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Use of Cattell's Music Preferences Test with Alcoholics Before and After Treatment

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**USE OF CATTELL'S MUSIC PREFERENCES TEST WITH
ALCOHOLICS BEFORE AND AFTER TREATMENT**

by

Lisa Aiken

**A Thesis Submitted to the Faculty of the Graduate School
of Loyola University of Chicago in Partial Fulfillment
of the Requirements for the Degree of**

Master of Arts

June

1977

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VITA

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CHAPTER 1

INTRODUCTION

It long has been believed that music may be used to elicit emotional responses from listeners, as well as providing a means of self-expression by composers and musicians alike. This raises the possibility that there could be some quality inherent in certain musical selections which consistently elicits similar emotional responses in all listeners from a particular culture. At the same time, another possibility is suggested; namely, that there may be a tendency for preferences for particular kinds of music to be systematically related to different personality structures. Do common patterns of choice exist to a set of musical pieces, and how are these preferences influenced by such variables as traits, moods, stimulus situations and specific patterns of cultural education?

There seems to be substantial support for the hypothesis, at least for some types of music, that musical form itself is the primary determinant of the emotions evoked. Schoen and Gatewood (1927) studied the responses to recorded music of 20,000 subjects across the United States. They found that musical compositions produced changes in the affective reactions (such as feeling happy, sad, peaceful or excited) reported by the subjects. The changes induced were strikingly similar for the large majority of listeners, regardless of their age, training or experience with music. In a later study, Hevner (1935) found similar results.

When music in a minor mode was heard, listeners classified the music as mournful, melancholy, gloomy, depressing, mysterious, weird, and mystical. The same selection played in major mode was classified as happy, bright, light, joyous and gay. Pieces played in low octaves were perceived as dignified, solemn, sad, heavy, vigorous and majestic, while they were classified as being sparkling, happy, bright and serene when played in a higher octave (Hevner, 1937). Fast pieces were perceived in much the same way as pieces played in higher octaves, while the same piece played more slowly was perceived in a manner similar to pieces played in a low octave. Firm rhythms were rated as being vigorous and dignified, and flowing rhythms were rated as happy and graceful (Hevner, 1936). Downey (1897), Riggs (1940) and Pratt (1961) also found results supporting the idea that subjects tend to perceive the same emotions in a piece of music. Typically, an adjective checklist was designed, and subjects rated whether or not a given musical selection expressed joy, sadness, gloom, peacefulness, etc. If subjects checked the same adjectives for a given musical selection, it was concluded that they perceived the same emotions in that music. Sopchak (1964), in contrast with the findings of Downey, Riggs and Pratt, found that listeners could agree on the emotions elicited by popular music, but not by classical music. In addition, however, he found that the emotional state of the listener influenced the emotions he perceived in the music. In his study happy subjects tended to rate music as being happy, and melancholy subjects tended to perceive the music as being more melancholy than did other subjects.

These results raise the issue of determining to what extent perceived emotions in music are due to the musical form, and to what extent

they are a function of the subject's attributes. It seems that the experimental evidence tends to support the notions that the form itself elicits the emotion perceived, but the degree to which this emotion is perceived seems to depend on the listener's state and/or traits. For instance, no significant differences were found between schizophrenics, normals, manics, and psychotic depressives in their identifications of the moods of selections of piano music (Simon, Holzberg, Alessi and Garrity, 1951). However, the degree of emotional arousal elicited by the music may differ according to the type of subject used. For example, Skelly and Haselrud (1952) found that exciting music played between selections of depressing music increased the activity level of apathetic female schizophrenics over their base-rate activity levels. An early study on the effects of music on GSR (Gilman and Paperte, 1949) found that exciting music had the same effect on psychotics as it had on normals, but calming music had a more relaxing effect on psychotics than on normals. Weidenfeller and Zimny (1962), on the other hand, found that exciting music produced a greater reduction in electrical resistance of normals (using a GSR) than of psychotic depressives and schizophrenics. The psychotic group's muted response was interpreted as possibly being due to reduced contact with arousing stimuli. Calming music in this study tended to increase resistance, as opposed to the effects of the exciting music. Finally, depressives tended to have more variability in their GSRs than did schizophrenics when exciting music was used.

The results of the above studies suggest that if one wishes to use music as a means of assessing personality differences between people, rather than just assessing moods, or transitory states, it would be more

useful to have subjects rate the degree of the emotion perceived in a musical selection, rather than simply indicating which emotion they perceive in the selection. Since subjects tend to perceive the same emotion in a given piece of music, it makes it difficult to use individual differences in these perceptions as a means of discriminating individual differences in personality. The magnitude of the emotional response seems a better indicator of personality than does the simple perception of a given emotion, but the emotional response is also related to the temporary mood state of the person, thus confounding traits with mood states.

Another tack which has been taken is to look at differences between individuals with regard to music preferences, for which more variance across groups seems to exist than for the simple perception of a given emotion in a musical selection. Bernier and Stafford (1972) found that those subjects who can easily detect differences in the timbre of a tone tend to prefer hearing musical instruments with more complex sound waves. This may be useful in explaining why some individuals prefer classical music above other types--perhaps the musical complexity of classical music is greater than that of the forms which are less preferred. However, since the affective reaction to music appears to be an interaction of the characteristics of the musical stimulus (tempo, pitch, harmony, rhythm, etc.), the listener's familiarity with the music, and the kind of music which is heard (classical, popular, rock, etc.) it makes sense to consider contributions which additional factors might have in determining music preference, other than just complexity.

Farnsworth (1958) believes that musical taste is primarily a func-

tion of one's cultural education. In studying musical preference among Occidentals, Africans and Orientals, he came to the conclusion that Occidentals love simple rhythms, careful tuning, harmonies, tonic effects, and the diatonic scale. Africans prefer complicated rhythms, and Chinese seem to enjoy music with poor tuning (in the Occidental sense of the word). However, with continued residence in the Western world, Orientals come to appreciate American music and Americans in Oriental countries come to lose their sensitivity to pitch inexactitude. Furthermore, it appears that children initially have different musical tastes than adults, but as they grow older, they tend to conform to the musical tastes of adults. Thus, it appears that musical preferences may be highly determined by one's culture.

Baumann (1960) related music preferences in teenagers not only to their general culture, but also to their social class. He had teenagers from Maryland and Arizona complete music preference inventories, as well as the Short Scale Status Inventory. He found that the Easterners preferred popular music, while the Westerners preferred classical music. It was also noted that teens from low socio-economic backgrounds (as judged by the Social Status Inventory) preferred traditional music more than did the high status teens, whereas the high status teens preferred classical and popular music more than did the low status teens. Riesman, Glazer and Denny (1969) and Johnstone and Katz (1957) found that music preferences in teenagers vary according to the neighborhood in which they live. Both found that girls' tastes tend to conform to the neighborhood norms more than do those of boys, and Johnstone and Katz found that the more a girl is liked, the closer her preferences resemble those of the neighborhood in general.

It seems evident, therefore, that factors other than personality traits can influence the way in which people respond to music. Nevertheless, once these factors are taken into account, it is still possible to obtain differences within groups on musical preference tests. Eysenck (1941) related introversion and extraversion to aesthetic preferences in art. He found that extroverted subjects preferred simple, unified, vivid, and obvious forms, as well as art that is ordered. Introverts opted for complex, diversified, less ordered and less vivid selections. He interpreted these findings as being due to the reduction of energy in one's nervous system, i.e., the more a perception can reduce the tension in one's nervous system, the higher is one's liking for that art form.

Bryson and Driver (1972) used a slightly different approach, and classified subjects not only into introverts and extroverts, but subdivided these categories into cognitively simple and cognitively complex subjects in each. They found that both types of extroverts preferred moderate levels of complexity in polygon art forms, while cognitively complex introverts preferred simple art forms, and cognitively simple introverts preferred complex art. Unfortunately, Bryson and Driver did not offer insights into why these results would occur given the personality composition of extroverts and introverts. They also neglected to note that although the subjects responded in this way to the types of stimuli used in the study, these preferences probably do not generalize across art forms, so that subjects would probably not respond in the same way to paintings, sculptures, music and dance. Furthermore, other groups of subjects have not exhibited differential preferences for drawings when normals, schizophrenics and alcoholics were tested (Piron, 1974), so it

cannot be assumed that other personality differences are associated with particular preferences in art.

Music preferences among psychotics, rather than among normals, have also been investigated. A relatively recent study by DeWolfe and Konieczny (1973) offered an explanation as to why reactive schizophrenics have a stronger preference for relaxing music than do process schizophrenics. Process schizophrenics are suggested to be underresponsive to environmental stimuli, and do not discriminate well between them. Reactives, on the other hand, are seen as highly responsive to the environment, and do discriminate well between stimuli. Therefore, reactives may be affected more strongly by relaxing music and show a stronger preference for it than do process schizophrenics. This is somewhat similar to the explanation offered by Weidenfeller and Zimny (1962) as to why exciting music has a stronger effect on normals than on psychotics, as judged by a GSR measure. They suggested that psychotics try to insulate themselves from environmental stimuli, or simply have reduced contact with arousing stimuli.

It appears that although the reasons for certain groups having particular musical preferences may be incompletely understood as yet, music preferences can be used to differentiate between groups with different traits or characteristics. Perhaps the most comprehensive studies in this area have been carried out by Cattell and his colleagues. Cattell suggested that a music preferences test may bypass cognitive defenses since there is no verbal content, and consequently, subjects' emotional needs may be probed directly through their responses to music selections. He hypothesized that liking or disliking music is due to the characteristics projected to the physical sounds by the listener, and are less in

need of defensive disguises than cognitive projections. This means that using music as a semi-projective technique could be a useful tool in personality assessment.

Cattell selected 100 music excerpts. He had each selection played on a piano by one musician, and had them recorded on a record. He used 98 psychotics from a state hospital, comprised of 36 alcoholic psychotics, 22 schizophrenics, 10 manics, 7 paranoids, and 23 others from diagnostic categories other than those mentioned already (Cattell and Eber, 1962). Both males and females were used, ranging in age from 25-60 years of age. Subjects rated each piece of music according to whether they liked, disliked, or neither liked nor disliked it. A series of factor analyses revealed 11 factors on the test, most of which had reasonably high consistency and split-half reliability. These factors were then correlated with factors on Cattell's 16 factor personality questionnaire, which all subjects completed. He found no one-to-one relationship between the music factors and the personality factors. However, groups of the personality factors which correlated with any one music factor (MF) were psychologically consistent and compatible with each other. For instance, MF 1 was correlated with dominance, strong enthusiasm, stubbornness, radicalism, and self-sufficiency. Also, the highest correlation for any music factor with a personality factor was the highest personality factor's correlation with music factors. Factors on the music test were named according to the bipolar personality factor with which it was most highly correlated. Thus, MF 1 was named "adjustment vs. frustrated emotionality"; MF 3--hypomanic self-centeredness vs. self-distrust and doubt; MF 4--tough sociability vs. tenderminded individuality; MF 5--

introspectiveness vs. social contact; MF 6--anxiety and concern vs. imperiousness; MF 7--complex eccentricity vs. stability and normality; MF 8--resilience vs. withdrawn schizothymia; MF 11--schizothyme tenacity vs. relaxed cyclothymia. Music factors 2, 9, and 10 were not named, as their reliability was not considered acceptable.

Alcoholics scored lowest on factors 2, 4 (tough sociability) and 7 (complex eccentricity) and highest on 6 (imperiousness) and 9 as compared with the psychotics as a whole. The psychotic group varied from normals in the same way that alcoholics differed from psychotics. Schizophrenics scored high on 6 (imperiousness) and 9; manics lower on 11 (schizothyme tenacity), but higher on 6 and 9; and paranoids lower on 6 and 11. Psychotic alcoholics differed from the other psychotics by being lower on 2 and 7 (complex eccentricity), and this scoring profile suggested "frustrated emotionality and withdrawn schizothymia. . .which fits the description and the dynamics of alcoholism." (Cattell & Anderson, 1953; Cattell & Saunders, 1954).

Healey (1973) replicated Cattell's study in Australia. He used 38 patients and 19 staff members as subjects, drawn from the same mental hospital. His patient group consisted of 10 chronic alcoholics (three of whom had alcohol psychoses), 19 schizophrenics, one person with cerebral syphilis, one with psychotic depression, three with drug dependencies and personality disorders, and one with a severe personality disorder. The ages ranged from 27-64, with a mean age of 48.6.

Healey found essentially the same reliabilities, or higher than those found by Cattell for the music factors. However, Factor 1, which is supposed to distinguish normals from psychotics, with alcoholics and

paranoids lowest, showed no significant differences between the scores of groups. In fact, the trend was for the alcoholics and psychotics to score higher than the normals. Results contradictory to Cattell's findings comparing alcoholics, psychotics and normals were found for other factors as well, including factors 4 (tough sociability), 5 (introspectiveness), 7 (eccentricity) and 8 (resilience). This may be due, in part, to the cultural differences in music preferences mentioned earlier. Cattell had, in fact, claimed no reliability or validity for this test outside of the American culture in which it was validated.

In any event, it seems that both of these studies had methodological difficulties with them which make their findings somewhat suspect. For one thing, Cattell's original sample used a group of normals whose intelligence was probably higher than that of the patient groups, since most of the normals were college students. Furthermore, there was an age differential involved by comparing patients to normals on the personality factors and on the music preferences. That is, the mean age for the college students was approximately 20, whereas for the alcoholics it was between 40 and 50. It is known that musical preferences change with age, yet Cattell and Anderson (1953) did not take this into account. In addition, it appears that no distinctions were made for patients within diagnostic categories as to the length or severity of the psychosis, or to subdivisions within categories.

The present study is concerned with both replicating and expanding the use of Cattell's Music Preference Test (MPT) with alcoholics. A non-verbal test could be very useful with this group of patients if it is a valid assessment tool and/or prognostic indicator. Many alcoholics have

a low level of literacy, or are unwilling or unable to take standard personality inventories such as the MMPI. Also, alcoholics may find that taking projective tests such as the Rorschach provokes anxiety, or they may not have the verbal facility to delineate their responses on projective techniques. Using a non-verbal projective technique such as the MPT would bypass these difficulties.

Cattell seemed to assume in his experiment that there is an alcoholic personality and thus used an "alcoholic" category, without differentiating between different personality types in this category or between psychotic and non-psychotic alcoholics. Healey's (1973) study did not remedy this situation, either. Prior to discussing the proposed experimental changes in the present study, some background into prior studies on the testing and assessment of alcoholics will be presented.

The Alcoholic Personality--Is There One?

Some researchers tend to doubt that there is one alcoholic personality. Ceccarelli (1958), for example, found that alcoholics tended to show schizoid or schizophrenic traits on the MMPI, often with an elevated D scale. Fuller (1966) used the 16 Personality Factor Questionnaire (the same test used by Cattell in the music preferences experiments) with over 800 alcoholics. He found that the subjects' profiles on the tests resembled those of neurotics, rather than psychotics, or sociopaths. (It has been suggested that the alcoholic drinks to avoid neurotic anxiety, or to provide an alternative to becoming psychotic.)

The MMPI has been used as a starting point for the development of alcoholism scales. MacAndrew (1965) reviewed studies done with three such scales, and concluded that rather than providing indices of alco-

holism, they merely indicate general maladjustment. In a study using the full MMPI with alcoholics, Muzekari (1965) found that he was unable to differentiate alcoholics who had abstained from alcohol for at least one year from others who had received a year's treatment but had relapsed. Thus, the MMPI was not deemed useful as a tool by which to assess probability of recovery after treatment. A factor analysis of alcoholic protocols on the MMPI by Hill, Haertzen and Davis (1962) revealed that no specific personality characteristic correlated with the alcoholic personality, and that it was primarily related to social deviance. Other studies using the MMPI alcoholism scales had found that both depression and dependency are characteristic of alcoholics (Button, 1956a, 1956b).

Thus, the issue has not been clearly resolved. Some writers (e.g., Karp and Kornstadt, 1965; Podolsky, 1962) feel that there is, in fact, a specific alcoholic personality; the majority (e.g., Jellinek, 1952; Hoff, 1965, in his literature review on the topic), however, seem to doubt that this is the case. A number of researchers point to immaturity and dependency as the most pervasive characteristics of the alcoholic (Karp and Kornstadt, 1965; Karp, Witkin and Goodenough, 1965), and that these factors in turn cause additional feelings of inadequacy and loneliness. Podolsky (1962) concluded his series of studies on the alcoholic by saying that the alcoholic is primarily an inadequate personality who tends to respond inadequately to everyday psychological and physical demands. He added that the alcoholic turns to drinking in order to feel able to cope, and to achieve some sort of emotional stability.

Coleman (1976) does not agree with the above assessment. He holds that there is no alcoholic personality type, but that such people often

have set their levels of aspiration too high, and are too immature to cope with failure, in addition to being passive dependent. Hoff (1961, 1965) in his literature reviews in the area, also concluded that there is no single alcoholic personality, although they do tend to be characterized by certain traits. These traits include dependence, inadequacy, and a poor tolerance for tensions.

Due to the nature of retroactive experimentation with alcoholics, it has yet to be determined if a particular type of personality predisposes a person to becoming an alcoholic, or if the effects of drinking result in the personality patterns which may be thought of as characterizing the alcoholic personality. To complicate matters, an additional difficulty with attempting to diagnostically categorize the alcoholic is that the time period during which the testing is done may be primarily responsible for the results obtained, rather than the alcoholic's personality being the major determinant. Vanderpool (1969) used both the MMPI and the 16 Personality Factor Questionnaire to test alcoholics immediately after withdrawal from alcohol and 60 days later. He found that the neurotic profiles found by Fuller (1966) were an artifact of the withdrawal from alcohol, rather than being characteristic of the alcoholic personality. This concurs with the results found by Hill, Haertzen and Davis (1962). These studies, then, point up several possible problems with Cattell's work using the music preference test with alcoholics.

Cattell and Anderson (1953) do not mention at what period during treatment the alcoholics were tested, nor what the diagnoses applied to the subjects were. It is entirely possible that the different results obtained in the replication of the experiment by Healey may have been due

to factors involving differences in the stage in the treatment period at which the testing took place. Such results could also have been due to a differential composition of personality disorders in the two studies, as well as to the cultural factors mentioned earlier.

In the present study, it was decided not to test any subjects during the 96-hour period immediately following cessation of drinking. There appear to be three major types of abstinence symptoms manifested in this 96-hour period (Bourne and Fox, 1973): (1) A state of tremors and hallucinations, peaking about 24 hours after cessation of drinking; (2) convulsive seizures, usually occurring 7-48 hours after withdrawal; (3) delirium tremens, which tends to occur after 72-96 hours without drinking. Since the various withdrawal symptoms seem to manifest themselves primarily during this initial 96-hour period, it was decided to do all testing after this period, when the stress of withdrawal is still extent, but when confounding with the effects caused by biochemical imbalance and psychomotor distortions during the first four days has been reduced. Retesting subjects after approximately four weeks, during which time therapeutic measures had been initiated, might allow assessment of changes in music preferences and personality which may occur due to therapy and abstinence from alcohol. Such retesting would also indicate which factors on the music test tend to remain stable. Correlations between the two tests will be calculated to determine which factors may be significantly related to the alcoholic personality, and hopefully give insights into what personality characteristics in the alcoholic are related to particular music preferences.

It is expected that if an alcoholic personality type exists, as

Cattell's work seems to imply, it should result in characteristic modes of responding on the Music Preference Test. It would further be expected that correlations between the first music test and the first self-concept rating would not significantly differ from the correlations between the second set of tests. That is, if music preferences reveal traits, they should remain fairly stable over a four-week period. On the other hand, if the test is susceptible to state influences, it would be expected that the music preferences would differ significantly depending upon the time of testing. Furthermore, by comparing the music preferences with responses on the self-concept scale it might help explain how changes in self-image or temperament are projected through music preferences.

Thus, it was decided to use the IPAT Music Preference Test (MPT), developed by Cattell, to see if the factors which he feels are characteristic of alcoholics consistently reappear when different samples are used. The seven music factors (MF 1, 3, 4, 5, 7, 8, and 11) which Cattell had found to be reliable, and one additional factor (MF 6) upon which Cattell had found alcoholics to score particularly low, were selected for examination.

The Tennessee Self-Concept Scale (TSCS) was employed in order to compare music preferences with personality traits and self-concept, and to see if changes in one's personal adjustment are accompanied by changes in musical preference. For the purposes of this study, a scale was desired which would provide valid and reliable indices of psychopathology, could provide some index of the self-concept, could be easily administered to alcoholics in groups, and would require an hour or less for completion. Indices of psychopathology were needed in order to test

some of Cattell's hypotheses regarding the relationships between personality traits and music preferences of different clinical groups. A self-concept measure was desired in order to see if there was a relationship between the way an alcoholic views himself (e.g., in a generally critical, debasing manner) and the way in which he would react to music (e.g., a tendency to dislike most music, perhaps with a preference for gloomy music). After considering the above factors, it was decided to use the TSCS. Use of the MMPI was ruled out because it was too long a test, and its shortened versions, such as the Mini-Mult, have not been demonstrated to have acceptable validity and reliability. Most of the alcoholics tested have poor reading abilities, and their vocabularies are not very extensive. This precluded usage of certain adjective checklists which require knowledge of the meanings of words with which most of the alcoholics are unfamiliar. Thus, the TSCS was chosen for both practical and empirical reasons.

The TSCS is easily administered to alcoholics, and has been demonstrated to have acceptable validity and reliability (e.g., Vanderpool, 1969). Vanderpool used the TSCS with alcoholics and found that alcoholics have poor self-concepts, and have confusion, contradiction and general conflict in self-perception. It would be interesting to see if such confusion would be projected through music preferences.

Since not all of the scales on the TSCS are relevant to the purposes of the present study, the following scales were selected as most relevant to be used: Self-Criticism, Total Variability, Total Positive, Defensive Personality, General Maladjustment, Psychosis, Personality Disorder, Neurosis, and Personality Integration. It is hypothesized that

Self-Criticism in alcoholics would be higher than average (T scores of 50), and dissatisfaction with the self might be related to one being critical of one's environment; or, conversely, to being critical of one-self but not of external stimuli. This might be indicated if Self-Criticism correlated with MF 11, on which high scores reflect disliking more aspects of music than one likes.

High scores on Variability would be expected in the present study, as they indicate that one is insufficiently integrated, and this might be projected through a fragmented approach to music--e.g., liking and disliking musical selections which have the same qualities, within the same music factor. Cattell found MF 7 to be related to personality disintegration, and this could be tested through the relationship of Variability (and Personality Integration) to MF 7.

High scores on Total Positive reflect self-acceptance and self-esteem, and would be expected to be below average in the present sample of alcoholics. Total Positive might also be expected to be associated with high scores on MF 4, which purportedly reflects self-confidence, among other personality factors.

The clinical scales (Defensive Personality, General Maladjustment, Psychosis, Personality Disorder, Neurosis, and Personality Integration) were selected to measure the degree of psychopathology among the alcoholics, and to test Cattell's hypotheses regarding associations between scores on the music factors and certain types of psychopathology. Cattell had found that particular clinical groups, such as alcoholics, psychotics, manics and paranoids, score high or low on certain music factors, and that these music factors indicate certain personality traits. For ex-

ample, psychotics were supposed to score particularly low on MF 1, 3, and 8, and particularly high on MF 7. It would be expected, therefore, that scores on Psychosis would correlate with these music factors. High scores on MF 7 correlated with neuroticism in Cattell's study, and would be expected to correlate with Neurosis in the present study. General concern and anxiety were found by Cattell to be associated with high scores on MF 6. If this is true, General Maladjustment should correlate with this music factor. As mentioned above, PI would be expected to correlate with scores on MF 7. Defensive Personality might be expected to be related to scores on MF 1, which correlates negatively with "paranoid schizothymia", and to scores on MF 4, on which self-confident people were found by Cattell to score high. Personality Disorder was included to see if this scale was associated with any particular scales on the MPT. If PD correlates with any music factors, those factors could be tested in further research to determine if they are useful diagnostic indicators of personality disorders.

Additional hypotheses which were formulated were that scores on the MPT would remain relatively stable over the course of therapy; that is, there would be no significant changes on MPT scores between the pretests and posttests of the group which was retested. It was also expected that TSCS scores would change significantly between pretesting and posttesting. Ashcraft and Fitts (1964) found that the self-concept, as judged by the TSCS, improves significantly over the course of therapy, and that psychopathology decreases. Expected changes, then, would be that Variability, General Maladjustment, Psychosis, Personality Disorder, and Neurosis would decrease, and that Total Positive and Personality

Integration would increase. These results would parallel the changes found by Ashcraft and Fitts.

CHAPTER 2

METHOD

Subjects

Fifty-three male alcoholics from Chicago's Alcoholic Treatment Center were tested. All of the men were volunteers, and were tested between February 25, 1977 and May 2, 1977. Subjects had to be able to read English sufficiently well to complete the TSCS. The average age of the men in the sample was 37 years and ages ranged from 22-59 years. Thirty-three blacks and 20 whites were tested.

Measures

The following scales of the Tennessee Self-Concept Scale (TSCS) were used: Total Positive, Total Variability, Defensive Personality, General Maladjustment, Psychosis, Personality Disorder, Neurosis, Self-Criticism, and Personality Integration. Fitts (1965) indicated that the test-retest reliability with 60 college students over a two-week period ranged from a low of .67 to a high of .92 on the scales being used in the present study. The only scales with a reliability of less than .80 were Self-Criticism (.75) and Total Variability (.67). A study with psychiatric patients produced a coefficient of .88 for Total Positive Scores.

Validity in a scale such as the TSCS is difficult to express in a single statistical index, since there is no single instrument that purports to measure the same dimensions of the self-concept. The author,

however, has indicated validity of one or more of the scale scores when comparable scores are obtained on other tests such as the MMPI (Fitts, 1965).

The following factors on the Music Preference Test (MPT) were used: Music Factors 1, 3, 4, 5, 6, 7, 8, 11 (Cattell and Saunders, 1954). Reliabilities of the seven factors ranged between .43-.83. The reliability coefficient of MF 6 was .18.

The validity of the MPT has been indicated in studies by Cattell and Saunders (1954) which showed relationships between music factors and personality factors on the 16 PF Questionnaire. Mayeske (1962) cited findings that certain MPT scores were related to MMPI scores, to factors on the 16 PF, and to the Objective-Analytic Personality Test. In research specifically testing differences between normal and mental patients, Cattell and McMichael (1962) confirmed earlier research in showing that the MPT factors discriminated significantly between groups. Their results showed various factors discriminated between "organics, schizophrenics, sociopathic personalities, paranoids, psychoneurotics, total abnormals and normals." Further confirmation of the validity of the MPT is noted in Cattell and Eber (1962).

Procedure

Thirty-five subjects were administered the MPT and the TSCS after having been at the treatment center between 4 and 10 days. This group constituted the pretest group. The posttest only group consisted of 18 patients who were administered the MPT and the TSCS after they had been at the center for at least four weeks. The retest group consisted of 14 patients from the pretest group who were readministered both tests after

being in treatment for at least four weeks.

Patients were administered the TSCS and the MPT in groups of two to ten persons. The experimenter administered all of the tests. The TSCS was given on Friday afternoons, following one hour of free time. The MPT was administered to the same group on the following Sunday afternoons. The MPT was recorded onto a 3M Scotch magnetic tape, and played on a Wollensak tape recorder to increase ease of administration. Standard administration procedures for both tests were used.

CHAPTER 3

RESULTS

Table 1 presents the means and standard deviations for all of the alcoholic groups for all factors on the MPT and on the TSCS. A t-test for related measures was performed on the scores of the MPT and the TSCS scales for the pretest-retest group, to see if there were significant changes on musical preferences or on personality factors due to variables intervening between pretesting and posttesting. The only significant difference was on MF 11, for which subjects scored higher upon retest, $t(13) = -2.66, p < .02$. A series of t-tests comparing the posttest-only and retest groups showed no significant differences between them on any of the MPT and TSCS scores. Results of all t-tests appear in Table 2. This allowed the posttest-only and retest data to be combined for a posttest group in a later correlational analysis. It also showed that there was no significant testing effect, nor did the testing facilitate or decrease effects of therapy on the MPT or TSCS scores. These scores were consistent with the hypotheses for the MPT, in that changes in scores were not expected between pretesting and posttesting. However, they were not in accord with the hypotheses regarding expected changes in the direction of improved self-concept and adjustment on the TSCS.

A correlation matrix was computed for the pretest group, correlating the eight scales on the MPT with the ten scales on the TSCS and with age and race. All significant correlations are listed in Table 3. The

Table 1

Means and Standard Deviations of MPT and TSCS Scores For All Groups

<u>Variable</u>	<u>All Pretests</u>		<u>Posttest Only</u>		<u>Retests</u>	
	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>
MF 1	7.07	2.06	6.28	2.11	6.85	2.44
MF 3	5.00	2.60	4.94	2.58	4.14	3.42
MF 4	9.07	1.14	9.44	.92	8.57	1.83
MF 5	4.36	3.30	5.06	3.32	5.50	2.85
MF 6	5.21	3.36	4.56	3.43	5.29	3.27
MF 7	4.14	3.50	3.56	2.57	4.14	3.13
MF 8	7.00	1.92	7.39	2.00	7.43	1.40
MF 11	6.29	2.97	8.72	1.99	7.93	2.76
Variability	52.00	15.61	49.94	15.08	46.86	11.35
Total Positive	306.57	51.41	303.28	31.61	316.21	48.36
Defensive Personality	54.00	18.15	47.89	10.66	54.93	16.45
General Maladjustment	84.50	4.84	84.44	9.97	87.79	16.09
Psychosis	54.21	7.07	51.56	6.50	52.43	7.03
Personality Disorder	58.50	16.55	58.94	10.28	62.43	14.61
Neurosis	73.36	17.08	69.78	11.02	74.79	14.83
Personality Integration	6.00	2.72	7.83	3.60	7.07	4.16
Self-Criticism	35.50	6.59	36.28	4.48	35.86	6.29

Table 2

The t-Test Comparisons for Scores of Pretest-Posttest Group
and Posttest-Only with Retest Group

<u>Variable</u>	<u>Pretest-Posttest Group t Value¹</u>	<u>Posttest-Only Group with Retest Group t Value²</u>
MF 1	.39	-.72
MF 3	1.07	.76
MF 4	.94	1.76
MF 5	-1.30	-.40
MF 6	-.08	-.61
MF 7	.00	-.58
MF 8	.97	-.06
MF 11	-2.66*	.95
Variability	1.17	.62
Total Positive	-1.15	-.91
Defensive Personality	-.37	-1.47
General Maladjustment	-1.07	-.72
Psychosis	1.05	-.36
Personality Disorder	-1.74	-.79
Neurosis	-.43	-1.10
Personality Integration	-1.09	.55
Self-Criticism	-.20	.22

* $p < .05$

¹For these t values, df=13

²For these t values, df=30

Table 3

Correlations of Age, Race, MPT Factors and TSCS Scales for Pretest Group

	Age	Race	MF1	MF3	MF4	MF5	MF6	MF7	Total Posit.	Defen. Person.	Gen. Maladj.	Person. Disor.	Self- Crit.
MF1	.59***												
MF4	.56***												
MF5			-.33*		-.46**								
MF7	-.81***		-.55***		-.60***	.53***							
MF8			.37*	.46**	.51**								
Defensive Personality							.38*		.78***		.62***	.65***	-.58***
General Maladjustment							.35*	-.38*	.78***				
Psychosis						-.41*							
Personality Disorder									.88***		.74***		
Neurosis									.83***	.80***	.73***	.74***	-.55***
Personality/ Integration			.34*										
Self-Criticism									-.61***		-.46**	-.61***	

* p < .05 ** p < .01 *** p < .001

same 20 scales were intercorrelated for the posttest groups. These results are listed in Table 4.

In order to see how the present alcoholics scored on the MPT in relation to Cattell's standardization group of normals, comparisons using z scores were made. The z scores were computed using the means and standard deviations from Cattell's normal group. Results are presented in Table 5. The alcoholics scored significantly higher than the normals on MF 1, MF 4, MF 5, MF 8, and MF 11, regardless of whether they were in the pretest, posttest or retest group. Alcoholics in the retest and posttest-only groups scored significantly lower than the normals on MF 6. There were no significant differences between normals and alcoholics on MF 3 or on MF 7.

Cattell had found that "psychotics scored lower (than normals) on factors 1, 3 and somewhat (lower) on 8; and higher on 7 and 9 (than normals)." In the present investigation, the Psychosis scale on the TSCS did not correlate with any of these factors. When Cattell had correlated his music factors with factors on the 16 PF Questionnaire, he had found that a high score on MF 1 correlated negatively with paranoid schizothymia and nervous tension, indicating that MF 1 is associated with adjustment and peace of mind. In investigating this further, Cattell and Anderson (1953) found that alcoholics had average or low scores on this factor, as compared with normals. Unexpectedly, alcoholics scored significantly higher than normals in the present study, and yet there was no indication that the alcoholics were adjusted and felt peaceful. In addition, MF 1 did not correlate with any of the scales on the TSCS which would reflect adjustment. These results, when con-

Table 4

Correlations of Age, Race, MPT Factors and TSCS Scales for Posttest Groups

	Age	MF1	MF4	MF5	MF6	MF8	Var ¹	Total Posit.	Defen. Person.	Gen. Maladj.	Psychosis	Neurosis	Self- Crit.
Race				.38*		-.47**							
MF1	.44**												
MF3	-.39*				.41*								
MF4	.57***			-.49**									
MF5						-.54***							
MF6							-.42*						
MF7	-.59***	-.39*	-.42*									-.41*	
MF8												.44*	
MF11													.36*
Total Positive													
Defensive Personality								.85***					
General Maladjustment								.91***	.71***				
Personality Disorder							-.39*	.83***	.65***	.69***			.72***
Neurosis							-.44**	.93***	.79***	.82***			-.69***
Personality / Integration							-.36*					-.50**	
Self-Criticism								-.59***	-.50**	-.59***			-.56***

¹Variability

Comparisons of MPT Scores Between Pretest, Posttest
and Retest Alcoholics and Cattell's Standardization Group of Normals

<u>Factor</u>	<u>Group</u>	<u>Mean</u>	<u>SD</u>	<u>z</u> [†]
MF 1	Posttest Only	6.28	2.11	2.60**
	Pretest	7.07	2.06	4.097***
	Retest	6.85	2.44	3.13**
	Normals	4.79	1.97	
MF 3	Posttest Only	4.94	2.58	.80
	Pretest	5.00	2.60	.79
	Retest	4.14	3.42	.34
	Normals	4.45	1.98	
MF 4	Posttest Only	9.44	.92	10.15***
	Pretest	9.07	1.14	6.05***
	Retest	8.57	1.83	5.66***
	Normals	7.21	2.97	
MF 5	Posttest Only	5.06	3.32	2.50*
	Pretest	4.36	3.30	1.07
	Retest	5.50	2.85	3.39***
	Normals	3.52	1.57	
MF 6	Posttest Only	4.56	3.43	-3.04**
	Pretest	5.21	3.36	-2.00*
	Retest	5.29	3.27	-1.98*
	Normals	7.02	1.50	
MF 7	Posttest Only	3.56	2.57	-.02
	Pretest	4.14	3.50	.61
	Retest	4.14	3.13	.68
	Normals	3.57	1.69	
MF 8	Posttest Only	7.39	2.00	7.41***
	Pretest	7.00	1.92	6.10***
	Retest	7.43	1.40	9.47***
	Normals	3.83	2.19	
MF 11	Posttest Only	8.72	1.99	12.74***
	Pretest	6.29	2.97	4.46***
	Retest	7.93	2.76	7.03***
	Normals			

* $p < .05$

** $p < .01$

*** $p < .001$

† These z scores for the MF factors were computed using the Means and Standard Deviations of the Cattell normal standardization group. Thus, a z of greater than 1.96 indicates that the alcoholic sample of the present study differs significantly from the normals in Cattell's normative sample.

sidered together with the results of Healey (1973) who found that alcoholics scored the same, or higher than normals on MF 1, cast doubt on Cattell's assertion that the MF 1 measures the personality characteristics which he had suggested in the MPT Handbook (Cattell & Eber, 1962).

Cattell not only correlated the music factors with personality traits, but he also correlated the music factors with each other. In the present study, MF 1 correlated negatively with MF 7 for all groups, as Cattell had predicted. The musical interpretations for MF 1 and MF 7 would be consistent with a negative relationship between the two factors since high and low scores, respectively, on the factors indicate a preference for fast, stimulating music and a dislike of moody, slow music. On the other hand, the personality interpretation of MF 7 is not consistent with the results found in the present study. Cattell found that high scores on MF 7 correlated with neuroticism, and that alcoholics tended to score high on it. In the present study, however, alcoholics had the same scores as normals on MF 7, and high scores on MF 7 were associated with adjustment in the pretest group, and with the absence of psychosis in the posttest group. These results suggest that although the music interpretations of MF 1 and MF 7 may be valid, there is no support from the present study, nor from the results of Healey, for the generalization of the personality interpretations given by Cattell to these two factors when alcoholics were tested. That is, musically MF 1 and MF 7 may have been inversely related to each other; however, there was no indication in the present study that the population of alcoholics tested by Cattell was the same as that in the present population, and therefore, the personality interpretations made by Cattell for MF 1 and 7 did not

apply to the present sample.

The trend of the present results, and those of Healey, in contradicting the results of Cattell continued when other music factors were considered. Cattell had found alcoholics scored "decidedly low" on MF 3, whereas the present investigation found no significant differences between the scores of the normals and the alcoholics on this factor. Furthermore, MF 3 tended to be associated with adjustment in the pretest group of alcoholics, while Cattell had found high scores on MF 3 correlated with bohemianism (unconventionality, self-centeredness, and lack of concern for others). He further noted that schizoids tended to score high on this factor, which is inconsistent with the present finding that high scores were associated with adjustment.

As with the inconsistencies found between the present results and those noted by Cattell for MF 1, 3 and 7, the results on MF 4 did not support Cattell's hypotheses. The present alcoholics scored high on MF 4, which according to Cattell reflects "tough maturity, dominance, surgency, being carefree, somewhat insensitive, and liking crowds and crowd standards." He described people who scored high on this factor as being self-confident, and having easy, forceful interactions with people. This would not be an appropriate description of the alcoholics in the present study, but there were no correlations between this scale and scales on the TSCS to either support or refute Cattell's interpretation. However, Healey's findings that psychiatrically disturbed patients scored significantly higher than normals on this factor decreases the likelihood that Cattell's interpretation is generalizable. Also, Cattell had noted that "the score on this factor declines significantly with age," which

contradicted the finding in the present study that scores on this factor tended to increase with age.

On the other hand, the results for MF 5 were consistent with those of Cattell, as MF 5 correlated negatively with MF 4 in the present study, and Cattell found MF 5 to correlate negatively with the "touch maturity" component of MF 4. Furthermore, alcoholics in the posttest groups did score high on MF 5, as Cattell had predicted, which is in contrast with the tendency of the alcoholics tested by Healey to score low on this factor.

Despite the fact that some of the present results were consistent with those of Cattell, it seems necessary to question whether the reasons for which alcoholics scored this way were identical in both studies. In the present study, the interpretation offered by Cattell as to which personality traits are associated with MF 4 and MF 5 was neither supported nor refuted by relationships with TSCS scales. It is possible that esthetic preferences, rather than personality traits, are reflected in the relationship between MF 4 and MF 5. This would mean that people who, in our culture, tend to like jazz and similar music would tend to dislike subtle melodies, irrespective of their personality traits. This may reflect a cultural training, or a general lack of high sensitivity to nuances in music. (It would be interesting to see if the inverse relationship between MF 4 and MF 5 would hold if music students were tested.)


In continuing the comparison of the present results with those of Cattell on the MPT, one again finds contradictions for MF 6. Cattell had found this factor to correlate with general concern and anxiety; in contrast, the present results showed it to be associated with freedom

from general maladjustment and freedom from defensiveness in the pretest group of alcoholics, and with good integration in the posttest groups.

For MF 7, results both in support of and in conflict with those of Cattell were found. In support, the present study found this factor to correlate with general maladjustment, and Cattell thought that this factor reflected deterioration of personality integration. However, Cattell had indicated that alcoholics and abnormals score high on this factor, which he also found was associated with neuroticism. In the present study, alcoholics scored the same as normals on MF 7, and in Healey's study, they tended to score lower than normals. Furthermore, MF 7 did not correlate with neuroticism or lack of personality integration on the TSCS but it did correlate with lack of psychosis, indicating that Cattell's interpretation of this factor does not seem to apply.

A partial agreement between the results of the present study and those of Cattell was found with MF 8. Both studies found alcoholics tending to be high on this factor score. However, the present results and those of Cattell again were in disagreement on the factors related to MF 8. Cattell found that a high MF 8 score had a slight correlation with general neuroticism, and with "adventurous cyclothymia." Here, in the posttest group, high scores were associated with psychosis, whereas Cattell had found low scores on MF 8 to be related to pre-psychotic states.

The trend of finding disagreement between the results of Cattell and the present study continued with MF 11. The MF 11 score was thought to be a measure of a tendency to rigidity, hostility, and withdrawal; here, high scores on the scale were related to a healthy openness for



self-criticism in the posttest groups. Again, Cattell's interpretation of the traits reflected in this scale seem to be inapplicable to the population used in the present study.

CHAPTER 4

DISCUSSION

Although it was originally suggested in this paper that cultural differences may have been responsible for the differences between the results obtained by Healey and Cattell, this seems unlikely when viewed in the context of the results from the present study. The only music factor on which the alcoholics in the present study scored as would have been predicted by Cattell was on MF 5. The scoring patterns for MF 1, 4, 7 and 8 were consistent with those found by Healey for alcoholics. Since Healey found no significant differences between the way alcoholics, normals and psychotics in his study scored on many of the music factors, it is likely that had a control group of normals been used in the present study their music preferences would not have differed significantly from those of the alcoholics.

Thus, the present investigation has cast further doubt on Cattell's hypothesis that the MPT can be used to measure certain personality traits in alcoholics. It is doubtful that Cattell's correlates of personality with music factors can be generalized to populations other than the ones on which he standardized his norms and tested in a hospital setting. Although the present alcoholics differed significantly from Cattell's normals, it seems likely that Cattell's normal population would differ significantly from a current normal population, particularly if age and education were comparable to those in the present alcoholic sample. The

present results suggest the possibility that the musical selections played on the MPT do not appeal differentially to different clinical or normal groups, nor differentially to people in American or Australian cultures. That is, although most of the alcoholics in the present sample tended to respond with high scores on certain scales (especially on MF 1, 8, and 11), it seems likely that other groups taking the test would also obtain high scores on these factors.

Not only were there no significant differences between the retest and posttest-only groups, but there were no significant differences between the pretest and posttest responses of subjects taking the MPT twice. The MPT did not seem to be susceptible to any influences that occurred between pretesting and posttesting; however, one cannot infer from the lack of changes between testing periods on the MPT that personality traits of the subjects did not change. Other factors may more parsimoniously account for these results, such as one's sensitivity to musical fidelity, preference for orchestral music over piano music, and the qualitatively poor sound reproduction of certain pieces on the record which may be reflected more in the pieces of certain factors than in others. That is, the stability between responses by the same subject upon pretesting and retesting may not have reflected personality traits at all--any relationships between the music factors and the TSCS may have been spurious, and other factors unrelated to one's personality may better account for the music preferences which were observed (such as musical training).

Thus, the idea that Cattell presented, that alcoholics may have particular personality traits distinct from other groups, which are pro-

jected through the MPT, did not receive support in the present investigation. Not only did the present results tend to contradict the relationships that Cattell found between scores on particular music scales and personality characteristics, but there was little cross-validation of correlations between the MPT and the TSCS for the pretest and posttest groups.

Although the separate responses to the MPT and to the TSCS were not significantly different between the pretests and the posttests of the group that was retested, the scales which correlated between the two tests did differ between pretesting and posttesting. This suggests several possibilities: (1) that the MPT is not sensitive to any changes in personality measured by the TSCS, so that responses to the MPT remain fairly stable even if changes in self-concept or personality adjustment occur; (2) that responses on the MPT are not a reflection of personality traits, but are primarily a reflection of the musical composition of the pieces played on the MPT and one's sensitivity to musical qualities; or (3) that scores on some factors on the MPT are, in part, a reflection of one's personality; however, the association between music preferences and personality in alcoholics is modified according to whether an alcoholic is in the early or late stages of a treatment program. These modifications may consist of the person becoming less disturbed over the course of therapy, such that he becomes less psychotic, depressed, anxious, etc. This may result in an increased capacity to become more attentive to certain features in his environment, of his being less critical, and/or of his taking more time to evaluate his environment after treatment than upon entering therapy.

The TSCS results indicated that no significant changes occurred in the alcoholics' self-concepts or psychological adjustment between pre- and posttesting. However, the trend was for changes to occur in the direction of improvement in self-concept and psychological adjustment--with a larger sample, these changes toward improvement might have been significant. The pattern of T scores above or below the mean suggested that there was a tendency for alcoholics to have somewhat low self-esteem and personality integration, some indications of general maladjustment and personality disorders, and some manifestations of neuroses or psychoses. But, one cannot unequivocally make this statement since there was no equivalent control group. (Such a control group would consist of non-alcoholics from the same or similar socio-economic backgrounds, educational background, living in the same areas, of the same ages, working at similar jobs, and with the same types of psychopathology, excluding alcoholism per se.)

As would be expected, high variability in self-concept between different areas of self-perception was associated with personality disorder, neurosis, and personality disintegration in the posttest group. The scores on Variability for all of the pretested alcoholics were approximately the same as those of the psychiatric patients tested by Fitts in his validation of the TSCS; upon retest these scores of the alcoholics in the present study were closer to those of the normals in Fitts' standardization group. This suggests the possibility mentioned above, that with a larger sample of alcoholics significant gains in therapy might have resulted.

Several empirical scales on the TSCS were found to inter-correlate,

implying that an alcoholic with a positive self-concept is likely to be somewhat defensive, but generally adjusted and free from personality disorders and neurosis. These inter-correlations of factors were consistent with those found by Fitts in his groups of psychiatric patients and normals who were used in standardizing the TSCS. Paradoxically, however, alcoholics in the present sample who presented positive self-concepts had them associated with defensiveness and a deliberate effort to present a favorable picture of themselves. A tentative explanation for the association of adjustment with defensiveness in these alcoholics is that they may, by becoming defensive, make themselves less vulnerable, and therefore less subject to interpersonal difficulties and stresses. It would be interesting to investigate if alcoholics who are less defensive tend to be more anxious, depressed, and maladjusted when they are not in a treatment program, or if defensiveness in alcoholics is a generalized method which they adopt in coping with the world.

It has been seen, therefore, that one difference between normals and the alcoholics in the present sample is that normals with positive self-concepts have a healthy openness and capacity for self-criticism, whereas adjusted alcoholics tend towards a defensive rigidity. Despite these differences, the present alcoholics differed as well from the psychiatric patients used in Fitts' study (1965). The present alcoholics had lower Total Positive and Personality Disorder scores than did those of Fitts' patient group, indicating low self-esteem and personality disorders. Also, Psychosis scores were higher for the alcoholics than for the patient group. Thus, there were differences between the alcoholics' patterns of responding on the TSCS and those of both normals and psychia-

tric patients. Although it is possible that some of the alcoholics responded as would psychiatric patients, the alcoholics as a group did not. Furthermore, there was quite a lot of variation between the scores of alcoholics within the same group--some alcoholics had all of their scores within the normal range, while others scored above the normal limits on at least three of the empirical scales, and below the normal limits on Personality Integration.

Relating to the question of whether there might be "an alcoholic personality," the above results seem to cast doubt on this idea. Although the alcoholics as a group tended to have low self-esteem, low personality integration and some general maladjustment, there did not seem to be enough consistency between the protocols of the alcoholics tested to conclude that there is "one" alcoholic personality type. Some of the patients were probably psychotic and many scored high on the neurosis scale. However, this study did not support Cattell's hypothesis regarding the particular pattern of responding which is supposed to characterize the alcoholic on the MPT. This study did not provide a test of whether or not alcoholics tend to be immature, dependent, or inadequate personality types. Results did suggest, however, that the nature of one's psychopathology may predict one's music preferences more adequately than would whether one is an alcoholic or not. Since the present sample of alcoholics was very heterogeneous, the MPT might be more informative in indicating a given person's adjustment, rather than whether or not one is an alcoholic. Since certain of the TSCS scales did correlate with certain MPT scales, even if they were not cross-validated upon retesting, there was a consistency between a scale correlating with indices of

pathology, even if the index did not remain the same, between the pre-test and posttest groups. Simply knowing that someone is an alcoholic may not help in differentiating his music preferences from those of other alcoholics, or possibly even from normals.

It should be noted that the present study had some important limitations. To begin with, the present sample of alcoholics was quite heterogeneous. Some of the alcoholics would probably have a primary diagnosis of alcoholism, while others would have a primary diagnosis of psychosis, personality disorder, etc. For these latter subjects alcoholism may be a secondary characteristic. The alcoholic personality hypothesis would not be appropriate to this latter group, but since the alcoholic treatment center did not classify alcoholics according to such diagnoses, it was not known how many of the men in the present sample would have a primary diagnosis of alcoholism.

All of the subjects were volunteers, and needed to have about a sixth-grade reading ability. Certain alcoholics were excluded from the sample--e.g., if they were negativistic, heavily sedated, had extensive brain damage, or were illiterate. Furthermore, all of the alcoholics were drawn from a municipal alcoholic treatment center. The results may have been different, particularly on the TSCS, had the sample been drawn from a private hospital or from a different treatment center.

Healey tested patients from a hospital which probably resembled the center from which the present sample was drawn, and most of his results on the MPT were cross-validated in the present results. As noted previously, these patterns of scores may be similar for most people taking the test, regardless of the presence of psychopathology. However, differ-

ences might be expected on the TSCS if another sample of alcoholics from a different institution were tested. Furthermore, had a different personality test been used, rather than the TSCS, correlations between the MPT factors and personality traits may have been different than in the present study.

Summary

The present findings did not show the MPT to be a useful diagnostic or prognostic indicator for use with alcoholics. The present investigation showed that alcoholics' scores on the MPT differed significantly from those of the alcoholics tested by Cattell and Anderson (1953) on MF 1, 3, 6, and 7. Further support for the present findings came from Healey's (1973) results, which agreed with the present findings on MF 1 and MF 7. In further disagreement with Cattell, the correlations of scores on the TSCS with the music factors tended to contradict his personality interpretations on MF 1, 3, 6, 7, 8 and 11. This, together with the finding that the music factors' associations with scales on the TSCS did not cross-validate between the pretest and posttest groups suggested that the MPT is not a useful tool for personality assessment of alcoholics. In addition, it disconfirms the hypothesis that the alcoholics which Cattell tested, and those in the present study, were from the same population.

In future studies involving music preferences and alcoholics (or other groups), it seems reasonable for investigators to design their own music preference test rather than replicating experiments using the MPT. The music factors on the MPT may have effectively discriminated between normal and clinical groups between 1953-1962, but the fidelity and se-

lection of the musical compositions needs to be updated. One approach to use in revising the MPT would be to take musical selections consisting of the same musical qualities as on the MPT factors (e.g., certain rhythms, complexities, melodies, etc.), and see if alcoholics and normals prefer different kinds of music, and if the preferences are consistent with those found by Cattell. However, the results of the present, and other recent studies, indicate that further investigations using the MPT, in its current form, with alcoholics for purposes of personality assessment will probably bear little fruit.

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APPROVAL SHEET

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The final copies have been examined by the Director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the thesis is now given final approval by the Committee with reference to content and form.

The thesis is therefore accepted in partial fulfillment of the requirements for the degree of Master of Arts.

7/14/77
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