective awareness or extent to which person is aware of accuracy or distortions of inner reality.
2. Judgment
   - A. Anticipation of probable consequences of intended behavior (e.g., anticipating dangers, legal culpabilities, social censure, disapproval or inappropriateness, and physical harm).
   - B. Extent to which manifest behavior reflects the awareness of its probable consequences, and the extent to which behavior expressing maladaptive judgment is repeated.
   - C. Appropriateness of behavior, or extent to which person is able to attune himself emotionally to relevant aspects of external reality.
3. Sense of reality of the world and of the self
   - A. Extent of derealization and related altered state of consciousness. The extent to which external events are experienced as real and as embedded in a familiar context.

B. Extent of depersonalization and related altered state of consciousness. The extent to which the body (or parts of it) and its functioning and one's behavior are experienced as familiar and unobtrusive and as belonging to (or emanating from) subject.
C. The degree to which subject has developed individuality, uniqueness, a sense of self, a stable body image, and self-esteem.
D. The degree to which subject's self-representations are distinguished from object representations; that is, the extent to which other people are distinguished as independent entities and the extent to which subject correctly ascribes which qualities are self-representative and which belong to others. Stated in another way, the extent to which ego boundaries between the self and the outside world are clearly demarcated.

4. Regulation and control of drives, affects and impulses

A. The directness of impulse expression, ranging from primitive and psychopathic acting out, through the activity of the impulse-ridden character, through neurotic acting out, to relatively indirect forms of behavioral expression. Maladaptiveness would be a function of the extent to which awareness of drive, affect, and impulse are experienced and expressed disruptively.
B. The effectiveness of delay and control mechanisms (including both under- and overcontrol); the degree of frustration tolerance and the extent to which drive derivatives are channeled through ideation, affective expression, and manifest behavior.

5. Object relations

A. The degree and kind of relatedness to others (taking account of narcissism, symbiosis, separation-individuation, withdrawal trends, egocentricity, narcissistic object choice or extent of mutuality, reciprocity, empathy, ease of communication); degree of closeness or distance and the degree of flexibility and choice in maintaining object relations.
B. Primitivity-maturity of object relations, including the extent to which present relationships are adaptively or maladaptively influenced by, or patterned upon, older ones.
C. The extent to which the person perceives and responds to others as independent entities rather than as extensions of himself.
D. The extent to which he can maintain object constancy, that is, can sustain both the physical absence of the object and the presence of frustration or anxiety related to the object; degree and kind of internalization (the way subject perceives and responds to people who are not physically present).

6. Thought processes

A. Degree of adaptiveness in memory, concentration, and attention.
B. The ability to conceptualize. The extent to which abstract and concrete modes of thinking are appropriate to the situation.
C. The extent to which language and communication reflect primary or secondary process thinking.

7. Adaptive regression in the service of the ego (ARISE)

   A. First phase of an oscillating process: degree of relaxation of perceptual and conceptual acuity with corresponding increase in ego awareness of previously preconscious and unconscious contents and the extent to which these "regressions" disrupt adaptation or are uncontrolled.
   B. Extent of controlled use of primary process thinking in the induction of new configurations. Extent of increase in adaptive potential as a result of creative integrations produced by ultimately controlled and secondary process use of regressions.

8. Defensive functioning

   A. Extent to which defense mechanisms, character defenses, and other defensive functioning have maladaptively affected ideation, behavior, and the adaptive level of other ego functions.
   B. Extent to which defenses have succeeded or failed: for example, degree of emergence of anxiety, depression, and/or other dysphoric affects.

9. Stimulus barrier

   A. Threshold for, sensitivity to, or registration of, external and internal stimuli impinging upon various sensory modalities (corresponds to "receptive function").
   B. Degree of adaption, organization, and integration of responses to various levels of sensory stimulation; the effectiveness of "coping mechanisms" in relation to degree of sensory stimulation, whether observed in motor behavior, affective response, or cognition.

10. Autonomous function

   A. Degree of freedom from impairment of apparatuses of primary autonomy (attention, concentration, memory, learning, perception, motor function, intention).
   B. Degree of freedom from impairment of secondary autonomy (disturbances in habit patterns, learned complex skills, work routines, hobbies, and interests).

11. Synthetic-integrative functioning

   A. Degree of reconciliation or integration of discrepant or potentially incongruent (contradictory) attitudes, values, affects, behavior, and self-representations (e.g., role conflicts).
   B. Degree of active relating together (i.e., integrating) of both intrapsychic and behavioral events. These events may or may not be conflict-ridden and are not necessarily limited to behavior.

12. Mastery-competence

   A. Competence, or how well the person actually performs in relation to his existing capacity to interact with and actively master and affect his environment.

B. The subjective role, or subject's feeling of competence with respect to actively mastering and affecting his environment: subject's expectations of success on actual performance (how he feels about how he does and what he can do). Sense of competence is scored at face value: for example, higher than actual competence if there is an exaggerated sense of competence.
C. The degree of discrepancy between component A and component B: that is, between actual competence and sense of competence. It may be negative (-: actual competence exceeds sense of competence); it may be equal (=: actual competence and sense of competence are congruent); it may be positive (+: sense of competence exceeds actual competence, as in a grandiose, exaggerated sense of competence compared with performance).

APPENDIX E

ASSESSMENT OF EGO FUNCTIONS RATING FORM

ASSESSMENT OF EGO FUNCTIONS RATING FORM

S CODE _____

RATER AND DATE _____

_____

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1. Reality Testing

a. _____
b. _____
c. _____ } _____

2. Judgement

a. _____
b. _____
c. _____ } _____

3. Sense of Reality

a. _____
b. _____
c. _____
d. _____ } _____

4. Regulation and Control of Drives, Impulses, and Affects

a. _____
b. _____ } _____

5. Object Relations

a. _____
b. _____
c. _____
d. _____ } _____

6. Thought Processes

a. _____
b. _____
c. _____ } _____

7. ARISE

a. _____
b. _____ } _____

8. Defensive Functioning

a. _____
b. _____ } _____

9. Stimulus Barrier

a. _____
b. _____ } _____

10. Autonomous Functioning

a. _____
b. _____ } _____

11. Synthetic-Integrative Functioning

a. _____
b. _____ } _____

12. Mastery-Competence

a. _____
b. _____
c. _____ } _____

APPENDIX F

STANDARD LETTER OF RESULTS AND FEEDBACK SENT TO RESEARCH PARTICIPANTS

Dear Research Participants: July 4, 1982

I would like to offer you my heartfelt thanks and appreciation for helping me with my research project. I might also add that both Bob and Sigi (my interviewers), as well as myself, were quite impressed with the honesty and candor with which all of you approached the interviews.

Basically, my research was designed to test whether those musicians who preferred or identified with classical music were significantly different from those who preferred or identified with jazz. This notion was based on a review of the research literature which indicated that these differences might exist.

For instance, recent research by Anthony Kemp in England has shown that classical musicians typically display traits of intelligence, sensitivity, self-sufficiency, and aloofness. Moreover, they are commonly characterized by introversion, imagination, and submissiveness. He has also found differences between various instrumentalists--e.g., strings = aloof, introverted, overly sensitive; brass = less inhibited and insensitive; woodwind = shy and self-sufficient; keyboard and vocals = more extroverted.

Jazz players, on the other hand, have been shown to be depressed, dependent, more playful, having higher music achievement, and having a greater need for freedom, spontaneity, and creating new things.

Unfortunately, when one tries to understand and integrate all these findings, it is confusing and inconclusive. Subsequently, my study was an attempt to systematically investigate these variables by looking at both kinds of musicians specifically.

The results of my study showed, however, that no significant differences could be found between these groups. It appears that a number of factors may have been responsible for this finding. For example, it seems that the measuring instrument wasn't able to discriminate very well for very high functioning individuals. Another problem concerned the use of students as opposed to professional musicians.

My own hunch before starting the study was that those individuals who like to improvise and play jazz would be more extroverted, would like to daydream, pun, joke, etc. and generally prefer less structure and control. Classical musicians, on the other hand, would prefer the "security" and structure of previously composed music, as well as being more introverted, sensitive, and approval seeking.

If any of this research is interesting to you, and you would like to learn more, may I suggest you consult my dissertation in the Michigan State University Library or Dissertation Abstracts. The title is: Assessment of Ego Functions in Classical and Jazz Musicians: A Study of Personality Differences.

Again, thank you very much for helping me. May I offer you all my best wishes for a prosperous and successful career no matter what kind of music you play.

Warm regards,

Stan Finch

APPENDIX G

LETTER OF APPROVAL FROM HUMAN SUBJECTS COMMITTEE TO CONDUCT THE PROPOSED STUDY

MICHIGAN STATE UNIVERSITY

UNIVERSITY COMMITTEE ON RESEARCH INVOLVING
HUMAN SUBJECTS (UCRIHS)
238 ADMINISTRATION BUILDING
(517) 355-2186

EAST LANSING · MICHIGAN · 48824

March 3, 1982

Mr. Steven C. Fisch
Counseling Psychology

Dear Mr. Fisch:

Subject: Proposal Regarding the Investigation of Personality Differences Between Classical and Jazz Musicians

The above referenced project was recently submitted for review to the UCRIHS.

We are pleased to advise that the rights and welfare of the human subjects appear to be adequately protected and the Committee, therefore, approved this project at its meeting on March 1, 1982. This approval is valid for one year. If you plan to continue this project beyond one year, please make provisions for obtaining appropriate UCRIHS approval prior to the anniversary date noted above.

Any changes in procedures involving human subjects must be reviewed by the UCRIHS prior to initiation of the change. UCRIHS must also be notified promptly of any problems (unexpected side effects, complaints, etc.) involving human subjects during the course of the work.

Thank you for bringing this project to our attention. If we can be of any future help, please do not hesitate to let us know.

Sincerely,

Henry E. Bredeck
Chairman, UCRIHS

HEB/jms

cc: Dr. R.G. Johnson

APPENDIX H

RAW SCORES OF SUBJECTS ON THE TWELVE EGO FUNCTIONS

RAW SCORES OF SUBJECTS ON THE TWELVE EGO FUNCTIONS

Subject Number	Ego Functions											
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
					Interviewer Two							
1	11	11	11	11	11	12	12	11	12	11	11	10
2	12	11	12	11	11	12	12	11	11	11	12	12
3	10	10	10	10	10	11	10	10	10	11	10	10
4	12	12	12	11	12	11	11	12	11	11	11	11
5	12	12	12	11	12	12	11	12	12	12	12	12
6	10	11	11	10	10	11	10	10	11	11	10	10
7	11	11	11	11	11	10	11	10	11	11	11	11
8	13	12	12	12	12	13	12	12	12	12	12	12
9	11	11	11	10	11	11	12	11	11	11	11	11
10	11	11	11	11	11	11	11	10	11	11	11	10
11	11	12	11	11	11	11	12	11	11	11	11	11
12	12	12	12	11	11	11	12	12	12	12	12	12
13	11	11	11	11	10	11	12	11	11	11	11	10
14	12	11	12	11	11	12	12	11	12	12	12	11
15	12	12	13	13	13	12	12	12	12	12	13	12
16	12	12	12	12	12	12	12	11	12	11	12	11
17	12	12	13	12	13	13	12	13	13	13	13	13
18	10	10	10	10	09	11	10	10	10	10	10	10
19	12	11	12	11	11	12	12	11	12	11	12	11
20	11	11	11	11	10	11	11	11	11	10	11	10

RAW SCORES--Continued

Subject Number	Ego Functions											
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
						Interviewer One						
1	10	10	10	08	10	10	09	09	10	09	09	11
2	11	11	10	11	10	10	12	09	11	11	10	11
3	11	11	11	11	11	10	09	11	11	09	10	09
4	11	11	10	10	11	11	12	10	11	11	11	11
5	11	11	11	11	11	11	13	12	11	12	12	08
6	12	12	11	13	12	12	12	13	12	11	12	11
7	12	12	13	12	12	12	13	12	13	13	13	12
8	11	11	10	10	10	11	09	09	11	09	09	11
9	10	08	10	09	08	08	08	08	11	08	08	08
10	11	11	12	12	12	12	11	12	13	11	12	13
11	09	11	09	10	09	11	09	09	10	09	10	10
12	11	11	11	11	11	11	11	11	11	12	11	08
13	11	10	11	12	10	11	09	11	11	11	11	12
14	10	10	10	09	09	10	10	09	09	09	09	11
15	10	10	10	09	10	10	09	10	11	10	09	10
16	10	11	08	08	08	10	10	08	11	11	08	11
17	11	11	11	10	10	11	11	10	11	11	11	11
18	12	12	11	11	11	11	11	11	11	12	11	11
19	10	11	11	09	10	11	11	10	10	11	11	09
20	11	11	11	11	11	11	09	11	11	11	10	10
21	11	11	11	11	11	11	10	11	10	11	10	11
22	11	11	09	11	09	11	10	10	11	11	10	11
23	09	10	08	09	10	11	08	09	09	11	09	06
24	12	12	13	13	13	12	13	13	13	13	13	12

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