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THE UNIVERSITY OF ALBERTA

Counselling with Background Music

by

Hilton Devlin

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

OF MASTER OF EDUCATION

IN

COUNSELLING PSYCHOLOGY

Department of Educational Psychology

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FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled Counselling with Background Music submitted by Hilton Devlin in partial fulfilment of the requirements for the degree of Master of Education in Educational Psychology.

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Supervisor

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Date Feb. 24, 1986

Dedication

To my parents, without whose support and sacrifices

I would not be where I am today.

Abstract

The intent of this study was to explore the effects of a background of soft, instrumental music, from the baroque era, on depth of client self-exploration, in counselling dyads. Three music conditions were compared: Lively (120 beats per minute), slow (60 beats per minute), and no music. It was hypothesized that both the "lively" and the "slow" conditions would be associated with significantly greater depth of client self-exploration than would the "no music" condition, and that the "slow" music condition would be associated with significantly greater depth of client self-exploration than would either the "lively" or "no music" conditions. The subjects were twelve female volunteers, with an average age of twenty-one years, from two undergraduate educational psychology courses. The volunteer counsellors were four female graduate students, in their final year of a counselling program. Three female counselling psychologists independently rated audio-taped, ten-minute segments from the thirty-minute counselling sessions, on the nine-point Depth of Client Self-Exploration Scale (Truax & Carkhuff, 1967). An Analysis of Variance of the resulting scores revealed that the background music conditions were associated with significantly greater depth of client self-exploration ($p<.01$), than was the "no music" condition. Between-group t-tests indicated that the "slow" music condition was associated with significantly greater depth of client self-

exploration ($p<.01$) than was the "lively" music condition. Implications for counsellors and for further research were discussed.

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CHAPTER I

INTRODUCTION

> And it came to pass, when the evil spirit from God was upon Saul; that David took the harp and played with his hand: so Saul was refreshed and was well, and the evil spirit departed from him (Old Testament, 1 Samuel).

History and literature are replete with accounts of the almost magical effects of music. Down through the centuries, music has been used for its calming and medicinal effects. Masserman (1973, p.65) cites the use of music in early Greek and Roman "Sanatoria", as "providing aesthetic expression and encouraging group belongingness through feelings of conjoint rhythm and harmony."

Hippocrates is said to have taken his mental patients to the temple to listen to music; the Arabs equipped their hospitals with music rooms in the thirteenth century (Mann, 1950); music was an integral part of the physician's training and practice from 800 A.D. to 1800 A.D. (Taylor, 1981) and, among "primitive" native tribes--for example, the North American Indians (Densmore, 1968)--music has long been part of the healing ritual.

A. Modern Applications

Psychotherapy

In more recent times, music has been widely used as a calming and socializing agent in psychiatric wards (Altshuler, 1944; Altshuler & Shebasta, 1941; Baumel, 1973; Bigelow & Ruben, 1970;

Biller, Olson & Breen, 1974; Bonny, 1968; Daly & Barry, 1957; Dollins, 1968; Gilman & Paperte, 1949; Gutheil, 1954; Hope, 1971; Hunter, 1974; Hyde, 1968; Joynt & Green, 1962; Kahans & Calford, 1982; Licht, 1946; Man, 1950; Michel, 1977; Parriott, 1969; Podolsky, 1939; Rubin & Katz, 1946; Schoen, 1940; Sears, 1968; Shatin, 1970; Shatin & Zimet, 1958; Simon, Holzberg, Alessi & Garrity, 1951; Skelly & Haselrud, 1952; Smith & Morris, 1977; Sommer, 1968; Traub, 1969; Van De Wall, 1936; Weidenfeller & Zimny, 1962).

Medicine

In hospital wards and operating theatres, music has been found to exert a beneficial effect on both staff and patients--reducing fatigue in the former, and calming and distracting the latter (Barrett, 1961; Gatewood, 1921a; Ilsen, 1926; Kane, 1914; Licht, 1946; Light, Haymond, Livingston & Willard, 1949; Light, Love, Benson & Morch, 1949 & 1954; McGlinn, 1930; Naidu, 1982; Padfield, 1976; Pickrell, Metzger, Wilde, Broadbent & Edwards, 1950). In maternity wards, it has been found to ease labor and delivery (Clark, McCorkle & Williams, 1981; Hanser, Larson & O'Connell, 1983), and to calm and quieten newborns (Murooka, 1974; Murooka, Koie & Suda, 1976).

Dentistry

In dental surgeries, background music has masked unpleasant drilling noise and pain, reduced the amount of gas required, and

hastened recovery (Best, 1935; Cherry & Pallin, 1948).

Industry and commerce

Although extensive research into the industrial use of background music, as a morale and production booster, has failed to produce convincing results (Anastasi, 1964; Blum & Naylor, 1968; Gatewood, 1921b; Gladstone, 1969; Kerr, 1945; McBain, 1961; Poock & Wiener, 1966; Uhrbrook, 1961; Young & Berry, 1979) it is, nevertheless still piped into offices, factories and shopping malls as pre-programmed "Muzak". However, background music in supermarkets has been found to significantly influence sales (Donovan & Rossiter, 1982; Milliman, 1982; Smith & Curnow, 1966). Similarly, background music in advertising--as in television commercials--has been found to exert a significant effect upon customers' choice of product (Gorn, 1982; Ostrander & Schroeder, 1979; Wintle, 1979).

Education

In the realm of education, music has been used as a reinforcer for acceptable behaviour (Michel, 1977); to enhance student-teacher relationships (Schuster & Vincent, 1980); to increase verbalization among EMR children in kindergarten (Goolsby, Frary & Rogers, 1974); to calm students, and to improve their examination performance (Blanchard, 1979; Stainback & Stainback, 1973; Stanton, 1973; Williams, 1961); to improve the rate and quality of learning (Caskey, 1980; Hall, 1952; Ostrander & Schroeder, 1979; Prichard & Taylor, 1980); to reduce activity levels in hyperactive children

(Rieber, 1965; Scott, 1970; Windwer, 1981); to improve retention in EMR children (Campbell, 1972; Myers, 1979), and to aid in attention focusing (Borling, 1981; Wagner, 1975). Most studies found calming music to be more effective than stimulating music where educational performance was concerned, and some studies (Smith & Morris, 1976, 1977; Williams, 1961) found that, in the foregoing area, stimulating, or pop music had adverse effects.

Miscellaneous

Some other non-counselling areas in which the effects of music have been examined are: **horticulture** (Retallack, cited in Ostrander & Schroeder, 1979), **skating** (Blum & Naylor, 1968), strength (Pearce, 1981), **physical performance** (Anshel & Marisi, 1978), **driving** (Konz & McDougal, 1968), **sharpshooting** (Mastromatteo, Calderaro & Valentin, 1975), **anxiety reduction** (Rohner & Miller, 1980), **church services** (Leonard, 1981; Shiner, 1966), **bowling** (Beasley, 1982), and **verbal interaction** among groups of university students (Bonny, Cistrunk, Makuch, Stevens & Tally, 1965).

Counselling

Only one study could be found (Mezzano & Prueter, 1974; Prueter & Mezzano, 1973) which examined the effect of background music and, in particular, "stimulating" vs. "soothing" background music, upon verbal interaction in the counselling dyad--the theme of this paper--based upon a functionally normal population which one would expect to find in a "counselling", as opposed to a "clinical", setting. Aside from the study of Bonny, Cistrunk,

Makuch, Stevens & Tally (1965), which examined the effect of background music on verbal interaction among groups of university students, other reports on the use of music in counselling are anecdotal in nature, and involve the use of musical instruments by the clients (Nystul, 1978) or pop music, chosen by the clients, and actively listened-to, whether in groups (Schiff & Frances, 1974), or in dyads (Boyum, 1978).

B. Effect on the Listener

Physiological effects

Some authors suggest that music acts directly upon more primitive parts of the brain--the thalamus--and that the excitation then travels directly to the cerebral cortex, where memories, moods, or actions may be triggered. The process, because the sense of hearing is not easily blocked, and is therefore not really under the control of the hearer, is referred to as the "thalamic reflex" (Altshuler, 1944; Antrim, 1943; Alvin, 1966; Brim, 1978; Cattell & Sanders, 1954; Coriat, 1945; Gatewood, 1921a; Jaynes, 1976; Knapp, 1953; Bardas, Masserman, Ramana, Teller, cited in Noy, 1966; Podolsky, 1939; Taylor & Paperte, 1958).

A number of physiological parameters, such as heart rate (Blanchard, 1979; Ellis & Brighouse, 1952; Gilliland & Moore, 1968; Hyde & Scalapino, 1918; Landreth & Landreth, 1974; Weld, 1912), blood pressure (Blanchard, 1979, Hyde & Scalapino, 1918), breathing rate (Diserens, 1923; Ellis & Brighouse, 1952; Foster &

Gamble, 1926), skin resistance (Dibner, 1958; Henkin, 1957; Misbach, 1932; Peretti, 1975; Phares, 1934; Taylor, 1973; Weidenfeller & Zimny, 1962; Zimny & Weidenfeller, 1963), muscle tonus (Sears, 1958), stomach acid (Demling, Tzschoppe & Classen, 1970), strength (Pearce, 1981), and endurance (Anshel & Marisi, 1978), have been shown to be significantly affected by music. However, the psychological effects of music are more the concern of this paper.

Psychological effects

Other authors (Campbell, 1942; Gatewood, 1927; Hevner, 1935a; Knapp, 1953; Rigg, 1940a; Zink, 1960) postulate that music induces in the listener a generalized affective state. In somewhat similar vein (Leonard, 1981; Lange, Perotti, Pratt, cited in Noy, 1966; Taylor & Paperte, 1958) suggest a "resonance" effect, whereby the bodily rhythms vibrate in unison with those of the music. Other authors (Bardas, Friedmann, Germain, Pfeifer, cited in Noy, 1966; Gutheil, 1954; Coriat, 1945; Kohut, 1957; Margolis, 1954; Sterba, 1946) propose that music's effectiveness depends upon the autoerotic, libidinal pleasures derived from induced regression to the childhood state. This is said to be brought about via musical rhythm--it being a reminder of cradle-rocking and other maternal rhythms--and this would appear to be supported by the recent work of Murooka (1974), and Murooka, Koie and Suda (1976), in the use of intrauterine sounds to calm children. Coriat (1945) also suggests that steady rhythm serves to

release sexual tension. Pleasure is also said to be derived from the alternation of psychic tension (Miller, 1967), or through the ordering, in the mind of the listener, of the "chaos" of musical sound (Kohut & Levarie, 1950).

1. Alpha states

Recent research with biofeedback techniques and music--particularly slow music--indicates that such music is accompanied by an increase in "alpha" brainwaves in the listener (Borling, 1981; McElwain, 1979; McKee, Humphrey & McAdam, 1973; Ostrander & Schroeder, 1979; Wagner, 1975). These "alpha" waves have also been found to predominate in the brainwave patterns of those engaged in yoga (Anand, Chhina & Singh, 1969), Zen meditation (Kasamatsu & Hirai, 1969), and Transcendental Meditation (Wallace, 1970). Calm and pleasurable feelings are said to accompany the "alpha" state (Kamiya, 1969). Lesh (1970), and Grim (1975) have also been able to associate significant increases in empathy and insight with the practice of meditative techniques. Cadoret (1952), Chapman (1984), and Morris, Roll, Klein and Wheeler (1972), have also noted significant increases in ESP (which could be defined as empathy) among those experiencing "alpha" states.

2. Moodshift

Whatever psychological mechanisms are involved, the basic effect, which appears to emerge from the cited research, is that of a "mood shift". With the exception of a few cases, where the music

has had traumatic associations in the hearer's past (Alvin, 1966; Henson, 1978; Michel, 1977); when epileptic seizures have been triggered (Daly & Barry, 1957; Joynt & Green, 1962), or when psychotic patients have reacted unpredictably (Simon, Holzberg, Alessi & Garrity, 1951), the "mood shift" has been in a positive, perceived beneficial direction. The induced feelings may involve calm, arousal, pleasure, "transcendental feelings", "generalized affect", any combination of the foregoing and/or, as some authors (Gatewood, 1927; Lange, Pratt, cited in Noy, 1966) suggest, the experiencing of a variety of emotions, seemingly at the cerebral level, without the concomitant bodily reactions.

Researchers in social psychology, working with non-therapeutic populations, have found an elevated mood to be associated with increase in self-esteem, desire to communicate, receptivity, helpfulness, increased recall of positive material from memory, and attraction toward persons present when the elevated mood is experienced (Batson, 1970; Bousfield, 1950; Donovan & Rossiter, 1982; Dribben & Brabender, 1979; Fried & Berkowitz, 1979; Gouaux, 1971; Griffitt, 1968; Isen & Levin, 1972; Isen, Shalker, Clark & Karp, 1978; Laird, Wagener, Halal & Szegda, 1981; Lott & Lott, 1974; Natale & Hantas, 1982; Strickland, Hale & Anderson, 1975; Wessman & Ricks, 1966).

3. Lessening of anxiety

Music therapists have found that musical involvement by patients, whether it is active--that is, when the patients are

singing, playing instruments, or listening to music--or whether the involvement is merely passive; results in less anxiety; more communication; increased introspection; more helpfulness; more expression of affect, heightened self-esteem, increased sociability; more information-giving; greater receptivity to the communications of others, and greater access to positive memories (Altshuler, 1944; Altshuler & Shebasta, 1941; Baumel, 1973; Bigelow & Ruben, 1970; Biller, Olson & Breen, 1974; Boyum, 1978; Dollins, 1976; Gilman & Paperte, 1949; Gutheil, 1954; Hope, 1971; Hunter, 1974; Hyde, 1968; Kahans & Calford, 1982; Licht, 1946; Mann, 1950; Michel, 1977; Parriott, 1969; Podolsky, 1939; Rubin & Katz, 1946; Sears, 1968; Schiff & Frances, 1974; Schoen, 1968; Shatin, 1970; Shatin & Zimet, 1958; Skelly & Haselrud, 1952; Sommer, 1958; Traub, 1969; Weidenfeller & Zimny, 1962).

A permissive, less structured atmosphere (as engendered by a musical background) has also been found to be associated with heightened interaction. In their efforts to identify the elusive quality or qualities which enable music to act the way it does, researchers have isolated some important variables, namely, the elements of the music itself, the environment in which the music is heard, the listener, and the type of music and the mode of presentation.

C. **Effective Elements of Music**

As far as the elements of music are concerned, mode, pitch, melody, tempo, harmony, tone, and rhythm, both in isolation and in

combinations, have been suggested as being the key "ingredients" (Altshuler, 1944; Alvin, 1966; Blum & Naylor, 1968; Campbell, 1972; Cattell & Sanders, 1954; Cazden, 1979; Clark, McCorkle & Williams, 1981; Dreikurs, 1953; Farnsworth, 1969; Fitzherbert, 1971; Foster & Gamble, 1906; Friedlander, 1954; Gaston, 1952, 1968; Gutheil, 1954; Hanson, 1944; Heinlein, 1928; Henkin, 1955; Heyner, 1934; Ilsen, 1926; Licht, 1946; Bullough, Montani, Mosonyi, Perotti, cited in Noy, 1966; Oswald, 1926; Parriott, 1969; Podolsky, 1939; Rigg, 1940a, 1940b; Schiff & Frances, 1974; Schoen, 1940; Schoen & Gatewood, 1928). If it were possible to say that one element was the key factor which emerged from so many studies over the years, it would be rhythm. However, there is a synergism among the elements of music, as Apel (1969, p.517) for example, notes, "By its very nature melody cannot be separated from rhythm. Each musical sound has two fundamental qualities, pitch and duration, and both of these enter into the successions of pitch-plus-duration values known as melodies."

D. Factors Moderating the Effects of Music

The environment

Studies in shopping malls, supermarkets, and in media advertising have highlighted the important role that environmental factors, such as music, can play in influencing the perception, attitude and behavior of the listener (Donovan & Rossiter, 1982; Gorn, 1982; Ostrander & Schroeder, 1979; Milliman, 1982; Russell & Mehrabian, 1978; Smith & Curnow, 1966; Wintle, 1979). Among

the environmental factors in a counselling setting, of course, must be included the room itself, the furnishings, the lighting, the heating/cooling, the ventilation, the time of day--vis-à-vis the circadian rhythms of counsellor and client--whether or not each has eaten, and what; whether either party smokes (or wants to), and the counsellor himself or herself. In fact, the list is endless. However, one study, that of Donovan and Rossiter (1982), suggests that even an environment, which might otherwise be perceived as being unpleasant, could be rendered more appealing by calming the listener--with relaxing music. As has already been mentioned, the personality, attitude, and prior conditioning of the listener interact with the environment and the music to modify the overall impact.

The state of the listener

Prior conditioning, whether cultural, educational, socio-economic, or the result of exposure to the media, does modify the effects of music on the listener (Alvin, 1966; Cazden, 1979; Harrer & Harrer, 1978; Heinlein, 1928; Schoen & Gatewood, 1968; Schuessler, 1948; Sopchak, 1955), as does the medical condition of the hospital patient who is similarly exposed to music (Van De Wall, 1936). Personality and attitude are important variables (Alvin, 1966; Farnsworth, 1969; Fisher & Fisher, 1951; Fisher & Greenberg, 1972; Harrer & Harrer, 1978; Henson, 1978; Schoen & Gatewood, 1968), especially if the listener is emotionally unstable. In such cases, the music may trigger unhappy memories,

resulting in unpleasant incidents. Finally, musical training may modify the effects of music on the listener (Brenneis, 1971; Campbell, 1942; Hevner, 1935; Hunter, 1974; Schoen, 1940; Sears, 1958; Sopchak, 1955).

E. The Type of Music

Familiar music

Different kinds of music have been found to be effective in a variety of settings. The music may be familiar or unfamiliar. Familiar tunes, whether from childhood, or from later in life, have been found to evoke associative memories and to facilitate emotional expression (Altshuler, 1944; Altshuler & Shebasta, 1941; Alvin, 1966; Baumel, 1971; Boyum, 1978; Maultsby, 1977; Schiff & Frances, 1974).

Quality of the music

As far as background music is concerned--taking into account the desirable results, from the point of view of counselling, of calm, introspection, pleasant mood, recall of memories, especially pleasant memories, receptivity, increased communication, and attraction to others--research indicates that soft, soothing instrumental music is both the most beneficial, and the most acceptable (Barrett, 1961; Biller, Olson & Breen, 1974; Bonny, 1968; Borling, 1981; Cattell & Anderson, 1953; Cherry & Pallin, 1948; Donovan & Rossiter, 1982; Fried & Berkowitz, 1979; Gamble, 1906; Gatewood, 1921b; Goolsby, Frary & Rogers, 1974; Greenberg & Fisher, 1971; Konz & McDougal, 1968; Licht, 1946; McBain,

1961; McGlinn, 1930; Mezzano & Prueter, 1974; Milliman, 1982; Ostrander & Schroeder, 1979; Parriott, 1969; Peretti, 1975; Pickrell, Metzger, Wilde, Broadbent & Edwards, 1950; Podolsky, 1939; Prichard & Taylor, 1980; Prueter & Mezzano, 1973; Rohner & Miller, 1980; Schuster & Vincent, 1980; Sears, 1958; Stainback, Stainback & Hallahan, 1973; Stanton, 1973). It is recognized that the term "soft", although generally undefined in the literature, is a relative term, depending upon each particular setting. However, the implied meaning is "unobtrusive" or, as in the Barrett study (1961), "almost subliminal".

Active vs passive listening

Just as music has been used in many different areas, to many different ends, so also has the category, or class, of music varied with the area. Sometimes, the music has been the choice of the researchers or, at other times, as in the case of surgical patients or factory workers (Hanser, Larson & O'Connell, 1983; Kerr, 1945; Light, Haymond, Livingston & Willard, 1949; Light, Love, Benson & Morch, 1954; McGlinn, 1930; Michel, 1977; Padfield, 1976; Pickrell, Metzger, Wilde, Broadbent & Edwards, 1950; Schoen & Gatewood, 1968), the subjects have chosen the pieces of music. Specially composed music has been used (Hevner, 1934; Rubin & Katz, 1946), and sometimes the subjects have taken up an instrument and extemporized (Nystul, 1977).

Mood matching

At other times, acting on his own judgement, or in

consultation with the patient/client, the researcher has chosen music which matches the initial mood of the said person and, during the course of a counselling session, has endeavoured to change the person's mood by selecting compositions which are, for example, calmer, or more cheerful (Altshuler, 1944; Gilman & Paperte, 1949; Schoen, 1968; Hunter, 1974; Shatin, 1970). The choice of music has covered the entire spectrum--from "primitive" to "avant-garde" --from North American Indian, through rock and roll to classical, and from Eastern to Western; while comparatively few authors have listed the compositions used--being content to refer to them as "calming", "lively", "sad", "predictable", etc., and often neglecting to define such terms--the majority of researchers have, at least, specified the category of music employed.

Varieties of background music

The categories referred to in the literature, which was reviewed for this study, are as follows: **Pop music** (Beasley, 1982; Boyum, 1978; Demling, Tzschoppe & Classen, 1970; Fi[illegible]ert, 1971; Gorn, 1982; Kahans & Calford, 1982; Maultsby, 1977; Middleton, Fay, Kerr & Amft, 1944; Peretti, 1975; Schiff & Frances, 1974; Sopchak, 1955); of the foregoing researchers, Boyum (1978), Maultsby (1977), and Schiff & Frances (1974), used the lyrics for effect; **marches** (Brim, 1978; Hyde & Scalapino, 1918; Pickrell, Metzger, Wilde, Broadbent & Edwards, 1950); blues (Smith & Morris, 1976); **country and western** (Brim, 1978; Smith & Morris, 1976); **Oriental** (Brim, 1978; Parriott, 1969); **North**

American Indian (Diserens, 1923); **church music** (Leonard, 1981; Pickrell, Metzger, Wilde, Broadbent & Edwards, 1950; Shiner, 1966); **rock and roll** (Blanchard, 1979; Brim, 1978; May & Hamilton, 1980; Retallack, cited in Ostrander & Schroeder, 1979; Smith & Morris, 1976); **jazz** (Brim, 1978; Gatewood, 1921b; Gilliland & Moore, 1968; Margolis, 1954; Retallack, cited in Ostrander & Schroeder, 1979; Smith & Morris, 1976; Wallach & Greenberg, 1960); **South Indian string music** (Gorn, 1982; Naidu, 1982; Retallack, cited in Ostrander & Schroeder, 1979); **swing** (Krugman, 1943); **mariachi** (Brim, 1978; Konz & McDougal, 1968); **industrial/Muzak** (Anastasi, 1964; Barrett, 1961; Gladstone, 1969; Hall, 1952; Light, Love, Benson & Morch, 1954).

Most popular background music

However, far and away the most preferred music, by both researchers and by subjects, has been **light classical** (Altshuler & Shebasta, 1941; Blum & Naylor, 1968; Cherry & Pallin, 1948; Ellis & Brighouse, 1952; Hyde & Scalapino, 1918; Light, Haymond, Livingston & Willard, 1949; Light, Love, Benson & Morch, 1954; Mastromatteo, Calderaro & Valentin, 1975; Mezzano & Prueter, 1974; Murooka, 1974; Padfield, 1976; Pruete & Mezzano, 1973; Rieber, 1965), and classical (Blanchard, 1979; Bonny, 1968; Brim, 1978; Caskey, 1980; Demling, Tzschoppe & Classen, 1970; Gilliland & Moore, 1968; Henkin, 1957; Kahans & Calford, 1982; Landreth & Landreth, 1974; Michel, 1977; Ostrander & Schroeder, 1979; Pickrell, Metzger, Wilde, Broadbent & Edwards, 1950; Prichard &

Taylor, 1980; Retallack, cited in Ostrander & Schroeder, 1979; Rieber, 1965; Schuster & Vincent, 1980; Shatin, 1970; Smith & Morris, 1976; Sopchak, 1955; Stanton, 1973).

Baroque music

Music from the Baroque era, in particular, is not only acceptable to young and old, and to the musically sophisticated, as well as to those with very basic tastes, but it appears to have beneficial effects attributable to no other type of music. A background of slow baroque music has been found to induce a state of relaxed concentration, so that learning is accelerated almost tenfold (Caskey, 1980; Ostrander & Schroeder, 1979; Prichard & Taylor, 1980). Classes of learning-disabled children have responded to baroque music backgrounds with increased interaction with peers and teachers, and their self-esteem has shown a decided upswing (Schuster & Vincent, 1980). Again, this type of background is said to calm; to increase inner awareness, and to promote entrainment--or synchronization of though patterns--with those in the immediate vicinity (Leonard, 1981; Ostrander & Schroeder, 1979). The induced state is likened to that of Transcendental Meditation (Ostrander & Schroeder, 1979).

F. Independent Variable

As relaxed awareness--especially awareness of unconscious motivations--access to pleasant memories; release of repressed material, increased affect, attraction to persons in the immediate environment, and a desire to be helpful to, and to communicate with

such persons, are very desirable for optimal results in counselling, then, as the reviewed works would seem to indicate, a background of soft, soothing, slow, baroque music would appear to be ideal.

G. Dependent Variable

Self-exploration, on the part of the client, has generally been regarded as an essential part of the therapeutic process (Barrett-Lennard, 1962; Braaten, 1961; Carkhuff, 1967, 1969; Carkhuff & Truax, 1965; Holder, Carkhuff & Berenson, 1967; Martin, Carkhuff & Berenson, 1966; Piaget, Berenson & Carkhuff, 1967; Truax & Carkhuff, 1964, 1967a, 1967b), and has been found to be highly correlated with outcome criteria (Braaten, 1961; Rogers & Truax, cited in Truax & Carkhuff, 1967a; Tomlinson & Hart, 1962). It was therefore decided to use depth of client self-exploration, as measured on the "Basic Scale of Depth of Self-Exploration" (Truax & Carkhuff, 1967a), as the dependent variable in this study.

H. Purpose of the Study

The purpose of this study was to explore the effects of a background of soft, instrumental music, from the baroque era, on depth of client self-exploration, in counselling dyads, to raise questions, and to provoke further research.

CHAPTER II

LITERATURE REVIEW

A. Applications of Background Music

Counselling

A study by Mezzano and Prueter (1974), using female counselling students as counsellors, female Introductory Psychology students as clients, and three levels of background music: Stimulating, soothing, and no music, found that the soothing background music promoted a significantly greater amount of interaction, and effective interaction than did either of the other two conditions. The musical selections, chosen on the basis of 85 per cent agreement among 46 college student judges, was played at the same level of loudness throughout the entire 30 minute counselling sessions.

Audio-tapes of the interviews were then analyzed according to the "Categories for the Analysis of Interaction in Counselling", Prueter and Mezzano (1973), by three graduate students in counselling at the same university.

The authors point out some of the limitations of the study: The stimulating music was march-oriented; there was no qualified observer to note the physical reactions of the clients; the small number and same sex of the participants, and there was no control for the possible effects of client familiarity with the music. However this study is, as far as can be ascertained, the only

published study dealing with background music and the counselling dyad.

With regard to the foregoing study, it should be noted that the music is background music, and that, although the sound level is not given, it is subdued enough not to be distracting. In other words, neither the clients nor the counsellors are actively listening to the music--nor are they aware of its purpose.

Aside from studies of background music in movies, shopping malls, factories, offices, schools, and in advertising, only one earlier study (Bonny et al., 1965) appears to have studied the effects of three levels of background music on the university population. Twenty-five minute selections were played to three 15 member classes in social interaction, but the music had no significant influence on verbal interaction.

The populations previously referred to, the non-institutionalized, could be said to be the major source of counselling clients. Unfortunately, the majority of studies of the various effects of background music have been conducted in hospitals or psychiatric wards, and with groups of people, rather than with individuals, as in the counselling dyad. Thus, although group therapy is part of counselling, the dyad is an integral part of therapy, and the results obtained in an institutional setting may not necessarily be generalized to the usual counselling situation. However, certain factors appear to emerge from an overview of research in this latter area. These will be discussed

later in this paper.

Psychotherapy

Shatin and Zimet (1958), using three levels of background music: Stimulating, quieting and no music, in group psychotherapy with male psychiatric patients "who could not be classed as psychotics", found that "stimulating music effected a significantly higher proportion of positive, warm and accepting responses". No music was less successful, and quieting music elicited more hostile reactions.

Traub (1969), working with two groups of low-verbalizing schizophrenics, and two levels of background music: Sedative and stimulating, delivered in four-minute segments interspersed with four-minute periods of silence, found no increase in verbalization. On the other hand, Baumel (1973); Dollins (1956), Michel (1977), Parriott (1969), Sears (1968), Sommer (1958), found that background music produced an increase in verbalization. Altshuler (1944), Altshuler and Shebasta (1941), Gutheil (1954), Hope (1971), Licht (1946), Michel (1977), and Podolsky (1939), found background music to have a calming effect on psychiatric patients. The music ranged from classical to popular music and, with the exception of mealtime music--which was low and sedative--most success was obtained with light and cheerful selections.

Gilman and Paperte (1949) matched the music to the patients' initial moods and, by gradually changing the selections of music,

were able to modify the patients' moods; they also found sedative music to be more effective with the psychotic patients. In a similar vein, Bigelow and Ruben (1970), by using lullabyes initially, and progressing to music which had special significance for the various patients, were able to "bring them back to reality", and Mann (1950) spoke of music as "the bridge to the outside world", by virtue of its effect on recall of past experiences, for "disturbed, withdrawn or retarded patients." Skelly and Haselrud (1952) used livelier music to induce activity in otherwise apathetic patients. They found, however, that the effects were short-lived.

In 1946, Rubin and Katz, working with psychotic depressives in an army general hospital, used "Auroratone" (interweaving colours) films with a background of "sedative, mildly sad" music and found that many of the patients became more accessible to individual and group psychotherapy immediately afterwards.

Altshuler (1944) mentions the "iso" principle whereby, as with Gilman and Paperte (1949), the music was first matched to the patient's mood, and that mood was then altered to one more acceptable, by gradually changing the music. Schoen & Gatewood (1968) found that subjects preferred music which matched their moods, as did Hunter (1974).

Shatin (1970), in a process called "vectoring", applied the same "iso" principle to successfully modify subjects' moods.

Biller, Olson and Breen (1974) demonstrated that "sad" music

had a strong tendency to lessen state anxiety--more than did "happy" music--but Hyde (1968) had found that most subjects were unfavourably affected by tragic, mournful music.

Altshuler (1944) found that, whereas depressed patients could be aroused more readily with sad than with gay music, lively music would more readily arouse the maniacal patient. Michel (1977) drew attention to the possible negative effects resulting from unfortunate associations with music played to some patients. And Daly and Barry (1957), and Joynt and Green (1962) describe "Musicogenic Epilepsy"--epileptic seizures triggered by music.

Gay, rhythmical music had favourable effects on subjects in studies by Hyde (1968) and Schoen (1940), but Smith and Morris (1977) noted an increase in worry scores and loss of concentration.

Kahans and Calford (1982) used both "live" and recorded backgrounds of popular and classical music when working with groups of psychiatric patients. They found that, regardless of whether the music was pop or classical, if it was made known that the selection was the preference of the therapist, significantly favourable attitude changes toward the therapist were recorded. Schiff and Frances (1974) used "standards" or "classics" of pop music with psychiatric groups. They found that a "rapid and deep rapport" developed between psychiatrist and group, and that memories and emotions were released. Simon, Holzberg, Alessi and Garrity (1951), however, question the generalizability of research findings as to the effects of music, between "normal" and psychotic

populations.

Medicine and dentistry

Barrett (1961) found that commercially produced background music "Melodies for Maladies" played throughout a hospital, including the operating theatre, reduced tension and fatigue in the staff and increased the work volume. Both patients and staff experienced a calming effect. The music was cheerful and almost subliminal, and was alternated with periods of silence: Six minutes of music and eight minutes of silence. Ilsen, in 1926, had postulated that music has a beneficial effect upon patients because it "arouses the vital functions of the body which are rhythmic".

Padfield (1976) found the patients' choice of classical and light classical music selections to be effective in inducing sedation prior to local analgesia. Naidu (1982) successfully used "Southern Indian string music" as a distractor during local analgesia.

Licht (1946) cites examples of music used in hospitals; in the operating room to distract the patient's attention from instruments and procedures, and to induce calm; and outside the operating room, as a diversion against post-operative pain. Pickrell, Metzger, Wilde, Broadbent and Edwards (1950) found "soft, soothing, melodious, sweet orchestrations" useful in reducing anxiety and fear in pre-operative patients. They used a wide variety of music, the least acceptable to the patients being hymns, spirituals and martial music.

Kane (1914) played phonograph music. "adapted to the tastes and temperament of the subjects", in the operating room, to calm and distract the patients. McGlinn (1930) credits operating room music with, not only serving to divert the patients' attention, but with producing a better atmosphere for the staff, also. The patients generally preferred "soft, soothing, melodious music". Jazz and sentimental music were not requested. Light et. al. (1949), and Light et al. (1954), also describe the beneficial use of patient-compatible music in the operating room, resulting in reductions in anesthetic and medication. Semi-classical music was generally preferred. According to Gatewood (1921a), consciousness is not necessary for music to exert its beneficial effects.

Best (1935) attached small speakers over the mastoid bones of dental patients so that bone-conducted music could mask the grinding noise of dental drills. Cherry and Pallin (1948) made use of light classical music during dental surgery, and found that there was no struggling or delirium; that the patients recovered more rapidly, and that there were no undesirable effects with poor-risk patients. The patients were fitted with earphones, and they could control the music volume. Smooth, even-toned music was preferred. The study involved 1000 patients.

Industry and commerce

Background music has long been used in industry in an effort to boost employee morale and production. In 1921, Gatewood found that, in an architectural drafting office, jazz was the preferred

background (1921b). Vocal music was considered to be too distracting. Most of the drafting students felt happier, however, with some musical background. An improvement in employee morale and facilitation of the performance of simple repetitive tasks, with background music, was noted by Anastasi (1964).

Although Uhrbrook (1961) found that background music was accompanied by an increase in production among the young people doing simple, repetitive jobs, the error rate also rose, and there was no overall increase in production. Most employees preferred a musical background, especially instrumental selections.

Gladstone (1969), in a study with data preparation operators, found no sustained effect for background music on work or error rates, but two thirds of the employees later requested that the music continue. The employees did, however, ask that the music be turned off when they were concentrating or, during their breaks, when they were relaxing. The music used was entitled "The Seeburg Light Industrial Programme".

In a carefully conducted series of studies with female factory workers, Kerr (1945) had noted a slight increase in production with background music, but that there was no relationship between order of preference as to the type of music and production.

Office workers, in a study by Young and Berry (1979), preferred a background of music, or of nature sound, to a totally quiet office. The authors suggest that the music masked otherwise intrusive and stress-inducing industrial noises. When subjects,

engaged in a visual monitoring task, received backgrounds of preferred music, non-preferred music, white noise, or conversation between pilots and air traffic controllers (Poock & Wiener, 1966), there was no significant improvement, but the conversational background produced significantly better results ($p<.05$) than the other three backgrounds. McBain (1961) suggested that work music should be "instrumental", in order to minimize distraction.

Blum and Naylor (1968) suggest that, in industrial studies with background music, rhythm is the key factor. Production rises when the rhythm of the music matches the natural rhythm of the workers, or when the music tends to pace them. An unpublished study is cited, wherein a background of waltzes caused a hitherto unpopulated skating rink to become crowded. The waltz somehow fits the natural rhythm of skating.

When loud music versus soft music was played in three supermarkets (Smith and Curnow, 1966), they emptied more quickly in the "loud" condition, but there was no improvement in sales.

Wintle (1979) noted that music can significantly influence viewers' emotive assessment of a television commercial message, and Ostrander and Schroeder (1979) state that advertising research has found that a 72 beat per minute rhythm for voice, music and drumbeat increases suggestibility to advertising.

In a recent study (Gorn, 1982), which is cited as a probable example of classical conditioning, "liked" music and "disliked" music was paired with two equally preferred products, minimal

product information being given, and exposure being brief. The subjects, McGill University marketing undergraduates, subsequently demonstrated a significant preference ($p<.001$) for the product paired with the "liked" music, but only five of 205 students said that the music might have influenced their choice.

A second study by the same author (Gorn, 1982), demonstrated that, in a non-decision-making situation, as when television viewers see advertisements which provide little product information, and when they are not considering the buying of these products, background music can significantly influence ($p<.001$) subsequent product choice. In both studies, there was virtually no product information; exposure to the product was brief, and the subjects were not thinking of buying the product.

Milliman (1982), in another supermarket study, using backgrounds of fast music (94+ beats per minute), slow music (72 beats per minute), and no music, as the independent variable; and sales volume as the dependent variable, found no significant difference between the "no music" and "fast music" conditions, but a highly significant difference between the "slow music" and "fast music" conditions. "Slow music" sales grossed $16,740.23, as compared with $12,112.85 for the "fast music" condition. The conclusion drawn was that people, induced to move more slowly by the slow music, bought more. The music, consisting of 40 selections in random order, was instrumental, and was classified as "soft background" music, being monitored with a decibel meter.

Donovan and Rossiter (1982), in testing the Mehrabian-Russell Environmental Psychology Model (Russell and Mehrabian, 1978) in retail stores, found that "shopping related intentions", including a willingness to communicate with staff, improved when pleasant stores were rendered arousing through the use of bright lighting, upbeat music, etc. They also found that arousal had the opposite effect (avoidance) in relatively unpleasant surroundings. In the latter case, they recommended subdued lighting and slow music, or no music.

Education

Another area in which the effects of background music has been studied, is that of learning. A method, developed in the early sixties--"Superlearning" (Ostrander and Schroeder, 1979)--uses a background of baroque music, and is said to produce phenomenal results.

The largo movements (60 beats per minute) are played while the material to be learned is recited. This system originated in Bulgaria, and has now spread throughout the world and into many schools. The rhythm of the music is said to slow and calm body rhythms, leaving the mind free to be fully effective. Similar effects were produced with a background of taped clicks (40-60 beats per minute), but the subjects complained of tension and headaches, indicating that the music does play a necessary part in maintaining relaxation and a feeling of well-being.

Schuster and Vincent (1980), using the "Superlearning"

techniques with learning-disabled children, found that "student-teacher effective relationship" scores improved, that the students were much freer in their relationships with their teachers and with each other, and that they were more relaxed, and felt better about themselves.

Stainback, Stainback and Hallahan (1973), in a study with 64 school children in the 50-80 IQ range, used calming background music to effect a significant improvement in the learning of task relevant material, while Goolsby, Frary and Rogers (1974) found that, whereas a background of loud music severely inhibited the verbalizations of disadvantaged kindergarteners, a loud/soft background resulted in increased verbalization.

When a background of industrial music was provided during 8th and 9th Grade reading comprehension classes (Hall, 1952), it was found to be especially helpful to those of below average intelligence, and there was an overall increase in accuracy, and all students performed to the best of their abilities. The quieter movements of Mozart's symphonies were found to facilitate the exam performance of students, particularly at high grade levels (Stanton, 1973).

Freeman and Neidt (1959) found that neither a background of "familiar" music, nor a background of "unfamiliar" music resulted in any significant difference in film learning. It was also noted that several students were unaware that there had been any music.

Popular music adversely affected mental test performance

(Williams, 1969) when tasks involved quantitative ability, but had no effect upon linguistic ability. The popular music selection affected boys more than girls, and those of average to above average ability. Classical music did not affect mental test performance.

Blanchard (1979), in a study involving 254 university students, used backgrounds of "rock and roll" music, "classical music" and no music, during final examinations. The students were divided into three groups of equal ability and approximately equal age. The grades of the two groups with background music were significantly higher than those of the control group. The beneficial effects of music have been examined in many other areas, of which the following section is but a small sampling.

Miscellaneous

Pearce (1981), in a study of the effects of three levels of music: Stimulating, sedative, and no music, on arousal, with grip strength as the dependent variable, found that, whereas stimulating music had no appreciable effect relative to no music, sedative music was accompanied by a significant loss of grip strength.

When subjects performed physical movement in time with popular rock music (125-135 bpm), a flickering light (100 flashes per minute), or with no accompaniment, it was found that in the rock music condition, subjects were able to endure the exercise for a significantly longer period than in either of the other conditions, and that males, in the rock music condition, endured significantly

longer than females (Anshel & Marisi, 1978).

Autogenic Training, accompanied by light classical music, when used by 50 Italian sharpshooters (Mastromatteo, Calderaro & Valentin, 1975) is claimed to have "given positive results both in the attainment of a state of intense relaxation and in the cathartic action over neurotic unconscious emotions".

Beasley (1982) found that backgrounds of "easy-listening" and disco music had no effect on bowling scores or on attitude toward bowling. A background of "Tijuana Brass" music was accompanied by a significant increase in accelerator use among a group of 24 drivers (Konz & McDougal, 1968), whilst no music and slow music led to improvements in driving, although the improvements could not be classed as significant.

When Retallack (cited in Ostrander & Schroeder, 1979) exposed plants in a controlled environment to rock music, they shrivelled and died. When music by Debussy was played, the plants were observed to be leaning away from the speakers. Jazz was somewhat more acceptable, but a background of baroque music, or of the Indian music of Ravi Shankar, encouraged lush growth and large roots – and the plants leaned toward the speakers.

Rohner and Miller (1980), in a study involving 321 introductory psychology students and four levels of background music: Familiar-stimulating, familiar-sedative, unfamiliar-stimulating, and unfamiliar-sedative, in group settings, found that, although music did not reduce state anxiety, sedative music

did show a trend toward reducing state anxiety in high-state anxiety subjects.

Music has always been an integral part of religious services, and it is easy to agree with Shiner (1966, p.1686), who sees music as "relaxing the anxious mind, loosening the tongue of the troubled and withdrawn, and recreating something worthwhile from the past." There is also a drawing together of the congregation, a process referred to by Leonard (1981) as "entrainment", or a synchronization of bodily and mental processes through natural involvement in rhythmic movement.

Indeed, in some churches, the rhythm of the music and singing may induce hypnotic trance states in the congregation (Sutphen, 1982), giving rise to manifestations of phenomena, such as conversions, "miracle" cures, glossolalia, and the (generally) safe handling of poisonous reptiles.

The story is told of a French Trappist monastery which, in compliance with Vatican II, eliminated the traditional Gregorian Chant from monastic services. Shortly thereafter, the monks fell prey to a mysterious lassitude, and to illnesses which had hitherto left them untouched. When lengthy medical investigations had failed to uncover the cause of the trouble, a psychologist, familiar with the effects of music, suggested that they try a return to Gregorian Chant. No sooner had the restoration been made than the trouble disappeared. The langorous rise and fall of Gregorian may approximate the rhythm of the slow baroque

music--with its beneficial effects.

Finally, anecdotal evidence abounds, as to the effects of music on egg and milk production, and even on the growth of crops.

B. Effect of Background Music on the Listener

Physiological effects

Foster and Gamble (1906) noted that music caused the breathing of the listener to become irregular, rapid and shallow. Weld (1912) had similar results, but added an increase in heart rate, "whether the attention was voluntary or involuntary", and muscle movements. Hyde and Scalapino (1918) recorded increased pulse rates and lowered blood pressure, in conjunction with the minor tones of music; increased pulse rates and blood pressure with the Toreador's Song and, with a march, also an increase of blood pressure, but slower pulse rates.

In a review of earlier literature, Diserens (1923, p.197) summarized the findings, as regards the effects of music on bodily functions, as follows: "1) Increases metabolism; 2) increases or decreases muscular energy; 3) accelerates respiration and decreases its regularity; 4) produced marked, but variable, effects on volume, pulse, and blood pressure; 5) lowers the threshold for sensory stimuli of different modes; 6) it thus affords the physiological basis for the genesis of emotions according to the James-Lange theory and consequently influences the internal secretions according to the researches of Cannon; 7) the precise influence of different modes and types of music has not

been determined and waits upon an adequate classification of musical selections..."

Although Ellis and Brighouse (1952) could find no trait of reactivity to music, their research demonstrated a significant increase in respiration rate in subjects listening to either lively or slow music. Gilliland and Moore (1968) found that jazz listening resulted in increased pulse rates, and Landreth and Landreth (1974) also noted increased pulse rates in subjects listening to string classical music.

In 1979, Blanchard, testing the effect of background music on the pulse rate, blood pressure, and final exam scores of 254 university students, found the mean pulse rate and blood pressure of the groups with backgrounds of either rock or classical music to be significantly lower than those of the control group--both during, and after, the exam. The exam scores were also significantly better for the music groups.

Lively, exciting, and higher pitched music generally results in lowered skin resistance (Henkin, 1957b; Peretti, 1975; Phares, 1934; Misbach, 1932; Taylor, 1973; Weidenfeller & Zimny, 1962; Zimny & Weidenfeller, 1963), while gentle, semi-classical music has the opposite effect--specially in the case of females--as Peretti (1975) noted. Henkin (1957b) and Peretti (1975) found that verbal reports of decreased anxiety, in subjects listening to calming music, tended to agree with GSR (Galvanic Skin Response) results of increased skin resistance and, although Phares (1934)

had noted similar agreement between verbal reports of pleasant affective reaction to calming music and increased skin resistance, Taylor (1973) concluded that listeners may not always be aware of their physiological reaction to music, as his results demonstrated only a 50% agreement between physiological measurements and verbal reports.

Demling, Taschoppe and Classen (1970) noted that listening to music, whether pop music or classical, resulted in a significant decrease in stomach acid. Sedative music was found to reduce the tension level in muscle 99% of the time (Sears, 1958), whereas stimulating music was less effective in producing the opposite effect. Pearce (1981), using grip strength as the criterion, and three levels of music: Stimulative, sedative, and silence, demonstrated that, whereas, relative to silence, stimulative music had no effect, sedative music was accompanied by a decrease in strength. Finally, Anshel and Marisi (1978), in a study involving 16 male and 16 female university students, and either synchronous or asynchronous work on a bicycle ergometer to a background of popular rock music, found a significant increase in endurance among those working in synchronization with the music. The endurance of the male students was significantly greater than that of the females. In all of the foregoing physiological studies, the various changes took place without conscious attempts, on the part of the subject, at control. How, then, does music exert its influence?

According to a number of researchers (Brim, 1978; Cattell & Sanders, 1954; Coriat, 1945; Gatewood, 1921a; Knapp, 1953; Bardas, Masserman, Ramana, Teller, cited in Noy, 1966), music evades the defences of body and ego; and Altshuler (1944), Alvin (1966), Antrim (1943), and Podolsky (1929), postulated that music, and especially the rhythm element, is received by the lower, primitive, automatic part of the brain, triggering a "thalamic reflex", which results in excitation of the cortex. Altshuler (1944) felt this "subcortical" action to be particularly useful in establishing contact with the schizophrenic patient, in whom "feeling and perception replace reasoning", and on whom "the spoken word has little effect".

> Sound is a very special modality. We cannot handle it. We cannot push it away. We cannot turn our backs on it. We can close our eyes, hold our noses, withdraw from touch, refuse to taste. We cannot close our ears though we can partly muffle them. Sound is the least controllable of all the sense modalities (Jaynes, 1976, p.191).

Psychological effects

> Music does not, therefore, express this or that particular and definite joy, this or that sorrow, or pain, or horror, or delight, or merriment, or peace of mind; but joy, sorrow, pain, horror, delight, merriment, peace of mind themselves ... This is why the effect of music is so much more powerful and penetrating than that of the other arts, for they speak only of shadows, but music speaks of the thing itself (Schopenhauer, cited in Noy, 1966, p.13).

The foregoing quotation appears to refer to the generalized affective state which, some authors feel, music induces in the listener (Baumel, 1973; Campbell, 1942; Gatewood, 1927; Hevner, 1935b; Rigg, 1940a; Schoen, 1928; Zink, 1960). This affective state seems to encompass the full range of feelings, even conflicting feelings (Gatewood, 1927), but never a single emotion (Campbell, 1942; Gatewood, 1927; Heyner, 1935b; Schoen, 1928). Rigg (1940a) says of music, "... It can recall and paraphrase feelings, but it never arouses them directly", and Pratt (cited in Noy, 1966) says, "Music sounds the way emotions feel."

Gatewood (1927) found that the most enjoyable pieces of music were those which expressed the largest variety of feelings, even of conflicting feelings, but not one single emotion. In other words, any given musical composition might elicit a variety of feelings through, as Pratt (cited in Noy, 1966), and Alvin (1966) seem to imply, a process of resonance, whereby various musical frequencies induce sympathetic vibrations in the listener's nervous system. However, the organic effects which usually accompany emotions are absent. Taylor and Paperte (1958), in the same vein, claim that a similarity in "structural dynamics" between music and emotions results in "sympathetic unison", so that "any change in the former will produce a corresponding change in the latter." As Lange (cited in Noy, 1966, p.15) said:

Music presents to the ear an array of auditory patterns

> which at a purely formal level are very similar to, if not identical with, bodily patterns which are the basis of real emotion. The two kinds of pattern are, with respect to their form, practically the same, but the auditory pattern make(s) music, whereas the organic and visceral pattern makes emotion.

Perotti (cited in Noy, 1966, p.130) suggests that the tonal variations of a piece of music activate "subconscious primary processes" which induce in the listener "an emotional reaction, specific for every one listener, depending on the properties of the feelings pressing toward expression." As Aristotle (cited in Shapiro, 1978, p.191) said, "Why do rhythms and melodies, which are mere sounds, resemble dispositions, while tastes do not, nor yet colours or smells?"

Other authors (Gutheil, 1954; Kohut, 1957; Margolis, 1954; Bardas, Friedmann, Germain, Pfeifer, cited in Noy, 1966; Sterba, 1946) postulate that music causes the ego to regress to the infantile state, with its accompanying "libidinal pleasures" resulting from the satisfaction of instinctual drives, and its "autoerotic, narcissistic pleasure connected with body movements." Regression, according to Germain (cited in Noy, 1966), is induced through a "sensation comparable to the rocking of the cradle" and, similarly, Coriat (1945) and Sterba (1946) feel that the rhythms of music remind the listener of maternal rhythms, and so induce regression.

> Music produces a kind of pleasure which human nature cannot do without (Confucius, The Book of Rites, cited in Shapiro, 1978, p.193).

Teller (cited in Noy, 1966) and Cattell and Sanders (1954) claim that music causes the release of repressed emotional material; Taylor and Paperte (1958) refer to music as stirring up "latent conflicts and emotions", and Baumel (1973) suggests that music induces "valuable introspection". It would seem then, that, whatever the mechanisms involved, and whatever the feelings induced, music produces an affective state in the listener, which may be accompanied by pleasure, and access is gained to repressed material.

> There is in souls a sympathy with sounds,
> And, as the mind is pitched the ear is pleased
> With melting airs, or martial, brisk or grave.
> Some chord in unison with what we hear
> Is touched within us, and the heart replies.
> (William Cowper, 1731-1800, cited in Shapiro, 1978, p.193).

C. The Listener

Although it is claimed that music affects the listener, whether or not he/she is actively listening (Altshuler, 1944; Antrim, 1943; Alvin, 1966; Brim, 1978; Cattell & Sanders, 1954; Coriat, 1945; Gatewood, 1921a; Jaynes, 1976; Knapp, 1953; Bardas, Masserman, Ramana, Teller, cited in Noy, 1966; Podolsky, 1939; Taylor & Paperte, 1958), researchers have demonstrated that

Studies by Hunter (1974), and Schoen and Gatewood (1968) indicate that listeners generally prefer music which, in whatever way, matches their existing mood which, in turn, may have been influenced by factors, such as fatigue, alcohol or coffee (Harrer & Harrer, 1978), state of health (Harrer & Harrer, 1978; Van De Wall, 1936), or by the immediate environment (Russell & Mehrabian, 1978).

Brenneis (1971), in a study involving 120 public elementary school students and music ranging from baroque to popular, with verbal reports of mood response as the dependent variable, found that, although socioeconomic status bore no relationship to intensity of response, music training did play a significant role, both in intensity of response and in musical preference. Henkin (1957b), using a classical music selection and silence as the independent variable, and galvanic skin response (GSR) as the dependent variable, concluded that musical training does play a role with respect to physiological responses which, in turn, agreed with verbal reports of induced moods. But Sears (1958), also using a physiological parameter (muscle tonus) found non-musicians to be affected to a greater degree than musicians.

Sopchak (1955), using 553 subjects, and three categories of music: Classical, popular and folk, as the independent variable, found that, on a check list of affective qualities, those with musical training were more reactive overall than were those with no musical training. Heinlein (1928) suggested that training to react

to music in specific ways; determines the resultant effect to a far greater degree than does the way in which the music is written. Hunter (1974) noted that non-musicians were more highly aroused when listening to predictable music than during unpredictable music, and that they were more affected overall than were musicians. Schoen (1968b) underlined the importance of temperament and education in determining the effect of music on the listener, and Cazden (1979), and Dreikurs (1953) concur.

Fisher and Fisher (1951) observed that personal insecurity influenced the listener's reaction to music, and Fisher and Greenberg (1972) using female subjects, found femininity and anxiety to be moderating factors in reaction to music. Emotional reactivity is another personality variable which could influence the effect of music on the listener (Harrer & Harrer, 1978). Alvin (1966) and Henson (1978) warn that, in the emotionally unstable, certain musical selections might trigger unhappy memories, resulting in unpleasant incidents, and Daly and Barry (1957), and Joynt and Green (1962) discuss "Musicogenic Epilepsy"--a rare form of epilepsy wherein attacks are apparently triggered by specific musical rhythms. Attitude toward music, the importance of music in the listener's life, and attitude toward the piece of music being played, could modify the response to music (Farnsworth, 1969; Harrer & Harrer, 1978). In the counselling context, attitude--toward counselling in general, or toward a counsellor in particular--could also play a role in the interaction.

Because musical taste, and therefore reactivity to specific musical selections, is strongly influenced by socializing forces, age must play a significant part in determining the effect of a given piece of music on a listener (Harrer & Harrer, 1978; Schuessler, 1948). Finally, although Sopchak (1955) found male and female emotional responses to music to be similar, and Anshel and Marisi (1978) noted that males endured longer on a physical task than did females, when moving in time to music, Peretti (1975) and Sears (1958) found females to be more responsive to music than males.

D. Effective Elements of Music

Although researchers cannot seem to agree as to what the precise mechanisms are by which a given musical composition conveys a specific mood effect to the listener, one element--rhythm--does appear to predominate throughout the literature, not only in the area of musical effect, but also in studies dealing with the effects of light pulses and the spoken word upon suggestibility.

Cazden (1979), Clark, McCorkle and Williams (1981), Mosonyi (cited in Noy, 1966), and Schoen and Gatewood (1968) suggested that all the elements in a musical composition are essential in order to induce a particular mood in the listener. Farnsworth (1969), Hevner (1935a, 1936), Montani (1945), and Parriott (1969) focused on the major and minor modes. Major modes convey happy feelings, whereas minor modes have the opposite effect, but Foster and Gamble (1906), and Heinlein (1928) had found that the modes had

little or no mood-inducing effect.

In 1937, Hevner added two more elements--tempo and pitch--to the list, ranking tempo first, followed by mode, and then pitch. Rigg (1940a, 1940b) agreed with Hevner, suggesting that a fast tempo, high pitch, and a major mode should convey feelings of joy. However, Parriott (1969) suggested that the effect of high pitch is not universal--that for Orientals high pitch denotes gloom and depression--and that, therefore, culture may play a greater role in determining the effect of a piece of music than any quality intrinsic to the music itself.

In 1934, Hevner had cited rhythm and harmony. Altshuler (1944) isolated tone and rhythm. Alvin (1966), Henkin (1955, 1977), Licht (1946), and Schoen (1940) proposed rhythm and harmony, and Cattell and Sanders (1954), and Henkin (1957b) focused on melody and rhythm. Perotti (cited in Noy, 1966) felt that the subconscious is activated by the rise and fall of tones, and Gaston (1952) drew attention to the sedative/hypnotic effect of a simple, repetitious rhythm, beneath a simple, sustained melody.

Bullough (cited in Noy, 1966), Friedlander (1954), Gutheil (1954), Hanson (1944), and Ilsen (1926) suggested rhythm as the principal effective element. According to Dreikurs (1953), rhythm is the "only common factor in all forms of music", and Parriott (1969) referred to rhythm as "the most moving, but often the most unconscious" element of music. Alvin (1966), Gutheil (1954), Ilsen (1926), Podolsky (1939), and Schiff and Frances (1974) suggest a

(1926), Podolsky (1939), and Schiff and Frances (1974) suggest a "resonance effect" between the rhythm of the music and innate, bodily rhythms which, in turn, influence brain function. Campbell (1972, p.38), working with learning-disabled children, says of rhythm: "rhythms seem to be the organizers that make the difference between order and chaos. They act to keep the body in tempo with itself and with its environment."

Oswald (1959) noted sleep patterns in the EEGs of subjects moving in rhythm with loud and violent musical selections. Fitzherbert (1971) likened the rhythm of pop music to the rhythm of intrauterine sounds, and suggested that the attraction of such music might lie in an unconscious desire to return to the womb. Coriat (1945), Germain (cited in Noy, 1966), and Sterba (1946) had already linked musical rhythm to maternal rhythms--and to regression to the safe, comfortable, infantile period.

Alpha rhythms

Wagner (1975) found that music induced more alpha rhythms in the EEG patterns of musicians than in non-musicians. McElwain (1979) noted that the percentage of alpha was significantly higher in the left temporal lobes of musicians, when the subjects were exposed to music, and Borling (1981) found that there was no significant difference in the alpha produced during either stimulative or sedative music.

McKee, Humphrey and McAdam (1973) also found a higher proportion of alpha in the left hemisphere during a musical task.

Ostrander and Schroeder (1979) describe the key to "Superlearning" as being the achievement of a state in which alpha predominates in the brain. This is a state of alertness, but at the same time one of well-being and relaxation.

Researchers have found alpha waves to be an important characteristic in the brain waves of subjects engaged in Yoga (Anand, Chhina and Singh, 1969), Zen meditation (Kasamatsu and Hirai, 1969) and Transcendental meditation (Wallace, 1970). Kamiya (1969, p.514) describes "alpha feelings" as: "Relaxation of the mental apparatus, not necessarily of the motor system, and a general calming of the mind...being carried along...not critical of anything."

If, as research appears to prove, music does, indeed, elevate the mood of the listener, then music played in the counselling context should produce the effects cited above. From the very first, the counsellor and the client should feel a mutual attraction, regardless of the lack of information about each other, and they should both feel a desire to communicate. Pleasant memories should also come readily to mind. If a clear mind and feeling of calm are also to be assured, then baroque music might be the ideal background music.

Rhythm – the key

A group of Japanese researchers, Murooka (1974), Murooka, Koie and Suda (1976), recorded the intrauterine sounds from a group of

pregnant women, and used the recordings to quieten newborns. They found that, not only did the crying stop in 86 per cent of the cases, but it only took a maximum of 41 seconds for 30 per cent of the babies to fall asleep. Rhythm was found to be key element--a maximum of 80 beats per minute. A successful LP was cut, combining the maternal sounds and light classical music, entitled "Lullaby from the Womb" (Murooka, 1974).

From the moment of conception, we are enveloped in rhythms. Night follows day; the seasons rotate; the tides ebb and flow, and we sleep, eat and work with a measure or regularity. It would seem, however, that we are more susceptible to certain rhythms than to others. The effects appear to vary, both with the type of rhythm and with the person. Walter (1957), for example, found that light flashes, in the 10-20 cycles per second range, would induce epileptic seizures in susceptible people. Although Daly and Barry (1957), and Joynt and Green (1962) found that certain instrumental music produced the same effect, they postulated that the trigger for the seizures was the emotion aroused by the music.

Pilots landing airplanes into the sun are warned that, at low propeller speeds, the flickering light can induce attacks of vertigo in the pilot (flicker vertigo), and that, at the first sign of nausea, the pilot should move the throttle to another setting. Similar effects have been noted by drivers (Sutphen, 1982), along stretches of highway bordered by trees, when the sun is rising or setting. Sutphen suggests that somnambulists may become hypnotized

by the flickering light and lose control of their vehicles. Several such cases are cited. He also suggests that the well-known "runner's high" is an hypnotic state induced by the rhythm of running itself.

Ostrander and Schroeder (1979, p.75) cite Wilson Key, the author of "Subliminal Seduction", who says that "a seventy-two-beat-a-minute rhythm for voice, music, and drumbeat increases suggestibility" in viewers of television advertising. Sutphen (1982), in a demonstration of the effects of subliminal programming, flashed pictures of a child becoming progressively younger, on a video-beam projection screen at 40 beats per minute. He found that most of his audience were in a state of hypnosis within a few minutes and that, upon awakening, they reported vivid experiences, not only of their infancy but, in one case, of an attempted abortion--later verified by the person's mother.

When Bulgarian students listened to material read to them above the sound of a metronome, it was found that they learned the material just as quickly as with the baroque musical background (Superlearning), but they complained of "stress, tension and fatigue". It was suggested that the role of music was to eliminate stress (Ostrander & Schroeder, 1979). The authors also note the role of rhythmic breathing in Yoga, and that, with rhythmic breathing, learning has been found to improve.

Certain poems seem to have an hypnotic effect on the listener when they are read aloud. Again, according to Snyder (1971) and

Weitzenhoffer (1957), rhythm is the key. Weitzenhoffer suggests that iambic pentameters, with their metronome equivalent beat of two-per-second, coupled to avoidance of startling content, will induce an hypnotic state in the rhythmically inclined listener. Snyder (1971, p.42) says, "Hypnotic poems in general give us heavy stresses falling regularly at half second intervals, and so ornamented that the rhythmically inclined listener has his attention drawn to the sound rather than the sense."

Chapman (1984) describes what happened when his co-workers were using a Brainwave Synchronizer--a strobe-like device which permits a wide range of variance in flash frequency--to include hypnosis: " ... a great increase in communication ... that we knew the patient's thought before she could verbalize it." The co-workers noted that they, themselves, had been hypnotized by reflection of the flashes from the patient's eyes. They claim that 50-65% of the patient's ideas or thoughts were perceived during each session. They attribute this communication effect to a mutual "synchrony" induced by the rhythmic flashes.

Condon (1975), in analyzing over 100 films of dyadic interactions, noted that the listener always moved in precise synchrony (Interactional Synchrony) with the speaker's words--there being no measurable delay. Subsequent reliability studies have served to verify his findings. The inference is that the observable vocalizations are but one facet of a communication process which involves hitherto unrecognized media. Byers (1977)

cites the work of Sollberg, in suggesting that, when we are together, we are somehow able to transmit and receive on the 10 cps brainwave frequency common to all of nature. Ten cycles per second also lies within the "alpha" frequency range. The process would be somewhat akin to tuning-in radio transceivers so that their circuits resonate to a 10 cps frequency.

Byers illustrates this form of communication with an experiment. He sits opposite a student with whom he feels a certain rapport and looks into the student's eyes. The student is coupled to a GSR (Galvanic Skin Response) meter which will emit a variable sound response, as well as indicating on a dial, when the skin resistance varies. Tone and needle rise with increased arousal. He has another student stand immediately behind the seated student and, randomly, point a finger up or down. The seated student cannot see the finger, whereas Byers can. The needle and tone invariably move up when the finger rises, and drop when it drops.

He suggests that the process whereby the Shamans effect their cures is one of re-synchronization of the "asynchronous". The sick members of a tribe, who can be singled out by their asynchronous behaviour, are brought into a circle of their fellow tribe members who induce synchrony--and effect a cure--in the sick by means of "singing, dancing, chanting, moving together or whatever the custom." He points to the already well-known physiological synchrony of breathing, heart rate, etc., in people rowing, singing

or marching together, and or menstrual synchrony in women rooming together. As these parameters are, in turn, seemingly regulated by electrical impulses from the brain, are they an indication of brain wave synchrony? Have these observable phenomena induced the very synchrony of which they are the external manifestation?

Condon (1975), in his film analysis of autistic children, has hypothesized that some of the children respond to a given sound more than once. In other words, their internal afferent and efferent systems appear to be out of synchrony. Kern, Koegel, and Dunlap (1984), in a study of the effect of vigorous exercise on the stereotypic behaviour of autistic children, had randomly selected adults, who were "naive to the experimental hypothesis", jog for 15 minutes with the children while holding their hands. The alternative treatment, in a simultaneous-treatments design, wherein each child experienced both conditions in alternating sequence over a two-day period, was 15 minutes of ball-playing with another randomly selected adult. They found that, whereas there was no appreciable decrease in stereotypic behaviour after the ball-playing, there was a considerable decrease following the jogging. While the researchers attribute the results to "vigorous exercise", is it possible that the rhythm of the jogging served to resynchronize the brainwaves of the children internally? Is there, perhaps, also a synchronization with the normal brainwave pattern of the accompanying adult--in the manner of the Shamanistic rites? Is rhythm again the key?

Can merely listening to the slow, 60 beats per minute of baroque music bring about the same internal and internal-external synchrony? Is this the "ordering" function of music referred to by Campbell (1972) in his studies with learning disabled Children? Leonard (1981) relates how the Dutch scientist Christian Huygens, in 1665, discovered that, when he placed two pendulum clocks side-by-side on a wall, the pendulums would commence to swing in unison. This mutual phase-locking is referred to as "entrainment", another word for synchrony.

Self-exploration

Although self-awareness, on the part of the client, is a primary objective of counselling, and although self-exploration would seem to be an essential part of this process (Barrett-Lennard, 1962; Braaten, 1961; Carkhuff, 1967, 1969; Carkhuff & Truax, 1965; Holder, Carkhuff & Berenson, 1966; Martin, Carkhuff & Berenson, 1966; Piaget, Berenson & Carkhuff, 1967; Truax & Carkhuff, 1964, 1967a, 1967b), most published studies use self-exploration as the criterion measure, and manipulate therapist-offered conditions.

Only one study (Rogers & Truax, cited in Truax & Carkhuff, 1967a) could be found, which examined the relationship between client self-exploration during initial interviews and final outcome, instead of using randomly selected observations from a number of sessions. These researchers found a .70 correlation between the level of self-exploration, as early as the second

interview, and final outcome. Significantly greater improvement was found, therefore, among those who showed the highest levels of self-exploration. However, as the word "patients" is used, and as "time spent hospitalized" is one of the criterion measures, in the description of this study, it probably involves psychiatric patients rather than "normal" counselling clients.

Braaten (1961), in an analysis of the records of 14 randomly selected cases, at the University of Chicago Counselling Center, found that "successful" cases--based upon therapist and TAT ratings--exhibited significantly more movement, over time, from "nonself" to "self", in their verbal communications. "Nonself" statements were defined as those "having little or no references to either the private inner self, or to the interpersonal self", whereas "self" statements--being subdivided into "interpersonal" and "private, inner-self"--concerned analysis of interactions between the self and others, and between the self and the "ideal self", respectively. This process could be termed "Self-exploration".

In another study, in 1962, Tomlinson and Hart, using the Process Scale--which measures degree of self-exploration, rigidity of concepts, and degree of immediate experiencing--found, in an analysis of one early and one late interview, taken from each of ten randomly selected cases, that successful cases--based upon therapist, patient, and Q-sort ratings--began and ended with significantly higher levels of "process", and showed greater

evidence of "process" change over time. It appears, then, that self-exploration is a feature of successful counselling process.

E. Summary

1. Music does appear to influence the listener.

2. The listener can be "active" or "passive".

3. The influence of music depends upon a number of factors: current mood, musical training, familiarity with the music, personality, attitudes, conditioning, sex, education, the type of music and the manner in which it is presented.

4. An instrumental background is less distracting than a vocal background.

5. Soft music appears to be more effective, overall, than loud music.

6. Slow music is preferable to stimulating music.

7. Music appears to exert its influence whether or not the listener is aware of its presence.

8. There may be a reflex reaction to music at lower brain levels, and therefore outside the control of the listener.

9. The principal elements of music appear to be rhythm and melody, and rhythm may be the more important.

10. The principal effect of music appears to be a mood shift.

11. A good mood may increase the desire to communicate, give access to pleasant memories, and facilitate attraction between strangers.

12. Baroque music, and especially the largo movements, tends

to slow the body rhythms of listeners, to induce "alpha" brainwaves, and to produce a state of relaxed awareness.

13. A less scientifically verifiable effect of music, and yet one which can be inferred from a number of studies, as well as from an overview of the literature, is that of intrapersonal and interpersonal synchrony. In other words, music appears to not only restore order, and therefore "health" to the brain/mind of the individual, but it puts listeners, who are in the vicinity, on the same "wavelength", thus facilitating empathic communication.

F. Definition of Terms

Background music: Music which is barely audible and, therefore, unobtrusive.

Baroque music: The music of the period c. 1600-1750, following that of the Renaissance (Apel, 1969).

Brainwaves: The electrical activity of the brain under varying conditions. Four distinct wave patterns have been identified (Brown, 1974):

Delta – 1 to 3 cycles per second. Predominant during sleep.

Theta – 4 to 7 cycles per second. Characterizes the pre-sleep period, with its imagery; although it has been found in relation to dreaming, orientation, drowsiness, recall and recognition, and during the assimilation of new information.

Alpha – 8 to 12 cycles per second. Found during rest, relaxation, and relief from attention and concentration.

Beta – 13 to 28 cycles per second. Characteristic of the waking state.

EEG: Electroencephalography – the study of the electrical activity of the brain by means of an electroencephalograph--an electronic machine, with its electrodes (sensors)--for measuring and graphically illustrating the electrical activity of the brain.

Emotion: A complete state of the organism, involving bodily changes of a widespread character--in breathing, pulse, gland secretion, etc.--and, on the mental side, a state of excitement or perturbation, marked by strong feeling, and usually an impulse towards a definite form of behaviour (Drever, 1975).

Empathy: The intellectual identification with, or vicarious experiencing of, the feelings, thoughts, or attitudes of another person (Random House College Dictionary, 1975).

Entrainment: The "mutual phase-locking of two (or more) oscillators" (Leonard, 1981).

Gregorian chant: The liturgical chant of the Roman Catholic Church. It is named after Pope Gregory I. ...Its freely flowing rhythm, far from being chaotic, shows subtleties of structure and organization that are superior to the hackneyed

rhythmic devices of some harmonized music ... (Apel, 1969).

Harmony: The chordal (or vertical) structure of a musical composition, in contrast to counterpoint, i.e., the melodic (or horizontal) structure (Apel, 1969).

Interactional synchrony: Movement of listeners in precise shared synchrony with a speaker's speech. It is characterized by the boundaries of the process units of a listener's behaviour occurring isomorphically with the articulatory boundaries or the segments of a speaker's speech (Condon, 1975).

Largo: Very slow in tempo, usually combined with great expressiveness (Apel, 1969).

Melody: In the broadest sense, a succession of musical tones, as opposed to harmony, i.e., musical tones sounded simultaneously...By its very nature melody cannot be separated from rhythm. Each musical sound has two fundamental qualities, pitch and duration, and both of these enter into the successions of pitch-plus-duration values known as melodies (Apel, 1969).

Mode: The selection of tones, arranged in a scale, that form the basic tonal substance of a composition, i.e., Major or Minor Keys (Apel, 1969).

Mood: An affective condition or attitude, enduring for some time, characterized by particular emotions in a condition of subexcitation, so as to be readily evoked, e.g. an irritable

mood, or a cheerful mood (Drever, 1975).

Rhythm: In its primary sense, the whole feeling of movement in music, with a strong implication of both regularity and differentiation. Thus breathing (inhalation vs. exhalation), pulse (systole vs. diastole), and tides (ebb vs. flow) are all examples of rhythm (Apel, 1969).

Tempo: The speed of a composition or a section thereof, ranging from very slow to very fast, as indicated by tempo marks such as largo, adagio, andante, moderato, allegro, presto, prestissimo (Apel, 1969).

G. Hypotheses

For the purpose of statistical analysis, the hypotheses will be expressed in the null form.

Hypothesis 1: No relationship will be shown between background music and depth of client self-exploration.

Hypothesis 2: There will be no difference in depth of client self-exploration between the slow music condition and the no music condition.

Hypothesis 3: There will be no difference in depth of client self-exploration between the lively music condition and the no music condition.

Hypothesis 4: There will be no difference in depth of client self-exploration between the slow music condition and the lively music condition.

CHAPTER III

METHOD

A. Introduction

This was intended as an exploratory study, the aim of which was to raise questions, rather than attempt to draw any statistically-based conclusions.

B. Design

Summary

This was a Control Group Design, with a post-test only (Campbell & Stanley, 1963). Background music was the independent variable, with three conditions: (a) Slow music, (b) lively music, and (c) no music (control). Each client was seen once, in one of the three conditions. The counsellors served as their own controls, as regards counselling style, in that each saw one client under each of the conditions. The dependent variable was depth of client self-exploration, in an interactional process between counsellor and client.

Clients

Fourteen female volunteers were obtained from two, 400-level, Educational Psychology courses at the University of Alberta. As the courses were oriented toward the preparation of school counsellors, it was suggested that the counselling experience would provide them with some valuable insights into the counselling process from that point of view. They were guaranteed complete anonymity and confidentiality, and were told that they could

discuss any topic they desired--for a period of 30 minutes. They also consented to the audio-taping of a 10-minute segment from each session--the said segments to be rated by three independent psychologists for counsellor effectiveness.

Of the fourteen volunteers, twelve were finally available, and these subjects were assigned--three to each of the four counsellors--purely on the basis of mutual availability within a three-week period. They were then randomly assigned to each of the three music conditions. There were no restrictions placed on counsellors or clients as to the days on which the sessions were held, or as to the time of day. The subjects' average age was 21 years.

Counsellors

Four female, graduate counselling students, were asked to conduct initial interviews, each of 30 minutes' duration, with three different clients. The counsellors were selected, from a group of six volunteers, on the basis of availability at the time of the study. They were informed of the time limit, the recording procedure, and of the clients' freedom to discuss anything. They were asked to treat the sessions as normal counselling interviews. Females were used throughout the study to control for the variable of sex. The counsellors were told that the purpose of the study was to measure client/counsellor interaction under varying music conditions, and that one of the conditions involved no music at all.

Raters

Three female, practising psychologists acted as independent raters. Two 60-minute audio-cassettes, containing the twelve 10-minute segments, were sent to each rater. For each rater, the segments were presented in a different, randomly assigned order (Table 3). They were each sent a copy of the "Basic Scale of Depth of Self-Exploration" (Appendix B), and asked to rate each segment according to the scale.

C. Materials

Instrument

The dependent variable, depth of client self-exploration, was evaluated according to the "Basic Scale of Depth of Self-Exploration" (Truax & Carkhuff, 1967a) (Appendix B). This instrument measures client self-exploration on a nine-point Likert Scale. Clear explanations, and several samples of appropriate client/counsellor dialogue, are provided for each of the nine categories.

This scale was developed from earlier scales by Rogers, Walker and Rablen, and by Gendlin, Tomlinson and van der Veen (cited in Truax & Carkhuff, 1967a). The reliabilities are presented in Table 1.

Although, as Truax and Carkhuff (1967a, p.194) note, "the scale can be considered to be reasonably reliable", the validity "cannot be so easily assessed...one must depend on the face validity and the research evidence showing predictable relationships to

Table 1

Reliability of Rating Scale for Depth of Intrapersonal Exploration from Specific Studies (Truax & Carkhuff, 1967a)

Study	N Samples	N Patients	N Therapists	Group or Individual	Correlation
Truax & Carkhuff (1963)	297	14	10	Individual	.68[a]
Truax & Carkhuff (1963)	64	8	8	Individual	.59[a]
Truax, (1962e)	104	26	1	Individual	.68[a]
Truax & Wargo (1966b)	366	80	6	Group	.79
Truax, Wargo & Carkhuff (1966)	89	80	8	Group	.74
Truax & Wargo (1966c)	698	160	15	Group	.80
Truax (1962 j,k,l,m,n)	420	14	10	Individual	.68[a]
Truax & Carkhuff (1965a)	45	3	1	Individual	.78
Carkhuff & Truax (1965a)	151	70	28	Individual	.59[a]
Truax & Silber (1966)	144	48	16	Individual	.77
Truax, Silber & Carkhuff (1965)	342	80	5	Group	.88
Truax(1966d)	161	30	4	Group	.68

a. Average Pearson Correlations. All other are Ebel's intraclass reliabilities for the pooled data used in analysis of findings.

therapeutic outcome..." The authors subsequently produced a modified, six-stage scale. This version of the scale was chosen, in preference to the later, six-stage scale (Carkhuff, 1969), because it was felt that the instructions were more detailed and, therefore of more assistance to the independent raters.

Music

The music used in this study (Appendix A) consisted of selected movements from the instrumental works of a number of baroque composers, recorded on a single, 90-minute, BASF LH-EI, audio cassette. Selection and recording took place in the University's music library, with the assistance of a member of the library staff. Side "A" contained the largo (60 beats per minute) movements, and side "B" contained the faster (120 beats per minute) movements. It was felt that a clear distinction had to be made between "slow" and "lively"; excerpts on the tape were minimal (Two to three secs.); there was no attempt at accuracy in this regard, nor was there any attempt to match the successive excerpts harmonically. During the counselling sessions, the music was played on a Sony 110-B cassette recorder, with the gain control at its lowest audible setting.

Setting

The rooms normally used for counselling, in the Faculty of Education at the University of Alberta Clinic, were used in this study. Standard features of the seven-by-seven-by-eight foot rooms were two comfortable chairs, with wooden arm rests; a ceiling-mounted video-camera; a wall-mounted, flexible-arm microphone, which was situated next to the client's chair; a small coffee table, and remote control switches for the video-recorders. The rooms were painted an off-white; had red carpet on the floor; were lit by diffused fluorescent light, and were moderately soundproof.

Audio equipment

Before each session, two Sony 110-B cassette player/recorders and an "RCA-to-Mini" patchcord, were obtained from the University's Audio-Visual Department. Audio recordings were made by coupling one of the player/recorders to the audio output of a Panasonic three-quarter inch video-recorder, using the "RCA-to-Mini" patchcord. Aside from the BASF LH-EI, 90-minute, audio-cassette used in recording the background music, all other tapes were good quality, 60-minute, generic brands.

D. Procedure

At the outset of the study, the participating counsellors were supplied with copies of the client list, containing availability times and telephone numbers, and they were asked to contact the three clients whose times best suited their own schedules. The counsellors were then randomly assigned--without their knowledge--to each of the four schedules of music presentation (Table 2), to control for the possible effects of a set order of music presentation. Because each counsellor interviewed clients under each of the three music conditions, they served as their own controls for the possible effects of counsellor style. The counsellors, too, were selected from a larger group of volunteers, on the basis of availability at the time of the study.

Five minutes before each counselling session, before client and counsellor arrived, the cassette player was placed in the counselling room, on the coffee table and, depending upon the music

Table 2

Order of Background Music Presentation per Counsellor per Client

Counsellor	Background Music Condition		
1	Lively	No Music	Slow
	A[a]	B	C
2	No Music	Slow	Lively
	D	E	F
3	Slow	Lively	No Music
	G	H	I
4	No Music	Lively	Slow
	J	K	L

[a] Prior to re-recording, each 10-minute segment received an alphabetical label to facilitate randomization, and to assure anonymity.

condition, was switched on, or left off. The cassette player was left in the room during the "no music" condition to control for any effects which its absence might otherwise have produced.

In the control room, housing the video-recorders for all the counselling rooms, audio recordings were then made through the existing system, by attaching another Sony 110-B cassette recorder, by means of an "RCA-to-Mini" patchcord, to the audio-output of the appropriate Panasonic video-recorder. Recording was begun ten

minutes after the commencement of each session, and continued for a further ten minutes.

Each of the resulting ten-minute segments was then labelled according to counsellor and music condition, and assigned a letter designation. The segments were then re-recorded, in random order, with alphabetical labelling only, on three sets of two cassettes, so that each set contained all of the segments in a different order (Table 3). Again, this was to control for the possible effects of presentation order. Each of the raters then received a set of two tapes.

E. Data Analysis

All Self-Exploration scores, from the three raters, were then tabulated in columns, under the music conditions (Table 4), and an Analysis of Variance was then performed on the data, to determine if a soft background of instrumental, baroque music, was associated with more self-exploration than was a no music background. In order to determine the relative effectiveness of each music condition, t-tests were used. A one-tailed t-test, with a .05 level of significance was established as the criterion of effectiveness (Table 8).

Table 3

Assignment of Counselling Segments to Raters

Raters	Tape	Randomly Assigned Counselling Segments					
1	1	B	G	J	H	E	L
	2	F	A	D	K	I	C
2	3	H	G	K	B	C	E
	4	F	I	A	J	L	D
3	5	J	G	K	H	L	B
	6	F	E	I	A	D	C

To obtain an estimate of the reliability of the mean of three Raters, an Analysis of Variance of repeated measures of a single factor (Winer, 1971, pp.283-288, equations 1 & 2) was used. the results were then tabulated (Table 6).

$$\hat{\theta} = \frac{MS_{b.\ people} - MS_{w.people}}{kMS_{w.\ people}} \qquad (1)$$

$$r_3 = \frac{3\hat{\theta}}{1 + 3\hat{\theta}} \qquad (2)$$

The self-exploration scores were re-tabulated, beforehand, according to each of the three raters, and arranged in the order in which the counselling sessions took place (Table 5), two sessions being eliminated, because scores from all three Raters were not available. An acceptable estimate of reliability ($r = .81$) was obtained.

Table 4

Ratings of Depth of Client Self-Exploration per Rater per Counselling Sessions

Counsellor	Rater	Music Condition		
		Slow	Lively	No Music
		C[a]	A	B
1	1	7.5	7.0	8.0
	2	7.0	4.5	6.5
	3	7.5	6.0	6.5
		E	F	D
2	1	n/a[b]	7.5	1.0
	2	7.0	4.0	3.0
	3	8.0	5.0	5.0
		G	H	I
3	1	6.0	2.5	4.0
	2	5.0	3.0	6.5
	3	6.0	5.0	4.0
		L	K	J
4	1	9.0	n/a[b]	3.0
	2	6.5	n/a	4.0
	3	7.5	n/a	4.0
	$\bar{X}$	7.0	4.9	4.6
	SD	1.1	1.7	1.9
	S^2	1.2	2.8	3.8

[a] A capital letter was used to designate each 10-minute counselling segment, before the segments were randomly re-recorded for each rater.

[b] A rating was not available, because background interference rendered much of the dialogue unintelligible to the rater.

Table 5

A Comparison of Ratings of Depth of Client Self-Exploration per Rater, per Counselling Session

Counselling Session	Rater 1	2	3	Total
C[a]	7.5	7.0	7.5	22.0
A	7.0	4.5	6.0	17.5
B	8.0	6.5	6.5	21.0
F	7.5	4.0	5.0	16.5
D	1.0	3.0	5.0	9.0
G	6.0	5.0	6.0	17.0
H	2.5	3.0	5.0	10.5
I	4.0	6.5	4.0	14.5
L	9.0	6.5	7.5	23.0
J	3.0	4.0	4.0	11.0
Total	55.5	50.0	56.5	162.0

[a] Sessions presented in the order: Slow, lively, no music... Two sessions were eliminated, because complete ratings were not available.

Table 6

Analysis of Variance of Ratings per Rater

Source of Variance	SS	df	MS
Between people	73.2	9	8.13
Within people	31.5	20	1.58
Total	104.7	29	

The results of the Analysis of Variance, and of the t-tests, will be presented in Chapter IV.

CHAPTER IV

RESULTS

The results of an analysis of variance and three t-tests will be presented in this chapter, and the hypotheses, which were outlined in chapter three, will be addressed.

Hypothesis 1: No relationship will be shown between background music and depth of client self-exploration.

The F-value of 6.98 (Table 7), obtained through an Analysis of Variance, is significant ($p<.01$) and, therefore, the null hypothesis must be rejected. In this study, background music did have a significant effect upon depth of client self-exploration.

Table 7

Analysis of Variance of Effect of Background Music

Source of Variance	Sum of Squares	df	Mean Square	F
A	36.69	2	18.35	6.93**
Error	76.81	29	2.65	
Total	113.5	31		

*$F_{.05} = 3.33$, $p<.05$

**$F_{.01} = 5.42$, $p<.01$

Hypothesis 2: There will be no difference in depth of client self-exploration between the slow music condition and the no music condition.

The t_{obs} of 2.747 (Table 8) was significant ($p<.01$) and,

therefore, the null hypothesis must be rejected. In this study, there was a significantly greater depth of client self-exploration with a background of slow music, than with no music.

Hypothesis 3: There will be no difference in depth of client self-exploration between the lively music condition and the no music condition.

The t_{obs} of 3.451 (Table 8) was significant ($p<.005$) and, therefore, the null hypothesis must be rejected. In this study, there was a significantly greater depth of client self-exploration with a background of lively music, than with no music.

Hypothesis 4: There will be no difference in depth of client self-exploration between the slow music condition and the lively music condition.

The t_{obs} of 2.747 (Table 8) was significant ($p<.01$) and, therefore, the null hypothesis must be rejected. In this study, there was significantly greater depth of client self-exploration with a background of slow music, than with a background of lively music.

Thus, all four null hypotheses had to be rejected at a greater level of significance ($a = .01$) than that established as a criterion ($a = .05$). In other words, this study appears to have established a relationship between increases in depth of client self-exploration and a soft background of baroque, instrumental music. Although both the "slow" and the "lively" backgrounds were apparently better than the "no music" background, the "slow"

condition was associated with greater depth of self-exploration than was the "lively" condition. It is noted, however, that, in a comparison with the "no music" condition (Table 8), the "lively condition appears to be more effective than the "slow" condition.

Table 8

Relative Effectiveness of Music Conditions on Client Self-Exploration: Between-Condition t-Tests

Music Condition	N	$\bar{X}$	df	t_{crit}	t_{obs}
Slow Music vs	11	7.0	18	2.552	2.747 *
Lively Music	9	4.9			
Slow Music vs	11	7.0	21	2.518	2.819 *
No Music	12	4.6			
Lively Music vs	9	4.9	19	2.861	3.451 **
No Music	12	4.6			

* indicates significance ($p<.01$), one-tailed.
** indicates significance ($p<.005$), one-tailed.

CHAPTER V

DISCUSSION

A. Summary of Results

The purpose of this study was to examine the effect that a background of soft, baroque, instrumental music--in particular, the slow movements (60 beats per minute)--would have on depth of client self-exploration, in initial counselling interviews. The following variables were controlled in the study: (a) Sex and educational status of the subjects, (b) sex, style, and counselling experience of the counsellors, (c) sex and experience of the raters, (d) length, and setting of the interviews, (e) type of background music, and its presentation, (f) the order in which the recordings of the interviews were presented to the raters, and (g) differing counselling styles of the counsellors.

The data obtained from this study, based upon a small N, and resulting, as it does, from one-on-one counselling interviews between volunteers from a specific university population, indicated that a background of soft, baroque, instrumental music was, indeed, associated with significantly greater depth of client self-exploration than was a background of no music. The lively music background was found to be significantly better than the no music background and, as hypothesized, the slow music was associated with significantly greater depth of client self-exploration, than either the lively or no music backgrounds.

B. Delimitations of the Study

Although the results obtained from this study offer significant support for the hypotheses, several factors limit their generalizability. In the first place, the subjects were volunteers from a final year Educational Psychology program in a university. The sample size (N=12) was small, and only females were used throughout, as counsellors, clients and raters. Thus, generalizations are limited to females.

C. Limitations of the Study

Prior to the study, neither counsellors nor clients were questioned as to either their musical training or preference. Variations in the availability times of counsellors, clients, and rooms, resulted in only two sessions being held at the same time, on the same day, but such variations are characteristic of counselling. It should be noted, however, that in this study, as in everyday counselling practice, the clients had the option of choosing the times of the counselling sessions, within, of course, the limitations imposed by the availability of rooms in the clinic.

Insofar as the raters used in this study did not rate the counselling segments as a panel, but independently, it might be argued that inter-rater reliability would suffer. However, it was felt that three independent raters, equipped as they were with detailed instructions and sample dialogue (Appendix B), and each being presented with the segments in a different random order, would provide a more powerful test of the hypotheses than if they

were to influence one another as a panel. The repeated measures analysis of variance (Table 7), however, yielded an acceptable ($r = .81$) estimate of inter-rater reliability.

Finally, the cassette player-recorders used in this study had to be borrowed from the department's audio-visual supplier immediately prior to each session. As a result, sound quality varied somewhat between machines. This may, in part, explain why three of the raters were unable to rate one session, and one rater could not satisfactorily judge a further session. Once a session began, the sound level could not be remotely adjusted, and the recordings could not be monitored.

D. Theoretical Implications

This study supported the earlier research of Prueter and Mezzano (1973), who found that a background of "soothing" instrumental music promoted more client-counsellor interaction, and more affective interaction, than backgrounds of either "stimulating" or no music. Further, a no music background was found to be better than one of "stimulating" music.

Whereas Prueter and Mezzano used a wide variety of musical compositions, from the works of a number of different classical composers, in both the "soothing" and the "stimulating" conditions, this study used baroque music only.

The literature review generally supported the use of soft, slow, instrumental music, in a wide range of anxiety-provoking settings, where it appears to induce calm and relaxation. In

psychotherapeutic situations, it is associated with greater communication. Baroque music--particularly slow baroque music--has been shown to induce more brainwave "alpha", which accompanies feelings of relaxed awareness and elevated mood.

Elevated mood, in turn, has been linked to greater access to pleasant memories, interpersonal attraction, and a desire to communicate--any one of which would increase the chances of a successful counselling outcome. As baroque music also appears to be more universally tolerated than music from any other era, it was decided to use it in both the "slow" and the "lively" conditions. Its acceptability was further insured by its being played as softly as conditions would permit.

As hypothesized, the "slow" music condition was, indeed, associated with greater depth of client self-exploration than was the "no music" condition. However, contrary to the findings of Prueter and Mezzano (1972), the "lively" music, in this study, also appeared effective.

It is noted, however, that Prueter and Mezzano used two, relatively popular marches, and two well-known, classical dances, for their "stimulating" background. Such music is often termed "catchy". It is, therefore, quite possible that the music was distracting, and thus not conducive to client-counsellor interaction. Had they used less distracting music, they might have found, along with the present study, that unobtrusive instrumental music, whether slow or lively, is more effective than no music.

Baroque music, as used in the present study, lacks the "catchiness" of other musical forms--probably by virtue of its complexities--and is, therefore not distracting. This "non-distractive" feature of baroque music may be a key factor in explaining the results of this particular study. Two further factors, which may help to explain this effectiveness of background music, in general, were noted in the literature review.

Music, or even pure rhythm--as in the beating of drums--may induce sympathetic bodily vibrations in its listeners, so that two or more people, listening together, may have their bodily rhythms synchronized with each other. It has been suggested that such synchrony may result in increased interpersonal attraction and mutual insights or--in other words--that contagious sympathy, which is an essential ingredient of the counselling process. Of course, the synchrony may also be intra-personal. There is evidence that music may have an ordering effect on otherwise disordered, or confused, thought processes, and thus facilitate the counselling experience.

Finally, music may act on the listener, whether or not he or she is actively listening. The music may be an unnoticed--or even an unwelcome--background to a conversation or task, and yet it may still result in a desirable mood shift.

E. Practical Implications

Both this study, and that of Prueter and Mezzano, indicate a possible relationship between backgrounds of soft, instrumental

music and significant increases in certain counselling processes, which are generally considered to be essential to successful outcome. Thus, it would appear that, with the use of such music, the counselling dyad, at least, would be more effective.

Again, both studies concentrated on initial interviews. At this time, counsellor and client generally become acquainted; the client is put at ease; formalities are taken care of; the client's problem is outlined and, if time permits, the counselling process may begin. Whereas the "no music" condition, in both this study, and that of Prueter and Mezzano, was probably associated with this "normal" progression, the "slow/soothing" conditions appeared to reduce the time needed for the initial stages, and to facilitate the transition to the actual counselling process. Therefore, soft, instrumental music backgrounds may help in breaking down initial barriers to effective counselling; save valuable time, and encourage those clients, who might not otherwise continue after the initial interview, to remain long enough to benefit from therapy.

F. Suggestions for Future Research

Several modifications to the design of the current study would provide additional areas of research and improve its applicability to the general population of counselling clients.

In future studies of this nature, clients and counsellors of both sexes might be used and, as in the Prueter and Mezzano study, the effects of background music on both clients and counsellors

could be studied. Further, the client sample might be drawn from the regular clientele of the University's clinic, rather than from the usual student volunteer pool.

Videotaping the sessions might further refine the observations by permitting the inclusion of a non-verbal scale while, at the same time, not requiring the presence of the raters at every session. Musical training, experience, and preference, which have been shown to moderate the effects of music on its listeners, should also be taken into account. Such information might be elicited as part of a phenomenological approach.

A phenomenological study, either alone, or as a complement to the usual statistical procedures, would be an invaluable source of information about areas which do not readily lend themselves to questionnaires. For example, the client's experiential account might indicate a mood-shift; sudden recall of forgotten material; awareness or unawareness of the music; being distracted by the music; evidence of "ordering" in hitherto confused thought processes; evidence of "synchrony" in thought processes between counsellor and client, and indications as to which music, if any, might be more generally acceptable. And other desirable effects, such as mutual attraction, desire to communicate, and lowered anxiety, might manifest themselves.

An electroencephalographic study, involving both client and counsellor, might reveal data regarding brainwave patterns which are associated with particular musical selections, the areas of the

brain which are most excited by the music, and whether there is any correlation between this electrical activity and self-reports of mood-shift, relaxation, memory recall, "ordering", interpersonal "synchrony", etc. As there is evidence that various areas of the brain respond differentially to pure tones, it may be possible to tailor musical pieces to target particular areas of the brain and, perhaps, trigger memories, lost speech, or even movement in "paralyzed" limbs. The rhythm of the music may thus be used to restimulate orderly firing in the neurons of the brains of the autistic; of stutterers; of cerebral palsy victims, and many others.

If a relationship can be shown between particular brainwave patterns and the "insights" which are claimed to accompany interpersonal "synchrony", it may then be possible to directly induce such states by particular musical selections. This may be especially useful with those clients who cannot--or who will not--communicate with the counsellor, such as the autistic, the catatonic, the schizophrenic, the mute, and even, perhaps, the comatose. A favourite popular song was recently used to recall a young woman from a coma which had lasted several months; so communication, in some form, may be possible.

Physiological studies might examine the effects of different musical backgrounds on endorphin production, for example. Researchers have found that background music appears to cure headaches, and reduce the amount of analgesia or anesthesia needed.

Could the elevated mood associated with some musical backgrounds be the result of endorphin production? Is there any correlation between endorphin production and "alpha" brainwave activity? Does the musical stimulation of particular areas of the brain result in more or less endorphin production? Might music be used to stimulate needed hormone production? Is there really a "high" associated with rock music? If so, what are the possible hormonal correlates? Is there a corresponding personality profile of the rock music fan? How might such profiles compare to those of other persuasions? Can music be used to effect measured personality changes? Are such changes lasting?

The background music, itself, may be subjected to an infinite number of variations. String music might be compared to that of the woodwinds, brass, tympani; piano, organ, harpsichord, Pan pipes, or synthesizer. Baroque music may be contrasted with waltzes, jazz, rock, mariachi, etc. In some instances, with particular populations, hymns, or songs, may be more effective than instrumental music. There are prescriptions for composing music to elicit specific moods. Pure rhythm, in the form of drumbeat, or even the simple "tick" of a metronome might be tried.

The choice of the music might be left entirely to the client, who would supply records or tapes, or he may be asked to choose from a given selection. Differing degrees of loudness--or even totally "subliminal" music--might be examined for their effectiveness. Soft music might be tried in waiting-areas, for its

calming effects. Popular songs and folksongs have been used successfully, especially in group work, to break down communication barriers, and to unlock memories. Old school songs and nursery rhymes have been used with the elderly, for the same purposes. Counsellors of the terminally ill, the bereaved, the depressed, the manic, and other special populations, have found music to be a useful adjunct.

A particularly fruitful area of research might lie in the use of "vectoring", which has been shown to be effective with such special populations as the foregoing examples. In this approach, the background music is first matched to the client's observed mood, and the selections are then gradually changed, in order to shift the client's mood in a desired direction.

Background music has been used effectively with relaxation techniques, hypnotic induction, regression, and guided imagery. It may be useful, therefore, to study its effectiveness in conjunction with systematic desensitization, where its calming, relaxing, mood-raising, and imagery-enhancing properties, might render the feared stimulus more readily approachable, or more acceptable. Even when visualization techniques are not being used in the privacy of the counsellor's office--when the client is physically approaching the stimulus in a public place--the musical background can still be unobtrusively supplied via the ubiquitous "Walkman". The therapist might accompany the client in the form of dubbed-in words of encouragement. This method also lends itself to the use

of subliminal instructions to the client, without any obvious disturbance to the music. It has been claimed that supermarkets, using subliminal affirmations of honesty, along with Muzak, have noted significant reductions in the number of thefts. It is possible that subliminal procedures may be more effective, overall, than the usual direct counselling approach. Some researchers claim success with the use of subliminal techniques in the areas of weight loss and athletic performance. Although, in these studies, the stimuli were visually presented--auditory stimuli-in conjunction with particular musical selections, might be even more effective.

It is possible that music, which is particularly stimulating to the right hemisphere, might thereby stimulate creative thought in the client. Again, different kinds of music might be compared as regards creativity scores. If creativity can, indeed, be so stimulated, then such music would be invaluable in the counselling of depressed and suicidal clients--who generally cannot generate alternative solutions to their problems--and in career counselling, especially when interest inventories and aptitude tests are of little help.

If, as has often been suggested, illness--even terminal illness--is the result of mental "dis-ease", or is an inappropriate solution to a problem, then music, which stimulates creativity, might provide the listener with solutions which are less devastating. It is therefore possible that music may be used to

help prevent illness. Perhaps music can, in a very short time, build that "bridge to the unconscious" which TM devotees so painstakingly construct. Perhaps the "god", to whom we pray, really resides within, and perhaps he (or she) is more accessible than we think. Perhaps we should look more closely at the early Greek and Arab civilizations.

> Music is a moral law. It gives a soul to the universe, wings to the mind, flight to the imagination, a charm to sadness, gaiety and life to everything. It is the essence of order, and leads to all that is good, just, and beautiful, of which it is the invisible, but nevertheless, dazzling, passionate, and eternal form (Plato, cited in Shapiro, 1978, p.237).

References

Altshuler, I. M., & Shebasta, B.H. (1941). Music--an aid in the management of the psychotic patient. Journal of Nervous and Mental Disease, 94, 179-183.

Altshuler, I. M. (1944). Four years' experience with music as a therapeutic agent at Eloise Hospital. American Journal of Psychiatry, 100, 792-794.

Alvin, J. (1966). Music therapy. London: John Baker.

Anand, B.K., Chhina, G. S., & Singh, B. (1969). Some aspects of electroencephalographic studies in yogis. In C. Tart (Ed.), Altered states of consciousness. New York: John Wiley.

Anastasi, A. (1964). Fields of applied psychology. New York: McGraw-Hill.

Anshel, N. H., & Marisi, D. Q. (1978). The effect of music and rhythm on physical performance. Research Quarterly, 49, 100-113.

Antrim, D. K. (1943). Healing children with music. Etude, 63, 651.

Apel, W. (1969). Harvard dictionary of music (2nd ed.). Cambridge, Mass.: Belknap Press of Harvard University Press.

Averill, J. R. (1969). Automatic response patterns during sadness and mirth. Psychophysiology, 5, 399-414.

Barrett, R. (1961). Let's keep background music in the background. Hospitals, 35, 44-46.

Barrett-Lennard, G. T. (1962). Dimensions of therapist response as causal factors in therapeutic change. Psychological Monographs, 76 (43, Whole No. 562).

Batson, C. D., Coke, J. S., Chard, F., Smith, D., & Taliaferro, A. (1979). Generality of the "glow of goodwill": Effects of mood on helping and information acquisition. Social Psychology Quarterly, 42, 176-179.

Baumel, L. N. (1973). Psychiatrist as music therapist. Journal of Music Therapy, 10, 83-85.

Beasley, T. S. (1982). The effects of two different types of background music on bowling scores and attitudes. Dissertation Abstracts International, 42, 3057A.

Bell, P. A. (1978). Affective state, attraction and affiliation: Misery loves happy company, too. Personality and Social Psychology Bulletin, 4, 616-619.

Bergin, A. E., & Solomon, S. (1968). Personality and performance correlates of empathic understanding in psychotherapy. American Psychologist, 18, 393.

Best, E. S. (1935). The psychology of pain control. Journal of the American Dental Association, 22, 256-267.

Bigelow, N., & Ruben, P. (1970). Music and milieu. Psychiatric Quarterly, 44(3), 502-515.

Biller, J. D., Olson, P. J., & Breen, T. (1974). The effect of "happy" versus "sad" music and participation on anxiety. Journal of Music Therapy, 11, 68-73.

Blanchard, B. E. (1979). The effect of music on pulse-rate, blood-pressure and final exam scores of university students. Journal of Sports Medicine, 19, 305-307.

Blum, M. L. & Naylor, J. C. (Eds.) (1968). Industrial Psychology: Its theoretical and social foundations. New York: Harper & Row.

Bonny, H. L., Cistrunk, M., Makuch, R., Stevens, E., & Tally, J. (1965). Some effects of music on verbal interaction in groups. Journal of Music Therapy, II (2), 61.

Bonny, H. L. (1968). Preferred loudness of recorded music of hospitalized psychiatric patients and hospital employees. Journal Music Therapy, 5, 44-52.

Bonny, H. L. (1975). Music and consciousness. Journal of Music Therapy, 12, 121-135.

Borling, J. E. (1981). The effects of sedative music on alpha rhythms and focused attention in high-creative and low-creative subjects. Journal of Music Therapy, 18, 101-108.

Bousfield, W. A. (1950). The relationship between mood and the production of affectively toned associates. Journal of General Psychology, 42, 67-85.

Boyum, R. (1978). Therapeutic uses of pop music. Journal of Counselling and Student Personnel, 19, 363.

Braaten, L. J. (1961). The movement of non-self to self in client-centered psychotherapy. Journal of Counselling Psychology, 8, 20-24.

Brenneis, N. C. (1971). Mood differential as reported by secondary music and non-music students from different socio-economic groups. Dissertation Abstracts International, 31, 5837A-5838A.

Brim, R. (1978). The effect of personality variables and repression-sensitization upon response to music. Journal of Music Therapy, 15, 74-87.

Brown, W. (1922). Suggestion and mental analysis (2nd ed.). New York: G. H. Doran.

Byers, P. (1977). A personal view of nonverbal communication. Theory into Practice, 16 (3), 134-140.

Byrne, D., & Clore, G. L. (1966). Predicting interpersonal attraction toward strangers presented in three different stimulus modes. Psychonomic Science, 4, 239-240.

Cadoret, R. J. (1964). An exploratory experiment: Continuous EEG recording during clairvoyant card tests. Journal of Parapsychology, 28, 226.

Campbell, D. D. (1972). One out of twenty: The LD. Music Educators Journal, 58, 38-39.

Campbell, D. T., & Stanley, J. C. (1963). Experimental and quasi-experimental designs for research. Chicago: Rand McNally College Publishing.

Campbell, I. G. (1942). Basal emotional patterns expressible in music. American Journal of Psychology, 55, 1-17.

Carkhuff, R. R. & Truax, C. B. (1965). Training in counseling and psychotherapy: An evaluation of an integrated didactic and experimental approach. Journal of Consulting Psychology, 29, 333-336.

Carkhuff, R. R. (1967). Toward a comprehensive model of facilitative interpersonal process. Journal of Counseling Psychology, 14, 67-72.

Carkhuff, R. R. (1969). Helping and human relations (Vol. II). New York: Holt, Rinehart & Winston.

Caskey, O. L. (1980). Suggestive-accelerative learning and teaching. Englewood Cliffs, New Jersey: Educational Technology Publications.

Cattell, R. R. & Anderson, J. C. (1953). The measurement of personality and behavior disorders by the IPAT Music Preference Test. Journal of Applied Psychology, 37, 446-454.

Cattell, R. R. & Sanders, D. R. (1954). Musical preference and personality diagnosis: A factorization of one hundred and twenty themes. Journal of Social Psychology, 39, 3-24.

Cazden, N. (1979). Can verbal meanings inhere in fragments of melody? Psychology of Music, 7, 34-38.

Cherry, H., & Pallin, I. (1948). Music as a supplement in nitrous oxide oxygen anesthesia. Anesthesiology, 9, 391-399.

Clark, M. E., McCorkle, R. R., & Williams, S. B. (1981). Music therapy assisted labor and delivery. Journal of Music Therapy, 18, 88-100.

Condon, W. S. (1975). Multiple response to sound in dysfunctional children. Journal of Autism and Childhood Schizophrenia, 5 (1), 37-56.

Coriat, I. H. (1945). Some aspects of a psychoanalytic interpretation of music. Psychoanalytic Review, 32, 408-418.

Daly, D. D. & Barry, M. J. (Jr.). (1957). Musicogenic epilepsy: Report of three cases. Psychosomatic Medicine, 19, 399-408.

Davis, D. (1982). Determinants of responsiveness in dyadic interaction. In W. Ickes, & W. S. Knowles (Eds.). Personality, roles and social behavior. New York: Springer-Verlag.

Demling, L., Tzschoppe, M., & Classen, M. (1970). The effect of various types of music on the secretory function of the stomach. American Journal of Digestive Disorders, 15, 15-20.

Densmore, F. (1968). The use of music in the treatment of the sick by American Indians. In C. Hofman (Ed.). Frances Densmore and American Indian music. New York: Museum of the American Indian Heye Foundation.

Dibner, A. S. (1958). Ambiguity and anxiety. Journal of Abnormal and Social Psychology, 56, 165-174.

Diserens, C. M. (1923). Reactions to music stimuli. Psychological Bulletin, 20, 173-199.

Dollins, C. (1968). The use of background music in a psychiatric hospital to increase group conversational frequency. In E. T. Gaston (Ed.). Music in therapy. New York: Macmillan.

Donovan, R. J., & Rossiter, J. R. (1982). Store atmosphere: An environmental psychology approach. Journal of Retailing, 58, 34-57.

Dreikurs, R. (1953). The dynamics of music therapy. National Association for Music Therapy Conference Proceedings, 15-23(a).

Drever, J. (1975). A dictionary of psychology (rev. ed.). Baltimore: Penguin.

Dribben, E., & Brabender, V. (1979). The effect of mood inducement upon audience receptiveness. Journal of Social Psychology, 107, 135-136.

Ellis, D. S., & Brighouse, G. (1952). Effects of music on respiration and heart rate. American Journal of Psychology, 65, 39-47.

Fried, R., & Berkowitz, L. (1979). Music hath charms...and can influence helpfulness. Journal of Applied Social Psychology, 9(3), 199-208.

Gaston, E. T. (1952). Dynamic music factors in mood change. Music Educators Journal, 37, 42-44.

Gaston, E. T. (1968). Man and music. In E. T. Gaston (Ed.). Music in therapy. New York: Macmillan.

Gatewood, E. L. (1921a). The psychology of music in relation to anesthesia. American Journal of Surgery, Anesthesia Supplement, 35, 47-50.

Gatewood, E. (1921b). An experiment in the use of music in an architectural drafting room. Journal of Applied Psychology, 5, 350.

Gatewood, E. L. (1927). An experimental study of the nature of musical enjoyment. In M. Schoen (Ed). The effects of music. New York: Harcourt Brace.

Gilliland, A. R., & Moore, H. T. (1968). The immediate and longtime effects of classical and popular phonograph selections. In M. Schoen (Ed.). The effects of music (2nd ed.). Freeport, New York: Books for Libraries Press.

Gilman, L., & Paperte, F. (1949). Music as a psychotherapeutic agent. Journal of Clinical Psychopathology, 10, 286-303.

Gladstone, W. H. (1969). Some effects of commercial background music on data preparation operators. Occupational Psychology, 43, 213-222.

Goolsby, T. M. (Jr.), Frary, R. B., & Rogers, M. M. (1974). Observational techniques in determination of the effects of background music upon verbalizations of disadvantaged kindergarten children. Journal of Music Therapy, 11, 21-32.

Gorn, G. J. (1982). The effects of music in advertising on choice behavior--a classical conditioning approach. Journal of Marketing, 46, 94-101.

Gouaux, C. (1971). Induced affective states and interpersonal attraction. Journal of Personality and Social Psychology, 20, 27-43.

Greenberg, R. P., & Fisher, S. (1971). Some differential effects of music on projective and psychological tests. Psychological Report, 28, 817-818.

Griffiths, D. M., & Brooks, W. F. (Jr.). (1971). Motivational effects of music stimulation on art expression in painting. Pakistan Journal of Psychology, 4, 17-26.

Griffitt, W. B. (1968). Attraction toward a stranger as a function of direct and associated reinforcement. Psychonomic Science, 11, 147-148.

Griffitt, W. B. (1970). Environmental effects on interpersonal affective behavior: Ambient effective temperature and attraction. Journal of Personality and Social Psychology, 15, 240-244.

Grim, P. (1975). Relaxation, meditation, and insight. Psychologia, 18, 125-133.

Gundlach, R. H. (1934). An analysis of some musical factors determining the mood characteristics of music. Psychological Bulletin, 31, 592-593.

Gutheil, E. A. (1954). Music as an adjunct to psychotherapy. American Journal of Psychotherapy, 8, 94-109.

Hall, J. C. (1952). The effect of background music on the reading comprehension of 278 eight and ninth grade students. Journal of Educational Research, 45, 451-458.

Hanser, S. B., Larson, S. C., & O'Connell, A. S. (1983). The effect of music on relation of expectant mothers during labor. Journal of Music Therapy, 20, 50-58.

Hanson, H. (1944/45). Some objective studies of rhythm in music. American Journal of Psychiatry, 101, 364-369.

Harrer, G., & Harrer, H. (1978). Music, emotion, and automatic function. In M. Critchley & R. A. Henson (Eds.). Music and the brain. London: William Heinmann.

Heinlein, C. P. (1928). The affective characters of the major and minor modes of music. Journal of Comparative Psychology, 8, 101-142.

Henkin, R. I. (1955). A factorial study of the components of music. Journal of Psychology, 39, 161-181.

Henkin, R. I. (1957a). A re-evaluation of a factorial study of the components of music. Journal of Psychology, 39, 161-181.

Henkin, R. I. (1957b). The prediction of behavior response patterns to music. Journal of Psychology, 44, 111-127.

Henson, R. A. (1978). The language of music. In M. Critchley & R. A. Henson (Eds.). Music and the brain. London: William Heinemann.

Hevner, K. (1934). The affective value of certain elements of musical form. Psychological Bulletin, 31, 678-679.

Hevner, K. (1935a). The affective character of the major and minor modes in music. American Journal of Psychology, 47, 103-118.

Hevner, K. (1935b). Expression in music: A discussion of experimental studies and theories. Psychological Review, 42, 186-204.

Hevner, K. (1935b). Experimental studies of the elements of expression in music. American Journal of Psychology, 48, 246-268.

Hevner, K. (1937). The affective value of pitch and tempo in music. American Journal of Psychology, 49, 621-630.

Holder, T., Carkhuff, R. R., & Berenson, R. G. (1967). Differential effects of the manipulation of therapeutic conditions upon high- and low-functioning clients. Journal of Counseling Psychology, 14, 63-66.

Hooper, P. P., & Powell, E. R. (1970). Influence of musical variables on pictorial connotations. Journal of Psychology, 76, 125-128.

Hope, H. (1971). Music has charms. Nursing Mirror, 132, 40-41.

Hunter, H. (1974). An investigation of psychological and physiological changes apparently elicited by musical stimuli. Psychology of Music, 2, 53-68.

Hyde, I. H., & Scalapino, W. (1918). The influence of music upon electrocardiograms and blood pressure. American Journal of Physiology, 46, 35-38.

Ilsen, I. M. (1926). How music is used in hospitals. Musician, 31, 15.

Isen, A. M., & Levin, P. F. (1972). Effect of feeling good from helping: Cookies and kindness. Journal of Personality and Social Psychology, 21, 384-388.

Isen, A. M., Shalker, T. E., Clark, M., & Karp, L. (1978). Affect, accessibility of material in memory, and behavior: A cognitive loop? Journal of Personality and Social Psychology, 36, 1-12.

Jaynes, J. (1976). The origin of consciousness in the breakdown of the bicameral mind. Boston: Houghton-Mifflin.

Joynt, R. J. & Green, D. (1962). Musicogenic epilepsy. Journal of the American Medical Association, 179, 501-504.

Kahans, D., & Calford, M. B. (1982). The influence of music on psychiatric patients' immediate attitude change toward therapists. Journal of Music Therapy, 19, 179-187.

Kaltsounis, B. (1973). Effect of sound on creative performance. Psychological Reports, 33, 737-738.

Kamiya, J. (1969). Operant control of the EEG alpha rhythm and some of its reported effects on consciousness. In C. Tart (Ed.). Altered states of consciousness. New York: John Wiley.

Kane, E. O. (1914). Phonograph in the operating room. Journal of the American Medical Association, 62, 1829.

Kasamatsu, A. & Hirai, T. (1969). An electroencephalographic study on the Zen meditation (Zazen). In C. Tart (Ed.). Altered states of consciousness. New York: John Wiley.

Kern, L., Koegel, R. L., & Dunlap, G. (1984). The influence of vigorous versus mild exercise on autistic stereotyped behaviors. Journal of Autism and Developmental Disorders, 14 (1), 57-67.

Kerr, W. A. (1945). Experiments on the effects of music on factory production. Applied Psychology Monographs, No. 5.

Knapp, P. H. (1953). The ear: Listening and hearing. American Psychoanalytic Association Journal, 1, 672-689.

Kohut, H., & Levarie, S. (1950). On the enjoyment of listening to music. Psychoanalytic Quarterly, 19, 64-87.

Kohut, H. (1957). Observations of the psychological functions of music. American Psychoanalytic Association Journal, 5, 389-407.

Konz, S., & McDougal (1968). The effect of background music on the control activity of an automobile driver. Human Factors, 10, 233-244.

Krugman, H. E. (1943). Affective response to music as a function of familiarity. Journal of Abnormal and Social Psychology, 38, 388-392.

Laird, J. D., Wagener, J. J., Halal, M., & Szegda, M. (1982). Remembering what you feel: Effects of emotion on memory. Journal of Personality & Social Psychology, 42, 646-657.

Landreth, J., & Landreth, H. (1974). The effects of music on physiological responses. Journal of Research in Music Education, 22, 4-12.

Leonard, G. (1981). The silent pulse. New York: Bantam.

Lesh, T. V. (1970). Zen meditation and the development of empathy in counsellors. Journal of Humanistic Psychology, 10, 39-74.

Licht, S. (1946). Music in medicine. Boston: New England Conservatory of Music.

Light, G. A., Haymond, W. V., Livingston, H. M., & Willard, J. (1949). Use of magnetic recorder "silent" music during operations. Current Researches in Anesthesia and Analgesia, 28, 330-338.

Light, G. A., Love, D. M., Benson, D., & Morch, E. T. (1954). Music in surgery. Current Researches in Anesthesia and Analgesia, 33, 258-264.

Lott, A. J., & Lott, B. E. (1974). The role of reward in the formation of interpersonal attitudes. In T. L. Huston (Ed.). Foundations of interpersonal attraction. New York: Academic Press.

Mann, C. (1950). Music and exercise as a form of psychotherapy. Psychoanalytic Review, 37, 143-155.

Margolis, N. M. (1954). A theory on the psychology of jazz. American Imago, 11, 263-291.

Martin, J. C., Carkhuff, R. R., & Berenson, B. G. (1966). Process variables in counseling and psychotherapy: A study of counseling and friendship. Journal of Counseling Psychology, 13, 356-359.

Masserman, J. H. (1954). Music and Child in society. American Journal of Psychotherapy, 8, 63-67.

Masserman, J. (1973). Theory and therapy in dynamic psychiatry. New York: Jason Aronson.

Mastromatteo, A., Calderaro, G., Valentin, O. (1975). Music therapy in autogenic training. International Journal of sport Psychology, 6, 219-222.

Maultsby, M. C. (1977). Combining music therapy and rational behavior therapy. Journal of Music Therapy, 14, 89-97.

May, J. L., & Hamilton, P. A. (1980). Effects of musically evoked affect on women's interpersonal attraction toward and perceptual judgements of physical attractiveness of men. Motivation and Emotion, 4, 217-228.

McBain, W. N. (1961). Noise, the "arousal hypothesis" and monotonous work. Journal of Applied Psychology, 45, 309-317.

McElwain, J. (1979). The effect of spontaneous an analytical listening on the evoked cortical activity in the left and right hemispheres of musicians and non-musicians. Journal of Music Therapy, 16, 180-189.

McGlinn, J. A. (1930). Music in the operating room. American Journal of Obstetrics and Gynecology, 20, 678-683.

McKee, G., Humphrey, B., & McAdam, D. W. (1973). Scaled lateralization of alpha activity during linguistic and musical tasks. Psychophysiology, 10, 441-443.

Mezzano, J., & Prueter, B. (1974). Background music and counselling interaction. Journal of Counselling Psychology, 21, 84-86.

Michel, D. E. (1977). Music therapy: An introduction to therapy and special education through music (2nd ed.). Illinois: C. C. Thomas.

Middleton, W. C., Fay, P. J., Kerr, W. A., & Amft, F. (1944). The effect of music on feelings of restfulness-tiredness and pleasantness-unpleasantness. Journal of Psychology, 17, 299-318.

Miller, M. D. (1967). Music and tension. Psychoanalytic Review, 54, 141-156.

Milliman, R. E. (1982). Using background music to affect the behavior of supermarket shoppers. Journal of Marketing, 46, 86-91.

Misbach, L. E. (1932). Effect of pitch of tone-stimuli upon body resistance and cardiovascular phenomena. Journal of Experimental Psychology, 15, 167-183.

Morris, R. L., Roll, W. G., Klein, J., & Wheeler, G. (1972). EEG patterns and ESP results in forced-choice experiments with Lalsingh Harribance. Journal of the American Society for Psychical Research, 66, 253-268.

Murooka, H. (Producer). (1974). Lullaby from the womb. (Record No. ST-11421). Mississauga, Ontario: Toshiba-EMI Ltd.

Murooka, H., Koie, Y., & Suda, N. (1976). The analysis of intrauterine sounds and their sedative effect on the new-born. Journal de Gynecologie Obstetrique et Biologie de la Reproduction, 5, 367-376.

Myers, E. G. (1979). The effect of music on retention in a paired-associate task with EMR children. Journal of Music Therapy, 16, 190-198.

Naidu, K. R. C. (1982). Music sedation in local analgesia. Anaesthesia, 37, 354.

Natale, M., & Hantas, M. (1982). Effect of temporary mood states on selective memory about the self. Journal of Personality & Social Psychology, 42, 927-934.

Noy, P. (1966/67). The psychodynamic meaning of music (Parts I-IV). Journal of Music Therapy, 3(4)-4(4).

Nystul, M. S. (1977). The use of music in counselling and psychotherapy. Individual Psychologist, 14, 45-60.

Ostrander, S., & Schroeder, L. (1979). Superlearning. New York: Delta.

Oswald, I. (1959). Experimental studies of rhythm, anxiety and cerebral vigilance. Journal of Mental Science, 439, 269-294.

Padfield, A. (1976). Music as sedation for local analgesia. Anaesthesia, 31, 300-301.

Parriott, S. (1969). Music as therapy. American Journal of Nursing, 69, 1723-1726.

Pearce, K. A. (1981). Effects of different types of music on physical strength. Perceptual Motor Skills, 53, 351-352.

Peretti, P. O. (1975). Changes in galvanic skin response as affected by musical selection, sex and academic discipline. Journal of Psychology, 89, 183-187.

Phares, M. L. (1934). Analysis of music appreciation by means of p.g.r. technique. Journal of Experimental Psychology, 17, 119-140.

Piaget, G. W., Berenson, B. G., & Carkhuff, R. R. (1967). Differential effects of the manipulation of therapeutic conditions by high- and moderate-functioning therapists upon high- and low-functioning clients. Journal of consulting Psychology, 31, 481-486.

Pickrell, K. L., Metzger, J. T., Wilde, N. J., Broadbent, J. R., & Edwards, B. F. (1950). The use and therapeutic value of music in the hospital and operating room. Plastic and Reconstructive Surgery, 6, 142-152.

Pike, A. A. (1972). A phenomenological analysis of emotional experience in music. Journal of research in Music Education, 20, 262-267.

Podolsky, E. (1939). Music for your health. New York: Bernard Ackerman.

Poock, G. K., & Wiener, E. L. (1966). Music and other auditory background during visual monitoring. Journal of Industrial Engineering, 17, 318-323.

Prichard, A., & Taylor, J. (1980). Accelerated learning: The use of suggestion in the classroom. Novato, California: Academic Therapy Publications.

Prueter, B., & Mezzano, J. (1973). Effects of background music upon initial counseling interaction. Journal of Music Therapy, 10, 215-212.

Random House college dictionary (rev. ed.) (1975). New York: Random House.

Rieber, M. (1965). The effect of music on the activity level of children. Psychonomic Science, 3, 325-326.

Rigg, M. G. (1940a). Speed as a determiner of musical mood. Journal of Experimental Psychology, 27, 566.

Rigg, M. (1940b). The expression of meanings and emotion in music. Psychological Bulletin, 37, 556.

Rohner, S. J., & Miller, R. (1980). Degrees of familiar and affective music and their effects on state anxiety. Journal of Music Therapy, 17, 2-15.

Rubin, H. E., & Katz, E. (1946). Auroratone films for the treatment of psychotic depressions in an army general hospital. Journal of Clinical Psychology, 2, 338-340.

Russell, J. A., & Mehrabian, A. (1978). Approach-avoidance and affiliation as functions of the emotion-eliciting quality of an environment. Environment and Behavior, 10, 355-387.

Schiff, M. & Frances, A. (1974). Popular music: A training catalyst. Journal of Music Therapy, 11, 33-40.

Schoen, M. (1940). The psychology of music. New York: Ronald Press.

Schoen, M., & Gatewood, E. L. (1968). The mood effects of music. In M. Schoen (Ed.). The effects of music (2nd ed.). Freeport, New York: Books for Libraries Press.

Schuessler, K. F. (1948). Social background and musical taste. American Sociological Review, 13, 330-335.

Schuster, D. H:, & Vincent, L. (1980). Teaching math and reading with suggestion and music. Academic Therapy, 16, 69-72.

Scott, R. (1970). The use of music to reduce hyperactivity in children. American Journal of Orthopsychiatry, 40, 677-690.

Sears, W. W. (1958). The effects of music on muscle tonus. In E. T. Gaston (Ed.). Music therapy. Lawrence, Kansas: Allen Press.

Sears, W. W. (1968). Processes in music therapy. In E. T. Gaston (Ed.). Music in therapy. New York: Macmillan.

Shapiro, N. (1978). An encyclopedia of quotations about music. New York: Doubleday.

Shatin, L., & Zimet, C. (1958). The influence of music upon verbal participation in group psychotherapy. Diseases of the Nervous System, 19, 66-72.

Shatin, L. (1970). Alteration of mood via music: A study of the vectoring effect. Journal of Psychology, 75, 81-86.

Shiner, M. J. (1966). 'If music be the food of love...' Nursing Times, 62, 1686.

Simon, B., Holzberg, J. D., Allesi, S. L., & Garrity, D. A. (1951). The recognition and acceptance of mood in music by psychotic patients. Journal of Nervous and Mental Disease, 114, 66-78.

Skelly, C. G., & Haselrud, G. M. (1952). Music and the general activity of apathetic schizophrenics. Journal of Abnormal and Social Psychology, 47, 188-192.

Smith, C. A., & Morris, L. W. (1976). Effects of stimulative and sedative music on cognitive and emotional components of anxiety. Psychological Reports, 38, 1187-1193.

Smith, C. A., & Morris, L. W. (1977). Differential effects of stimulative and sedative music on anxiety, concentration and performance. Psychological Reports, 41, 1047-1053.

Smith, P. C., & Curnow, R. (1966). "Arousal hypothesis" and the effects of music on purchasing behavior. Journal of Applied Psychology, 50, 225-256.

Snyder, E. D. (1971). Hypnotic poetry: A study of trance-inducing technique in certain poems and its literary significance. New York: Octagon Books.

Sommer, D. T. (1968). The effect of background music on frequency of interaction in group psychotherapy. In E. T. Gaston (Ed.). Music in therapy. New York: Macmillan.

Sopchak, A. L. (1955). Individual differences in responses to different types of music in relations to sex, mood and other variables. Psychological Monographs, 69, No. 11.

Stainback, S. B., Stainback, W. C., & Hallahan, D. P. (1973). Effect of background music on learning. Exceptional Children, 40, 109-110.

Stanford, R. G., & Stevenson, I. (1972). EEG correlates of free-response GESP in an individual subject. Journal of the American Society for Psychical Research, 66, 357-368.

Stanton, H. E. (1973). The effect of music on test anxiety. Australian Psychologist, 8, 220-228.

Sterba, R. (1946). Toward the problem of musical process. Psychoanalytic Review, 33, 37-43.

Strickland, B. R., Hale, W. D., & Anderson, L. K. (1975). Effect of induced mood states on activity and self-reported affect. Personality and Social Psychology Bulletin, 1, 399-401.

Sutphen, D. (1982). Unseen influences. New York: Pocket Books.

Talbot, E. B., & Darlington, L. (1897/98). Distraction by musical sounds: The effect of pitch upon attention. American Journal of Psychology, 9, 332-343.

Taylor, D. B. (1973). Subject responses to precategorized stimulative and sedative music. Journal of Music Therapy, 10, 86-94.

Taylor, D. B. (1981). Music in general hospital treatment from 1900 to 1950. Journal of Music Therapy, 18, 62-73.

Taylor, I. A., & Paperte, F. (1958). Current theory and research in the effects of music on human behavior. Journal of Aesthetics and Art Quarterly, 17, 251-258.

Tomlinson, T. M., & Hart, J. T. (1962). A validation study of the process scale. Journal of Consulting Psychology, 26 (1), 74-78.

Traub, C. (1969). The relation of music to speech of low verbalizing subjects in a music listening activity. Journal of Music Therapy, 6, 105.

Truax, C. B., & Carkhuff, R. R. (1964). Signficiant developments in psychotherapy research. In L. E. Abt & B. F. Riess (Eds.). Progress in clinical psychology (Vol. VI). New York: Grune & Stratton.

Truax, C. B., & Carkhuff, R. R. (1967a). Toward effective counseling and psychotherapy. Chicago: Aldine Publishing Co.

Truax, C. B., & Carkhuff, R. R. (1967b). The client-centered process as viewed by other therapists. In C. Rogers (Ed.). The therapeutic relationship and its impact: A study of psychotherapy with schizophrenics. Madison: University of Wisconsin Press.

Uhrbrook, R. S. (1961). Music on the job: Its influence on worker morale and production. Personnel Psychology, 14, 9-38.

Van De Wall, W. (1936). Music in institutions. Washington D. C.: McGrath Publishing Co.

Venturino, M. (1978). An investigation of the relationship between EEG alpha activity and ESP performance. Journal of the American Society for Psychical Research, 72, 141-152.

Wagner, M. J. (1975). The effect of music and biofeedback on alpha brainwave rhythms and attentiveness. Journal of Research in Music Education, 23, 3-13.

Wallace, R. K. (1970). Physiological effects of transcendental meditation. Science, 167, 1751-1754.

Wallach, M. A., & Greenberg, C. (1960). Personality functions of symbolic sexual arousal to music. Psychological Monographs, 74, No. 7.

Walter, W. G. (1957). The living brain. London: Duckworth.

Weidenfeller, E. W., & Zimny, G. H. (1962). Effects of music upon GSR of depressives and schizophrenics. Journal of Abnormal and Social Psychology, 64, 307-312.

Weitzenhoffer, A. M. (1957). General techniques of hypnotism. New York: Grune & Stratton.

Weld, H. P. (1912). An experimental study of musical enjoyment. American Journal of Psychology, 23, 245-308.

Wessman, A. E., & Ricks, D. F. (1966). Mood and personality. New York: Holt, Rinehart & Winston.

Williams, T. B. (1961). A study of the effect of music as a distractor on the mental test performance of certain eleventh grade students. Dissertation Abstracts International, 22, 168.

Windwer, C. M. (1981). An ascending music stimulus program and hyperactive children. Journal of Research in Music Education, 29, 173-181.

Winer, B. J. (1971). Statistical principles in experimental design. (2nd ed.). New York: McGraw-Hill.

Wintle, R. R. (1979). Emotional impact of music on television commercials. Dissertation Abstracts International, 39, 8-A, 5115-5116.

Young, H. H., & Berry, G. L. (1979). The impact of environment on the productivity attitudes of intellectually challenged office workers. Human Factors, 21, 399-407.

Zajonc, R. B. (1980). Feeling and thinking: Preferences need no inferences. American Psychologist, 35, 151-175.

Zimny, G. H., & Weidenfeller, W. W. (1963). The effects of music on GSR and heartrate. American Journal of Psychology, 76, 311-314.

Zink, S. (1960). Is the music really sad? Journal of Aesthetics and Art Criticism, 19, 197-207.

APPENDIX A

Music List (Slow Music)

Bach, J. S.
_____Largo from the "Goldberg" Variations, BWV 988
_____Aria (or Sarabande) to The "Goldberg" Variations BWV 988
_____Largo from Variations in the Italian Style, BWV 989
Complete Variations for Harpsichord
Igor Kipnes - Angel (SB 3796)

Largo from Concerto in G Minor for Flute and Strings, BWV 1056
Bach and Telemann Flute Concertos
Jean-Pierre Rampal, Saar Radio Chamber Orchestra - Epic (BC 1321)

Corelli, A.
_____Sarabande from Concerto XI, in B flat Major
_____Preludio from Concerto IX, in G Major
_____Preludio from Concerto X, in C Major
_____Largo from Concerto VIII, in G Minor
Twelve Concerti Grossi Opus 6
Neville Marriner, Academy of Saint-Martin-in-the-Fields - Argo (ZRG 775)

_____Largo from Sonata no. 9
12 Sonatas Opus 5 (Complete) for Violin, Harpsichord and Continuo
Stanley Plummer, Violin; Malcolm Hamilton, Harpsichord;
Jerome Kessler, Continuo - Everest (LPBR 6163/3)

Handel, G. F.
_____Largo from Concerto Grosso, Opus 3 no. 1
_____Largo from Concerto Grosso, Opus 3 no. 2
Twelve Concerti Grossi Opus 6
Neville Marriner, Academy of Saint-Martin-in-the-Fields - London (CSA 2309)

_____Largo from Concerto in F sharp
_____Largo from Concerto in D sharp
Feuerwerksmusik und drei Concerti
Raymond Leppard, English Chamber Orchestra - Philips (6500 369)

_____Largo from Concerto Grosso no. 2 in F
_____Largo from Concerto Grosso no. 4 in A Minor
_____Largo from Concerto Grosso no. 9 in F
_____Largo from Concerto Grosso no. 5 in D
Concertos for Wind and Strings Opus 3
Neville Marriner, Academy of Saint-Martin-in-the-Fields - Argo (ZRG 5400)

Telemann, G.

_____Largo from Concerto in D Major
Bach and Telemann Flute Concertos
Jean-Pierre Rampal, Saar Radio Chamber Orchestra - Epic (BC 1321)

Music List (Lively Music)

This consisted of the faster movements, taken from the foregoing pieces.

APPENDIX B

Basic Scale of Depth Self-Exploration

(Truax & Carkhuff, 1967a)

The following is a 9-point scale attempting to define the extent to which patients engage in self-exploration, ranging from no demonstrable intrapersonal exploration to a very high level of self-probing and exploration. Although this basic scale is intended to be a continuum, corrections should be added to determine the final assigned scale value.

Stage 0

No personally relevant material and no opportunity for it to be discussed. Personally relevant material refers to emotionally tinged experiences or feelings, or to feelings or experiences of significance to the self. This would include self-descriptions that are intended to reveal the self to the therapist, and communications of personal values, perceptions of one's relationships to others, one's personal role and self-worth in life, as well as communications indicating upsetness, emotional turmoil, or expressions of more specific feelings of anger, affection, etc.

Example A:

T: So you'll see Mrs. Smith about taking those tests? Have you got your slip?

C: Yeah.

T: As I mentioned earlier, I have to leave a little early today. (Phone rings) Hello, yes, this is Dr. Jones. Right, right, okay, right away. Goodbye. (Hangs up) So then I'll see you next Tuesday?

C: At ten?

T: Yes, or a little bit after. Okay, I'll see you next week.

Example B:

T: I am sorry that I'll be gone for ... several weeks now or ...

C: Mmm ... Oh!

T: Maybe over two weeks.

C: Mmm.

T: 'Cause here I just—we just start, and then ...

C: Mmm.

T: I go away and ...

C: Well, it's the holidays coming up—I mean that ... are you ... from here?

T: No, I'm from Utah.

C: Oh, uh huh ...

T: So that's why I'm going on this trip ...

C: Mmm ... (Pause)

T: And I'll be back on January 3rd ...

C: Mmm ... mmm ...

T: I'll be—I can make up the time for you.

C: Mmm ... You know ... it certainly couldn't make any difference to me if it's in the morning at ... ah ... couple morning periods.

T: You don't smoke, do you?

C: No, I don't.

T: You don't mind if I smoke, do you?

C: No. I don't ... (Laughs)

Stage 1

The patient actively evades personally relevant material (by changing the subject, for instance, refusing to respond at all, etc.). Thus, personally relevant material is not discussed. The patient does not respond to personally relevant material even when the therapist speaks of it.

Example A:

T: As though you're just feeling kind of down about these things ...

C: Tired.

T: What?

C: Tired.

T: Tired ... kind of worn out?

C: Couldn't sleep last night. (Pause)

T: You're just feeling kind of worn out.

(Client does not respond—silence to end of tape.)

Example B:

C: Dining room?

T: Hmmm?

C: You're dialing room? (Pause) That's why the operator always answers when I dial half around.

T: Is this your dialing room?

C: Sometimes when I'm in the kitchen. Umm, whenever I make a dial, dialed numbers, it reminds of dinner. What are we having today, do you know? (Pause)

T: Something good? (30-second pause—dialing of telephone—another long pause) It's kind of interesting to make phone calls even when they're not real?

C: (Dialing telephone and talking at the same time) It seems like fun.

T: Not so much fun. (Telephone is dialed 18 times)

C: Could I go back now? I don't want to do anything 'til they make me dress ...

T: I thin you can. Umm, I guess you feel this isn't very interesting, is it? I'm sorry I couldn't do a better job of playing a brother-in-law, but I didn't know what kind of guy he is.

C: (Mumbles) You did quite good.

T: Did I? (Silence to end)

Stage 2

The patient does not volunteer personally relevant material but he does not actually evade responding to it when the therapist

introduces it to the interpersonal situation.

Example A:

T: I gather it is rather tiresome for you to wait because unless somebody else says something you don't know when it'll be, you'll be out.

C: Uh huh. I hope someone does something for me pretty soon. (Long silence)

T: There's such a feeling about all this as if—me, I'm powerless. I can't do a thing.

C: You wait until your doctor tells you ... can do something but ... (Silence)

Example B:

five minutes of silence have preceded this interchange.

T: Our time is nearly up. I guess you just feel kind of somber?

C: Yeah, hopeless.

T: Hopeless ...

C: Everything ...

T: Everything's a mess, nothing can ... nothing can work out. (Pause) It's just hopeless (pause) ... feeling might be going into it or talking about it. It's hopeless anyway.

C: Yeah, I ... nothing makes sense anymore. (Laughs)

T: Hmmm?

C: Nothing makes sense anymore.

T: Nothing makes sense.

C: Just don't know ...

T: Messy, hopeless ... (Mumble) ...

Stage 3

The patient does not himself volunteer to share personally relevant material with the therapist, but he responds to personally relevant material introduced by the therapist. He may agree or disagree with the therapist's remarks and may freely make brief remarks, but he does not add significant new material.

Example A:

T: And I guess you don't need to, uh, see that doctor at all. But I'll see him and ask him—if you'd like me to?

C: Yes, I would.

T: Okay, I wanted to ask him also about your staffing because it was scheduled for this Monday and they must have had some kind of mix-up again. they didn't have it, did they?

C: No. Uh uh. They didn't call on it. (Silence)

T: Oh, ... a few new faces in the building?

C: Oh, no. They're from ... well, we have one there, two, is, but there's a couple from over here I know.

T: Um hmm.

C: I got, you know, she came over there.

Example B:

T: What did you do during those couple of years?

C: Nothing. Just stayed home.

T: Stayed home?

C: Right.

T: That's when you stayed home and looked after your little sister?

C: Yes. Except one year I did have a summer job.

T: How did that go?

C: Okay. But it was dirty.

T: Your sister ... how did that go?

C: Not too good.

T: Not too good? You didn't like her?

C: That's right. (Yawns)

T: Did you always resent her? Or did it start at a particular time?

C: Right when she cam ...

T: When she was born?

C: I thin so.

T: Do you have any ideas about that?

(Silence to end)

Stage 4

Personally relevant material is discussed (volunteered in part or in whole). Such volunteer discussion is done (1) in a mechanical manner (noticeably lacking in spontaneity or as a "reporter" or "observer"); and (2) without demonstration of emotional feeling. In addition, there is simply discussion without

movement by the patient toward further exploring the significance of meaning of the material or feeling in an effort to uncover related feelings or material. Both the emotional remoteness and the mechanical manner of the patient make his discussion often sound rehearsed.

Example A:

C: (Talks in a flat, monotone voice) ... It was hot, too.

T: It was kind of hectic and not too satisfying experience, I take it?

C: I mean the whole day was a flop. (Nervous laugh) It started out we were just going' to take a ride. A trip. Take ride up north. I ... 'cause I knew all the places would be busy, you know, and with the children it isn't too nice ... and'... so I ... Nobody seemed to know where they ... where they wanted to go ... I mean it wasn't too well planned in the first place. Thought we'd just get out for a while and drive and stop off if we saw something we would like to see. And then he said the night before we weren't going to go, 'cause they were acting up some ... and they were crying over that. Because one was trying to boss the other. (Laughs nervously) And then on the way up, we stopped every few miles and looked at a map. (Said slowly, with a tired and resigned tone of voice) It was ... I don't know ... it was ... It wasn't nice.

T: Is it kind of discouraging to see the same darned old patter of ...?

C: It was the same all over again ... (long pause) ... it certain was ... Got a good start anyway.

T: You had a good start. (Following told in a dry monotone voice) I did quite a bit of work Monday night. And Sunday night I made a dinner and was doing dishes at 9:30 that night so we could go and get a good start and all. It was hot that night and the kids didn't want to settle down. I tried to get them to settle down and maybe I got kind of nasty to them. Then he told me, "Well, we're not going to go tomorrow. We're going to say home or get up late ..." I didn't know what it was all about and just didn't do much. I stayed in the bedroom. I couldn't quiet them down. And they were so excited. It was late enough. It was 10 o'clock or something like that. Ten-thirty, I think it was. He had worked from about 4 o'clock, no, 5o'clock, to about 9 o'clock. No 8 o'clock. We didn't get there until quarter to nine.

Example B:

C: Yeah ... and let's see, what else did we do last weekend? We went to look at some new houses. The landlord said that we may not have to move. but my husband is going to talk to him again this week and then we'll know more ...

T: Um hum.

C: So.

T: You may not have to go through that, huh?

C: Yes, may not have to go through that.

T: Yes, um hum.

C: When we go through some houses that you can buy without a down payment—just closing costs. But they're so expensive, but at least it's something and my husband sort of would like to buy one of those.

T: Hmm, at least that's possible.

C: Yes.

T: That situation doesn't seem as much of a problem as it did recently.

C: No. not as much of a problem. (Voices flat and trailing off)

T: Still unsettled but ...

C: (Pause) If we have to move we just have to move that's all. We, we might buy a play without a down payment ...

T: If you have to ...

C: yes, My husband wants to anyway, so we might ... I don't know yet. (Pause)

T: I can't get how that feels to you ... would that be fun or are you a little concern?

C: What"

T: Buying a house.

C: Well, in a way that'd be nice. You know it would be a new house ...

T: Yes.

C: But the trouble is that want so much money for them.

T: Hmm.

C: I think you would pay a little bit more that way that it was actually worth if you were to get if ...

T: Yes, you do. yes you do ...

C: Without a down payment. (Long pause)

T: Our time is up?

C: Is it up? Well, I'd better go now.

T: I'll see you ...?

C: Tuesday.

Stage 5

This stage is similar to Stage 4 except that the material is discussed either with feeling indicating emotional proximity or with spontaneity, but not both. (Voice quality is the main cue.)

Example A:

C: He's the only close relative I have. But he's wrapped up in his own family up there ... and he doesn't seem to ... to realize that this house is the type ... it's dear to me ... I don't want to sell it, it ... I really don't.

T: but he wants to sell it.

C: ... He wants to sell it. He's eager to get rid of it because it's not worth keeping ... to him, because he has his own home. But this is all the home that I have. (Pause) But of course, he is perfectly willing to sell it for as much money as he can get, and on that score he doesn't give me any trouble. He doesn't want a sacrifice sale as my guardian seems to want ...

T: That's one of the few things that you have to look forward to ... and going back to it ...

C: ... Going back there is one of the ... I know I can't live there alone ... one of the few things I have to look forward to. I know I can't live there alone as soon as I leave the hospital because I don't have the money to keep it up. But given a few years, I could. And I was hopeful that, if I could get a job, then perhaps I could get a mortgage on the house and pay off my hospital bill because ... You see that's the whole catch, is the what do they call it ... the collections board or what is that? Bureau or board or something of Collections and Deportations.

T: I don't know ...

C: ... Here is Footville, wants the house sold so I can pay my hospital bill. But if they sell it for the ridiculously low price that it's listed at, it won't even pay my hospital bill.

T: Yes.

C: That, to me, seems stupid. I mean it, it would seem to me ... that since they can't get the full amount of my hospital bill out of it, by selling it at the list price they would be ... it would be better not to force sale of it and apply the rent that we get on my hospital bill. Or, at least my share of the rent ... But they don't seem to figure that that's ... oh. I don't know. I give up.

T: Yes ... it's a rather narrow way that they look at it ... very cold and inhuman-like.

C: I don't know.

T: I think it would make me pretty darn mad if they tried to take my house away from me. Especially one that ... I lived in for a long time and was really a part of me.

C: (Groans softly)

Example B:

T: Part of what it says to me is, "Boy, I had a wonderful time this weekend, and I found that my home was getting put together again, that I don't have to worry about my mother taking my son. My husband is doing something good, and when I do get out of here, at least I have something to look forward to now."

C: That's right. I mean, no matter what, what you said now, I mean I didn't let it, let it bother me, it being that like my sister was quite ill and expecting another baby. I think she has about five or six children now, I mean, my mother said, well, she had a seven or eight hundred dollar doctor bill. She was just ... just, it's just the insinuation that ... the ... uh ... they could afford it, and I couldn't and I belonged here is ... and didn't have the money financially to do, uh, to do what, what uh ... the rest of my family, with their big homes and that, can do. 'Cause we're in no position and never did have our, our own home, and ... uh ... but it didn't bother me, being that my husband was home now and able to take some responsibility. And, if he wouldn't have went and taken this job, coast-to-coast on the road there, I know I never would have been back in here again.

T: Mmm.

C: 'Cause, uh, then my son was out there more than he was home and my, my mother wanted me to go back already. I mean, I wasn't home a month, and she said, "I think you ought to, uh ... take her back in there again." and uh, in ... back to, again. So, uh ... that's just ... so now I, it doesn't, it doesn't both me though, because I know now she wouldn't be able to take them and, and to keep them out there. I mean and, that they couldn't commit me now, if my husband doesn't, uh ... knows, uh ... that ... uh ... there's nothing wrong with me.

T: Mmm ... before you had a feeling everybody was working to get you in here.

C: They were. My relatives, I mean, they, they, they seemed to think all the while there was something wrong with me.

T: And now you have kind of proof that, at least your husband and probably your children, are on your side.

C: Hmm ... (Pause) ... Well, I was ... there was never enough money ... my husband worked in a quarry at that time, too, and Billy was a baby, and I never was in the hospital to have either one of them, and I had to depend on my mother for that. Now, I went home to have both of them, the second time he was in the army. And uh ... and then, well, he left me, and he went to join the army. And it was fifteen, fifteen years ago. And, uh ... it seemed he always ... when they had to, someone does something like that for you, you always have to be under obligation to

someone. And I mean, they want to do something then like they ... she wanted my son in there then ... the youngest one, because she took care of him from the time he was a baby and spoiled him. And, uh ... I was always afraid someday that when he would grow up, that ... well that's just what did happen. And I guess I worried a little bit too much about it. And now, well, now I have the feeling that it ... that, uh ... things'll be, be different. 'Cause he's first anyway, my husband ... to, to, to ... take the responsibility that no one else could have, because the one that's nineteen, well, he's on his own with his own job and that, and nobody would both him anymore. So, he doesn't get into any trouble. Sometimes too much money isn't good either, for boys of that age.

T: So, almost as long as you've had Billy, you've always been afraid that somebody would want to take him away from you? Your mother?

C: yeah ... the youngest one ... not the oldest one. The youngest one.

T: Yeah.

C: Well, I had, I had to go home that time because I ... he left me already and, early in winter, and he was born first in September, and I had to depend on my relatives that whole summer for something to eat. And, uh ... then, then I had to go to my mother's ... there was no place ... I live in a small apartment.

And, uh ... there ...

Stage 6

In Stage 6 the level of Stage 4 is achieved again, with the additional fact that the personally relevant material is discussed with both spontaneity and feeling. There is clear indication that the patient is speaking with feeling, and his communication is laden with emotion.

Example A:

C: (Speaks with trembling voice throughout interview, almost always on the verge of sobbing, and in instances, does weep.) Do you have a match, or don't you use them?

T: Yes, I have one ...

C: (Lights cigarette) Thank you.

T: You're welcome.

C: (Pause) ... Like I said, you can't go back to living like that. (Pause) I've said, and even if he said he wouldn't do those things again, I'd still ... I mean I just can't trust him anymore. (Voice becomes very thin) I know it'd be that way. Not because I want to go back again. It'd be on account of the children. I don't want to come home. (Long pause) So there he's again using it. Now it's my fault. I don't want to go home so they think I don't want to come to them, back to them. (Crying) See"

T: Yes

C: And since ...

T: (Very quietly) Seems like everything gets twisted the wrong way so that you come out the goat.

C: I really felt bad last week. I've been taking the kids up to my folks. See? And I said, I told them, why I can't go back with him and like that. I said, "He'd do the same things all over again." And they said. "Oh, you don't want to come home with us. You don't love us. You don't want to be with us." You know? Like that. I try to explain to them. (Very upset) It's so hard and you hate to get them upset again. I mean, they've been upset so much already. (Long pause) I don't know what to do.

T: At times it must seem impossible that you could be so completely misunderstood, doesn't it, as if no one can see this thing the way it looks to you?

C: (Weeping) ... So there again he's using it.

Example B:

C: Dr. Smith showed me exactly how they do this. I was working at ... at that time.

T: Um hmm.

C: But it sure ... God! I never saw a fella, I never saw a child, change so much from a ... well, I had a picture of him before and after. I just never saw ... he was just ... (Pause, groping for words)

T: Very striking, I guess.

C: Huh?

T: It must have been very striking.

C: Oh boy! (Nervous laughter) It was, uh, it was, uh, well ... I just ... never you just don't believe it. That's all, because people just don't ... well you saw pictures of malnutrition and ...

T: Um hmm, yes.

C: He was just bone! And his stomach all puffed and the should ... that's just exactly the way he looked. His legs was about, uh, as that (demonstrates how large) that big around. He walked around and never said hardly anything. Course you couldn't blame him, poor kid. Sitting' up here with gas pressing on his diaphragm. It's a wonder he could breathe. And just like that (snaps fingers) you see a person get an operation ... and then all of a sudden he's straight as well, just as tall and straight as you or I. (Voice cracks with emotion) Can't help but appreciate the people who develop those things, take the time to develop those things. And that, that, that, well, that ... that was ... well, I'll tell you, I'm kind of a calloused individual but I sure was grateful for that. There's no getting around that. I used to worry about that little fella. I guess I worried more about him than his mother.

T: Uh hmm, hum.

C: He'll go along now. He's strong. Boy, he's strong. Before he wasn't very strong, but now ... just as strong as they come now. The other, I got a girl, she's got a crossed eye. She

wears glasses. That'll straighten itself out. Outside of that, they haven't any ailments outside of childhood meanness.

Stage 7

Tentative probing toward intrapersonal exploration. There is an inward probing to discover feelings or experiences anew. The patient is searching for discovery of new feelings which he struggles to reach and hold on to. The individual may speak with many private distinctions or with "personal" meanings to common words. he may recognize the value of this self-exploration but it must be clear that he is trying to explore himself and his world actively even though at the moment he does so perhaps fearfully and tentatively.

Example A:

C: What ... do you think this about, what would anybody get out of this?

T: Hmm. Not quite sure what you're asking.

C: This kind of therapy?

T: Hmm. You mean, "What is there in it for me?"

C: What could, could anybody get out of it?

T: Uh hmm. Well, saying, "Right now, I don't really feel I am getting anything."

C: Well, I guess I haven't been in it long enough.

T: Uh hmm. Well, anyway, is it uh, "Few times we have talked, I don't really feel I've gotten much out of it?"

C: Umm, I ain't got nothing.

T: Uh hmm. "Am I just going to go on this way or when do you, gonna get anything. It's just pretty useless, pretty hopeless."

C: Seem to be hopeless.

T: Uh humm. Doesn't seem to, do anything or help really at all.

C: And I don't think this hospital every done me any good yet. 'Cause I think I got worse since I been here.'

T: "I felt really worse. I guess especially since I had read last night about this other fellow."

C: Oh, I've always thought that.

T: Um hmm.

C: Guess that was a couple of weeks ago. I haven't gotten any better.

T: Hmm.

C: I'm ... I just don't care for anything now.

T: Not much interested in anything. Don't care what happens or ... doesn't happen.

C: Don't care if I live today or die tomorrow.

T: Nothing really has any meaning or purpose. (Pause)

C: Seems funny that ... the whole world seems all funny.

T: Sort of distant or ...

C: Don't ever seem like it's real.

T: Uh humm. Sort of like seeing a movie or what?

C: No, it ain't like seeing a movie. You know it's real but you don't feel it.

T: Um hmm. "I know this is all there is, that this is, this is really real, but it don't seem that way."

C: Seems so crazy. (Laughs)

T: Umm. Logically it doesn't make sense but it sure seems that way.

C: Don't make no sense to me. I don't feel like, like one person's got, uh, like he should say, "You get in here and spend the rest of your life in prison." I don't see how he can judge another person like that.

T: Uh hmm. How can one person make this decision?

Example B:

C: (Coughs) There are a lot of things that, that hurt. Yet I know I shouldn't ... let them bother me because some way they seem foolish, but in other ways they carry a great deal of weight. (Pause)

T: Um hmm. You know that there's an irrational part of it, but knowing that doesn't prevent you from feeling that.

C: No. Nor does it stop me from undergoing the compulsions. (Pause)

T: That was an example, and even talking about it ...

C: It just makes my heart beat fast. I just feel myself going up.

T: Were you ever afraid that you might do something like

that? Try and recall ...

C: Well, just the thought of it frightens me ... so much. It's like the, I think I told you one time, it's like playing a game, only you don't want to play it. That every thought would come into your mind ... successively each time. Then there's a counterpart. I mean you can, you can't have any good feelings without having bad ...

T: ... without having bad feelings.

C: And then ...

T: ... then have the reverse of that, is if you have a bad feeling. You try to think something good, or you try to do something that gets rid of the bad.

C: Well, I, I never get that far. About the best I get is the bad feeling and then I have to undergo my washing, or (Pause) ...

T: Um hmm.

C: Dr. Smith told me one time ... I don't believe it ... that it was due to the ... the church ... the ceremonies, involved the Catholic church. No I, I ...

T: Who's Dr. Smith?

C: He was down to the County.

T: Umm.

C: And, uh, that seems kind of (Pause) ... I think he was a little bit queer, I don't know.

T: It doesn't seem to make sense to you that part of it, or

whatever it was that he meant by that.

C: Oh, he told me another one too. that people (clears throat), that unconsciously try to keep from giving out to a doctor, you know, that sounds like a psychiatrist, generally have constipation, and those people that, uh, give out pretty freely, have good running bowels or loose bowels. Now that, hah, does that make any sense to you? Is there ...

T: The important thing is that it didn't make any sense to you.

C: No it didn't. Just the same as ...

T: Or at least that didn't give you an answer to clue for ah, what going on around here, impulse.

C: That's right. But he, as I say, said it was again the church, the, the ceremonies, and all that, ah, you know how a Catholic Church operates.

T: Umm. (Pause)

C: Oh, there's been some lulus. Dr. Jones said he thought it due ... to my marrying against my father's wishes. That didn't strike a responding cord either.

T: Yes, a lot of people have suggested a lot of different things, but you've never hit upon anything yourself that makes sense to you.

C: No, I haven't ... except for the last couple of times in here talkin' to you, I don't know if it's helped, maybe some.

T: Yah, I certainly get this feeling, that you're getting

close to some things.

C: Well, I sure hope so.

T: You're kind of ah, grasping at some things. You haven't quite got them yet, but you're close.

C: If I could get the beginning of it, I think it would help a great deal.

T: It's though that there's something there that's been forgotten, or ...

Stage 8

Active intrapersonal exploration. The patient is following a "connected" chain of thoughts in focusing upon himself and actively exploring himself. He may be discovering new feelings, new aspects of himself. He is actively exploring his feelings, his values, his perception of others, his relationships, his fears, his turmoil, and his life-choices.

Example A:

C: (She is relating experiences in Germany during World War II) I don't want to exaggerate but, why, you could have killed for some things! And the pendulum was always swinging. You never knew. You'd steal carrots to eat because you were always so dreadfully hungry. There was no clothing, no fuel ... and the cold ... (Voice soft, reflects a great deal of concentration) They had ... they always announced the dead, those who had been killed in the war. And one always went and read the lists. I don't recall

exactly where they were ... (Pause) It was conducive to think that life was ...

T: Unendurable, and getting used to the, that way of living.

C: Yes, yes, uh hum, I had no ... I was not ... I have a very close girlfriend who shared my things but I was not kind and tender with my brothers. I remember one thing that really shames me still. I was to watch out for them, and my younger brother fell and bruised his head one day, and I just pulled his cap over that. Really, really, but ... but my excuse I think I can say was that nobody ever treated me lovingly. At least I think that.

T: It was a hard life and you have to be hard. This is what you knew.

C: I think I was harder than I really had to be but I was just, ah, hard ...

T: Because you hadn't been taught to be soft and loving.

C: Yes, ah, yes. I don't know whether you teach somebody to be, to be ... do you?

T: Well, you haven't experienced it?

C: I feel that way now, toward my family, my husband and children ... I can ... love them.

Example B:

C: I think, ah, ah, I think you are probably right and, and, and, I wouldn't believe it. But I have the results and I owe the results to you. (Pauses, makes a series of tentative starts, then continues) Sometimes it may, must be a process of getting better

that you make out of something that you hear, like—like an attack that galvanizes you into action, because in the end that is what I must do myself and I, and ah, ah ... I know the tender subtleties that are involved and I know the immense vulnerability of any person. I didn't think I could hurt as much and I didn't think that could be, ah ... take the bit of others as well as their bark. I talked to my husband yesterday about mother's death. It was very lonely and very stupid in a poorly run hospital on a Sunday afternoon where they just sort of gave her no care at all and I, I said to my husband how terrible, how terrible that was and he pointed out rather patiently to me; he said, "Well, your brother brought her there in the afternoon and then she died four or five hours later." And that nobody was there was unfortunate but basically somebody was there, and, and, and my brother and my sister-in-law were as concern as you would have been, only then were told there was no ... danger at all, and so, in the meantime, my mother had died. And I found myself so gratefully holding on to this explanation. Why I am unable to find the positive explanation, I don't know, but I am constantly unable to look at the positive side. yet I think I can learn it ... (pause) certainly if meaninglessness doesn't do it then I think willingness will do it. And, and, I thought, I thought now here he knows I have a problem and we not only talk about ...

T: I think I was trying to say to you something about this ...

C: And don't you think I can find out? I mean beyond the words are ... is ... this universe where ...

T: Yes, ...

Stage 9

Stage 9 is an extension of the scale to be used in those rare moments when the patient is deeply exploring and being himself, or in those rare moments when he achieves a significant new perceptual base for his view of himself or the world. A rating at this stage is to be used at the judge's discretion.

Corrections

The following corrections should be applied to each basic rating where appropriate.

A. If a therapist is doing the talking but is speaking for the patient (i.e., depth reflection) and the patient is "with" him, then give the segment the rating based on the way the therapist is talking and subtract one full stage.

B. If a segment fits a given stage but does not clearly include all elements of the preceding lower stages (for example, Stage 7 lacking spontaneity), then subtract one-half stage for each missing element.

C. Add one-half stage for "personally private" material. "Personally private" material is any communication which thereby makes the individual more vulnerable. It may be information given

that could be thrown back at the patient by a hostile person in a very hurtful way. It thus has the potential of being personally damaging material.

D. Add one full stage for discussion of "personally damning" material. This is material that would be revealed only in a safe, accepting, and nonthreatening close relationship. Said in any other context it would hold the threat that the other person could "throw it in his face," which might be catastrophically damaging. It would almost invariably involve the patient's making a "damaging admission" about personal weaknesses, failures, or "terrible" things that he has thought, felt, said, or done.