Adolescents' Enjoyment in Listening to Unfamiliar Music:
Effects of Contextual Information and Audiovisual Mode

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ABSTRACT

Listening to unfamiliar music frequently arouses a less than positive reaction, yet an affinity with a topic is motivational for learning. As it has been shown that initial distaste for a musical genre is particularly difficult to shift, this study set out to investigate means by which maximum provision can be made in high school music classrooms, to arouse an attraction towards unfamiliar music during the first hearing. The research aimed to determine whether there was an identifiable relationship between the way in which recorded music is presented, and the degree of positivity with which students respond.

A sample of 438 secondary music students from Year 9, 10 and 11 classes, was distributed evenly with respect to gender, school type, class-year and area, amongst four treatment groups. Half the sample listened to an audio recording of the stimulus music, and the other half viewed a video of the same performance. Half of each of these groups was provided with a brief, informative introductory announcement. A researcher-designed questionnaire completed immediately after the musical performance provided data on subjects' affective response, attention style, subjective familiarity, gender and musical experience.

Results indicated that subjective familiarity was strongly related to audiovisual presentation mode. Four attentional styles were distinguished: surface-analytic, structure-analytic, holistic and receptive. The provision of contextual Information would appear to assist enjoyment of unfamiliar music, particularly for boys. The strongest results found were the influence of enjoyment on subsequent interest in hearing more of the music, and that of individual difference in attention style, as a greater predictor of positive response to the music than presentation condition, subjective familiarity, musical experience or gender.

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CHAPTER ONE

THE SIGNIFICANCE OF MUSICAL ENJOYMENT IN MUSIC LISTENING EDUCATION

Is it a desired outcome of a musical education that individuals will possess a taste for music? Is it assumed that after matriculating in music, students will gain lifelong satisfaction from the wealth of human art conveyed in sound? If such a value underpins the very presence of music in the school curriculum, then it needs to be understood. Should examination reveal that the human function of music embodies a response which is more than discrimination of aural patterns and recognition of their position in a cultural or historical context, then it is important that this additional response is not disabled by an educative process subservient to the goal of scoring points for knowledge. It is possible that unless music educators proactively plan for the achievement of affective objectives and possess knowledge about relevant teaching techniques, the core value of music education may be inhibited or suffer lasting impairment.

The purpose of the first chapter is to outline the essential context of this study. The research contributes to a line of investigation in empirical aesthetics central to the educational psychology of music. It arises, however, in response to philosophical matters which are set in an anthropological frame, with an ethnomusicological perspective.
1. The Human Functions of Music

Culture has been broadly defined by anthropologists as the cumulative patterns of thought and interaction of a community (Merriam, 1964; Nettl, 1983; Blacking, 1984). The cultural practices of every society include what may be broadly classified as biosocial aspects such as economics and politics, and the humanistic aspects we call artistic, religious and philosophical. While the purpose of man's biosocial systems is to satisfy the needs which assure continuity of existence, that of the humanistic elements is the "enrichment of human existence" (Merriam, 1964: 23). In an analysis based on considerable experience and study of many of the world's musical cultures, Nettl (1983) found the ultimate social functions of music to be mediation between people and the supernatural, and support for the integrity of social groups by the expression of cultural values in abstracted form. As a feature of every known society, the contribution of music to the quality of life is a universal reality, and has been described as a "sense of significance" (Reimer, 1970: 25). The ways in which these functions are achieved depend upon the musical concepts and behaviours of a culture.

2. Music as an Aesthetic Object of a Culture

Societies vary in the ways they conceptualise and value their music, in the extent to which they participate as performers, listeners and composers, and in the amount of time and type of attention they devote to music. The predominant functions of music as conceptualised in literate societies have been characterised as primarily of aesthetic enjoyment, entertainment, and emotional expression (Nettl, 1983). A perspective such as the aesthetic dimension of music which is common to a set of distinct social groups or cultures may also constitute a 'universal': "the capacity to perceive, feel and respond emotionally, spiritually and intellectually to music is by no means confined to those societies that verbalise the aesthetic dimension of their music or make it a subject of philosophical enquiry" (Nketia, 1984: 3). It has been postulated that use of this widely shared ability enables a form of intracultural transfer through which members of a musical tradition may gain some aesthetic reward in listening to certain musical output from beyond their own tradition (Kivy, 1990; Moravcsik, 1993; Nattiez, 1990; Nketia, 1984; Reynolds, 1975; Shore, 1991; Tolbert, 1987).
3. The Breakdown of Cultural Barriers in Music and Music Education

An entire lineage of erudite composition rising from the tonal-harmonic tradition of post-Renaissance Western Europe, and reaching forward to the output of those twentieth century composers of 'atonal' music, has been termed 'Western European art music'. Although one of the stylistic periods occurring within that lineage is known as Classical, the term 'classical' has also commonly been applied to encompass that entire musical tradition (Harman & Mellers, 1962; Floyd, 1996).

Drawing upon his observations of Western European art music and of music in other cultures of the world, Small (1977) attempted to outline a number of assumptions which appear to belong peculiarly to Western classical music. These included: the separation of music from everyday life as a self-contained object of contemplation, usually presented in dedicated spaces with a fore-ordained time of beginning and ending; the idea of music as communication, with the involvement of such separate entities as a composition, a performer, a performance, a composer and an audience; the importance of pitch relations granting supremacy to melody and harmony above rhythm, texture and timbre at least as structural elements; the use of such conscious devices as large harmonic forms to articulate time for the listener; and the adjustment of natural harmonics in devising a scale of twelve equidistant pitches per octave (Small, 1977). During the progress of the twentieth century, it will be seen that many composers rose to the challenge of liberating Western music from such notions which they perceived to be imposing unnecessary limitations.

It would be inappropriate to attempt to illustrate the myriads of examples of non-Western musics whose assumptions do mostly differ from the above, and yet not all of these musics differ on all assumptions. To provide just one instance, the classical music of North India will be briefly considered in the light of these few issues. In this case there is a concept of an art-form to be contemplated for its own sake, possibly in a dedicated space and with a fore-ordained time of beginning, but not of ending (Mayor, 1966). There is no previously notated composition, but there is a raga, or scalar figure on which improvisation is based, which is selected according to the time of day and the season (Kaufmann, 1965). As well as the importance of communication between the musicians, there is a notion of reciprocal
communication between performers and a responsive audience (Bailey, 1982). Rhythm is at least as important as melody, nuance, dynamics and embellishment (Syhra, 1966), but harmony does not exist as a progression. A tonal gravity is simply sustained by an unchanging drone (Berry, 1992). The term *rasa*, applied to the twenty-two *srutis* or microtones which are selectively used to characterise the mood of a melody, also refers to "the response created in the spectator" by emotions portrayed in the arts (Kaufmann, 1965: 272).

A process of intercultural exchange of musical influence has been constant throughout history (Merriam, 1964). Examples of musical homogenisation have included the expansion of Chinese culture in the fourteenth century, the Islamic wars of conquest, and the course of Aztec expansion; a reduction in the song repertoires of the Maoris and some North American Plains Indians, and in the Japanese classical repertoire; simplification of the rhythmic patterns of African drumming in the Caribbean; abandonment of the traditional music of some non-Western cultures, and the replacement of traditional instruments and technology in many cultures by Western counterparts (Nettl, 1983). Particular elements of Western music most frequently introduced by changes to the traditional musical culture of non-Western societies in a process of Westernisation have been simple metric rhythm, tonal scales and harmony, large ensembles, performance of unaltered or notated compositions, and concert presentation context (Nettl, 1983).

A further result of the process of intercultural exchange has been the arrival of hybrid musical genres, such as the flamenco style which evolved from centuries of intercultural encounter to blend elements of influence from Gypsies, Arabs, Christians, Jews, Africans, Andalusians, Castilians and Madrilenians (Labajo, No date). Through contact in America between African and European musics, the African worksong was transformed over time in the development of jazz, a hybrid genre of the twentieth century, which was to be acclaimed by the West as an "art" music. With the acceptance of jazz by a significant proportion of the populace of communities gathered under the term Western society, violation of some of the previous Western assumptions typifying classical music has been allowed. With its improvisatory practice, jazz blurs the boundary between composer and performer and prevents the predetermination of a time frame. Harmonic forms are predominantly condensed into a short theme
which is subjected to any number of variations in its repetition; the element of rhythm is at least as important as melody and harmony; and deviations from the twelve equidistant pitches, as well as from the classical norms for instrumental and vocal timbre, are important expressive devices.

European classical music had always incorporated local material, and with the expansion of global communication, influences of musical exchange between more distantly related cultures were increasingly accepted. Some early examples were the incorporation of jazz elements in compositions of Igor Stravinsky, and Balinese elements audible in works of Claude Debussy. Early in the twentieth century, such changes were to rapidly become more radical. The focus on pitch relationships was substituted by Varese with timbral relationships, and with the advent of musique concrete, noise and electronic sounds expanded the range of materials and techniques utilised by composers. Polyrhythms, assymetrical rhythms, polytonality and atonality were explored, in a rapid approach towards serial music. Western art music had broken the bounds of its slavery to tonality, and dissonance, no longer restricted by that harmonic system, became rampant to the ears of the public at large. Along with the familiar framework of melody, harmony and metric time, the highly developed musical forms based on the sonata principle also, in the public perception, dropped away. The listening public thus deprived of its familiar props, was grappling with music which, despite the extreme detail of organisation in its construction, seemed chaotic. If its organisation could be detected, the music’s dissonance and lack of melody were still sufficient to make it unattractive to the majority of concert attenders. The period during which composers may have been responding to world events such as two World Wars and the rise of mass communication, and appeared to be writing for each other despite the disenthusiasm of their wider audience, approximates 1920 -1950. The negative public response which peaked during the 1960s and -70s diminished somewhat toward the end of the twentieth century as audiences possibly drew benefit from exposure, education and the infiltration of a younger, more adventurous generation of listeners. Composers also appeared to be regaining a foothold on the interest of their audience, capturing their fascination by the use of more readily accessible imaginative devices.

The endemic breaking down of generic boundaries throughout history had not occurred on as large a scale as during the twentieth century which has produced a plethora of mixed or hybrid styles. An example of the
accelerating rapidity with which modern popular genres are metamorphosing is illustrated in the following record of recent developments in Jamaica (Mash, 2000). In the 1950s, Jamaicans were listening to their traditional Mento, Calypso from Trinidad, and American Rhythm and Blues. In the early 1960s a distinctively Jamaican blend arose, Ska. This new genre was phased out in 1966 by the slower Rocksteady, which was in turn transformed in 1968-9 into early Reggae with a return to the faster tempo of Ska. Between 1970 and 1973 a Rastafarian influence changed the sounds and the lyric content, and slowed the tempo, to Roots Reggae which allowed for much experimentation throughout the 1970s. In the early 1980s, with sound crews and disk-jockeys, came the prototype Dancehall, followed by the replacement in the mid-1980s of musicians at large, with digital equipment (Mash, 2000).

With increased overseas travel and development of communication media in the twentieth century, intercultural exposure to very different musical systems became more common. As a young boy in Paris in the 1930s Ravi Shankar was dismayed by the ignorance of Western musicians with regard to Indian music (Craske, 1997). In the 1950s and -60s Shankar made soundtracks for movies distributed in the West, improvised with American jazz artists and taught them Indian music, and performed with Yehudi Menuhin (renowned violinist in the Western European tradition) who had been studying raga since their meeting in 1952 (Craske, 1997). Together, Menuhin and Shankar made a series of recordings entitled "West Meets East" (1966)\(^1\). Through Shankar’s teaching of the sitar to George Harrison (bass guitarist to the Beatles of popular youth culture) in the mid-1960s, Indian music suddenly entered the Western popular consciousness (Craske, 1997). Although the visitation of Western popular music by India’s classical style did not perpetrate a lasting genre, it was the most prominent early example of the juxtaposition of culturally contrasting musics. In 1978, Shankar visited Japan where he wrote for and recorded an album\(^2\) with shakuhachi virtuoso, Hozan Yamamoto. Such global musical activity was reflected in calls for conscious effort to be applied to transcending the previous limits of the traditional Western concept of aesthetics (Sparshott, 1983; Stockmann, 1983; Supicic, 1983). Smith (1978) had initiated the effort toward that task in addressing the polarity between an etic view which might conceive of a universal aesthetic belonging to the causal science of behaviourism, and an

\(^1\)Remastered tracks on CD same title (1999)
\(^2\)"East Greets West" (1978), remastered as "Towards the Rising Sun"
emic view, more easily imagined, in a humanistic perspective of multiple aesthetics, which could be culturally, and possibly individually unique. Both perspectives were seen to apply, each fulfilling an essential complementary role in the contemporary philosophical challenge which would deal with a rebirth of aesthetics (Smith, 1978).

The variety of the world’s musical cultures has been achieving a growth in popularity, celebrated biennially in Australia by the Adelaide WOMAD festival which gathers international performers of many traditions. A myriad of intercultural musical combinations, such as witnessed at these multicultural music festivals, proliferated throughout the 1990s. Ensembles have combined performers from very different world cultures to rehearse together long-term for regular performances, or short-term for recordings or events, or to improvise spontaneously on a single occasion such as a festival. The diversity of musical activities in which performers of any cultural origin may partake is exemplified in the following sample of the recording output of a musician residing in Australia.

A master of the traditional Chikuho repertoire for shakuhachi, a Japanese bamboo flute, Riley Lee has produced many recordings as a soloist\(^3\) and in duos with shakuhachi\(^4\) or with koto, playing traditional Japanese music and improvisations\(^5\). In other recordings he has blended the shakuhachi with more contemporary sounds such as in duo with electric guitar\(^6\); with an ensemble of percussion and recorder, bass, acoustic guitar, lute, bazuki, and marimba\(^7\); and with an ensemble of bass guitar, percussion and computer\(^8\). Combining with Western classical musicians, he has recorded in duo with cello and with harp\(^9\), and with the accompaniment of symphony orchestra\(^10\). His collaborative performances with musicians of diverse cultures have resulted in recordings which juxtapose the shakuhachi with

\(^3\)For example: "Breath-Sight" (1992); "Mountain Valley" (1994); "bamboo grass" (1997)
\(^4\)"Nesting of the Cranes" (1994)
\(^5\)"Picture Dreams" (1997) and "Oriental Sunrise" (1991), respectively
\(^6\)"The Eagle and the Ocean" (1992b)
\(^7\)"Shoalhaven Rise" (1996)
\(^8\)"An Evening Under the Sun" (1997)
\(^9\)"Train to Okinawa" (2000) and "Spring Sea" (2000), respectively
\(^10\)"Dreams are Forever" (1998)
Celtic and South American harps\textsuperscript{11}; Indian \textit{tabla} and \textit{sitar}\textsuperscript{12}; Australian Aboriginal \textit{didjeridu}\textsuperscript{13}; and the Hawaiian slack key guitar\textsuperscript{14}.

Another means by which musicians are incorporating music of mixed cultural origins into their work is the use of sampling technology. The Japanese group Sorma, travelled through India, Mongolia and Bali to record samples for an ethnic trance album, "Sorma: Mirage of the East" (1999). Similarly, multi-instrumentalist Adam Plack recorded a CD\textsuperscript{15} in a more collaborative process with the songmen of the Ramingining community of Arnhem Land (Pertout, 2000). An effect sometimes resulting from this technique of combining traditional music with modern technologies, frequently used in the 1990s, is that of rendering the instruments and musical theories which are more native to the performers and their audience "invisible", while "exoticizing" other musics (Yoon, No date: 1).

The term Western music has come in the twentieth century to include classical, jazz and popular genres (Massey, 1996) which in turn, under the influence of many transcultural sources have spawned a multiplicity of mixed genres. In the entertainment guide of a weekly magazine devoted to the more technologically based genres of popular music, the following nineteen genres were listed, with mention of 51 types or subgenres (in parenthesis): Ambient; Breakbeat (nu skool breaks, party breaks, contemporary breaks, atmospheric breaks, disco breaks, jazzy breaks, funky electro breaks); Disco (funky disco); Drum and Bass; Funk (jazz funk, pure funk, mo funk, funk jazzy moves, retro, tribal funk); Garage; Hardcore; Hardhouse (underground); HI-NRG (nu nrg, commercial dance, progressive dance); Hip Hop; House (funky house, jazzy house, vocal house, deep beats, old skool, nu skool, French tip, tribal house, quality house, uplifting house, deep house, lounge grooves, retro house, funked up house, tech-house, progressive house, hard-house, garage/phat house, pre-club, house abstractions, loaded grooves style, minimal tek house); Rhythm and Blues/Soul (reggae); Techno (acid techno, pumping tech, funky techno); Trance (hard trance, progressive trance, psy trance); Electro (electro techno boogie); Electronica (dub, roots, dancehall); Latin, and Jazz ("Essential Guide", 2000). The above list cannot be considered an accurate taxonomy in classifications of genre or subgenre,

\textsuperscript{11}"Nalu" (1995)
\textsuperscript{12}"Mixed Spice" (1995)
\textsuperscript{13}"Wild Honey Dreaming" (1993)
\textsuperscript{14}"Maul Morning" (2000)
\textsuperscript{15}"Songman" (Nomad, 1999)
nor does it attempt to be comprehensive, in referring only to genres which emphasise digital sound techniques. Such a wide variety of typifications, however, within a category of popular music, clearly demonstrates the multiplicity of genres currently available to young people in Sydney.

A survey of 444 high school music students with regard to their liking for certain musical genres was taken in 1997 (Appendix A). It was found that in rating their liking for twenty-one genres, nineteen of which were current popular styles, the other two representing the broader classifications of classical and jazz, the average number of genres for which students gave a score of four or more on Likert-ratings of 0-7, was nine. In rating their liking for music of fifteen different (non-Western) cultures (Appendix B), the average number of genres liked fell to three. The latter results showed also that a very high proportion of students enjoyed the music of the Australian Aboriginals, likely due to some familiarity with that genre, coupled with some exposure to its cultural context. The music of Africa and South America also received high ranking and were noted by the researcher to be frequently introduced by high school music teachers, as testified by posters on the classroom walls. This fact in itself shows that those educators are having a positive effect. Verbal reports of students and teachers have indicated that despite a compulsory unit on twentieth century classical composition, a prevalent distaste for this class of music may have been difficult to shift. With the diversity of genres now accessible in entertainment venues and on recordings which can be purchased or downloaded, it would be a shame if an attempt were not made to awaken the curiosity of students towards the broadest possible range of musical material.

In tandem with the breaking down of barriers between Western and non-Western music, music education has broadened its musical perspective. In 1939 the Music Educators National Conference (MENC) discussed exchanges between the US and Latin America, and in 1949 the International Music Council was established by UNESCO (Boyce-Tillman, 1996). More recent occurrences in English, Australian and Canadian music education as reviewed by Volk (1998) are here briefly summarised: Since the 1960s, the British music education repertoire has made increasing efforts to broaden its scope beyond the European classical tradition to include musics from around the world, and teachers surveyed in 1987 reported a value in engaging pupils in music from different cultural origins. This was formalised in Britain's National Curriculum for music of 1993, which incorporated study
of music from cultures throughout the world, not without some controversy (Volk, 1998).

Australian music education in the 1950s made limited use of European folk songs, and in the 1960s added the occasional African-American spiritual. Syllabi were, however, firmly based in European classical music. In the 1970s, the secondary syllabi in three states included as an elective topic, music of Non-Western Cultures. By 1984, cultural diversity reached the NSW primary music syllabus, and in 1994 the Statements for the Arts in Australian schools formalised the importance of this study in national music education (Volk, 1998).

Canadians were using folk songs of their mixed cultural heritage (British Isles and France) in the 1920s, and began to include ethnic musics of their country in the 1950s. The latter has been part of the music curriculum in the Northwest Territories since the 1970s, and while traditional musics are taught throughout Canada, their curricular presence is not yet formalised nationwide. As observed by Volk, music education in many countries around the world moved to develop cultural diversity in their curricula in the 1970s. Volk (1998) also reported that implementation has suffered delay in that the required pre-service and in-service music teacher education has only recently been becoming available.

4. Music Education - Utilitarian to Aesthetic (Australia)

From Plato's time to the mid-twentieth century, a period of 2,500 years, the philosophy of Western music education has been described as utilitarian, its purpose being to develop more "effective" citizens (Mark, 1982). It was thus for the benefit of society that the components of music education throughout that time consisted predominantly of singing, and secondarily instrumental performance, with music theory and other non-performance based studies undertaken by relatively few.

The mainstay of music education in Great Britain during the nineteenth century was class singing and individual piano tuition. In 1908, the "Music Appreciation Movement" began as an extension of ear training, in a reaction against the previous emphasis on music-reading (Hutchings, 1980). Encouraged by the availability of the gramophone to school classrooms, such courses became quite popular in the 1920s, and were offered at all levels of schooling (Rainbow, 1980). The discipline of 'Appreciation', rooted
in the nineteenth century study of Musical Perception, required the application of specific precepts of 'aural discrimination' when listening. Students were thus preoccupied with form and analysis, which circumvented personal interpretation, but at least ensured a shared understanding of musical construction (Smith, 1979).

In Australia, where British influence was strong, singing was the main activity in primary school music from 1901 until 1936. In that year, the Australian Music Examinations Board (AMEB) resolved to design a "Musical Appreciation" syllabus, designed for secondary school use (Comte, 1988). In 1939, the Victorian Schools Board and the Tasmanian Board of Education adopted this course for matriculation studies, later to be followed by the other states (Bridges, 1980). Although this course initially represented a study of the history of music with reference to the works of famous composers, understanding of the term did broaden considerably over the ensuing fifty years to move away from the assumption that 'appreciation' should be gained through study in that format (Comte, 1988).

Throughout the first half of the twentieth century, the high interest in standardised testing drove a tendency with music educators "to focus on easily measured and quantified learnings, and to ignore higher-order cognitive skills, appreciations, and affective outcomes" (Geahigan, 1992: 5). The impact on arts education of the "testing and measurement movement" (p. 6), at its peak in the 1950's, was to blind many educators to the intellectual capacity involved in artistic response (Geahigan, 1992). This resulted in the provision of information about music which might have little purpose for the student other than for "the realisation of stated objectives and the raising of standards" (Plummeridge, 1999: 116). Such a limitation would later be criticised as being "atomistic and mechanistic" (Csikszentmihalyi & Schiefele, 1992: 187) in comparison with the desired outcome which it was later recognised "should include enhancement of subjectively meaningful experience" (p. 187).

During the 1920s and 1930s an idea, whose underpinning of subjectivity could well be attributed to Freud, was emerging. That idea was to undergo a metamorphosis lasting several decades before becoming acceptable in music educational practice. An instance of this developing line of thought may be seen in the definition of artistic perception as "an act of the going-out of energy in order to receive" in which "a beholder must create his own experience ... by an ordering of the elements of the whole" (p. 53-4) that
bears some relationship with the process in which the work was organised in its creation (Dewey, 1934). This statement empowered the individual by recognising a subjective experiential aspect in the act of perceiving.

Somewhat later, the challenge reached arts education. In the early 1960s a leading voice announced that because of the active discriminatory process at the heart of aesthetic experience, to conceive of it as a form of understanding was not entirely adequate. Since "emotion positive or negative is a mode of sensitivity to a work" it may be seen that "a work of art is apprehended through the feelings as well as through the senses" (Goodman, 1968: 262). Aesthetic experience thus came to be recognised as a process of enquiry in which our emotions play a part, as well as our cognitive discriminatory skills.

Since around the middle of the twentieth century, music education philosophers in their support of the teaching of music for aesthetic development have no longer expressed the need to relate aesthetic development to societal needs and goals. From that time on, the prevailing philosophy of aesthetic education has recognised the value of aesthetic development to the individual (Crittenden, 1970; Lehman, 1988; Mark, 1982). This in turn led to the current provision in music education for developing in students a capacity for personal aesthetic experience in the listening, performing and composing modes. "If music education in the present era could be characterized by a single, overriding purpose, one would have to say this field is trying to become 'aesthetic education'" (Reimer, 1970). Whilst the term aesthetic education has been used in various ways, it most frequently implies "an education in the fine arts, the aim of which is the development ... of a particular style of thinking or mode of intelligence" (Plummeridge, 1999: 115). The importance of an ability to apply this mode to the arts of other countries has simultaneously been recognised (Anderson, 1991; Dreyfus, 1988).

Allusions to an aspect of self-growth, in association with aesthetic experience, raised by Dewey (1916, 1934), were to recur in the 1990s. Sparshott (1980) claimed that the simplest and strongest vindication of music's place in general education was its ranking as one of the most enjoyable activities in life, and Ellis (1988) saw musical life to be of utmost importance to the health of a community. The central value of the arts and of aesthetic education, according to Reimer (1992), was a resultant "expansion of the self" (p. 40). Csikszentmihalyi and Schiefele (1992)
referred to the unique "quality of experience" provided by the "modes of knowing" (p. 171) which are developed in art and music education. They contrasted the powers of reason used in scientific thought with the "more global and analogic" approach required for artistic phenomena, which "also tolerates contradictions between constitutive elements" (p. 173). Lounsbury (1992) emphasised the desirability of the application of this approach across a range of cultures. This philosophy was taken to its praxial extreme when Elliott (1995) denied that music listening experiences should be considered as aesthetic, on the basis that they are "neither impractical nor self-sufficient" because "listeners achieve self-growth, self-knowledge, and enjoyment" (p. 124).

The reason for the enquiry central to this study relates to the very purpose of music education which is, ultimately, to develop in students the ability to derive musical satisfaction (Csikszentmihalyi & Schiefele, 1992; Geahigan, 1992; Reimer, 1970, 1992; Smith, 1979). An aim stated in the New South Wales Board of Studies music syllabus for secondary schools (1999a and 1999b) is "to provide students with the opportunity ... to emerge as musically sensitive and critical individuals with the capacity and desire for music to play a significant and continually developing role in their lives" (p. 8).

If there is a failure to develop enjoyment of music, despite knowledge acquired, students may be "educated beyond their ability to profit from it" (Bills, 1975: 8); if knowledge about music is developed without its affective counterpart, a love for music, the lifelong benefits of an education in music may be lost. This is an issue in which the importance of the affective domain cannot be ignored, for:

Since the affective realm is largely involved with feelings, values, and attitudes, it is the key to personal 'motivation'. In the long run, it is the factor that determines both the eventual success or failure of music education for each person and whether he seeks or avoids musical contacts outside of school and after graduation. (Regelski, 1975: 213)

5. The Listening Component in Music Education

In a music education program it is desirable to provide aesthetic experiences in the listening, performing and composing modes. Of these,
listening may be described as the cornerstone, a fundamental precondition to all musical experience, as "the actual experience of listening is what everything else is built on" (Smith, 1979: 204). Moreover, since the type of musical behaviour in which Western society predominantly participates is that of listening, all students will gain lifelong benefit from this ability, while a smaller proportion may continue in performance and/or composition. Schwadron (1984) emphasised the importance of educating a listening audience.

It is therefore an assumption of this study that the objectives of music educators in teaching music listening, include the acquisition by students of a value for music listening, at least to the extent that it will have a place in their lives. This ultimate objective represents the first step of three levels specified by Krathwohl, Bloom and Masia (1964) in the affective domain of Valuing: Acceptance of a value, Preference for a value, and Commitment to a value. This valuing of music, as an "attitudinal set" (Farnsworth, 1969: 97), means the establishment of a positive disposition towards the idea of listening to music (Kuhn, Sims & Shehan, 1981), and does not imply that it would be better or more musical to prefer one genre of music above another.

Since attitudes, being relatively long-term and stable (Radocy & Boyle, 1997), are known to develop over time (Eiser, 1987), the achievement of this goal is a long-term project, gradually consolidated throughout years of schooling. This valuing of music listening might at minimal be limited to appreciation of a particular genre, or ideally extend over a broad range of musical genres and include the capacity for further expansion. With regard to the debated question of whether music educators should engage in modification of students' attitudes by attempting to broaden the range of musical preferences, Wapnick (1976) concluded that the best solution lies in research devoted to developing effective teaching techniques for the presentation of unfamiliar musics in order that students become able to make meaningful judgments.

6. Modes of Response to Music Listening

Music listening behaviour ranges from peripheral hearing in which musical sound may be barely noticed as an acoustical background, to intense aural concentration where music is isolated as the central foreground object of
attention. Through these behaviours, music elicits responses at physical, emotional, intellectual and spiritual levels, which are valued to varying degrees by listeners according to their individual and socio-cultural background.

A broad spectrum of affective responses may be elicited by music (Yingling, 1962) and these have been described as "modes" (Radocy & Boyle, 1997). While affective behaviours are learned, some are shared as part of the culture\textsuperscript{16}, and others are learned by individuals (Radocy & Boyle, 1997). Modes of musical response referred to as affective are the mood mode, the referential or associative mode and the aesthetic mode. The aesthetic mode which is the principal mode recognised in Western culture, is referred to as an affective mode (Crickmore, 1968; Maslow, 1977) since it involves an emotional response to cognitive engagement with a musical work. The aesthetic mode, has frequently been described in terms of a dichotomy between affective and cognitive dimensions of aesthetic experience, and has been contrasted with the holistic Arabic concept that "art is feeling", and "music is to be felt" (Racy, 1991: 11). Popular Western understanding of the term 'aesthetic' appreciation embraces the affective aspect of aesthetic response as an essential ingredient (see below).

A mood mode may occur through the recognition of certain musical patterns which in Western art music, have come to be associated with particular mood responses (Pike, 1972) or through the influence of the listener's personality, preparatory mood, or attitudes (Farnsworth, 1969). The associational or referential mode occurs when musical patterns are associated with some phenomenon external to the sound (Hargreaves & Colman, 1981). Such extramusical meaning attached to music may be culturally shared in its relationship to the music's title or programmatic content, or be a purely individual connection with a personal memory, possiblyinviting the re-experiencing of powerful emotions learned through significant events in one's life (Zalanowski, 1986).

An important finding about affective modes such as the mood mode, the referential or associative mode, and the aesthetic mode, has been their recognition as potential means of access to holistic musical experience (Zalanowski, 1986). Another important finding has been that instruction

\textsuperscript{16} Feld (1982) provided elaboration concerning the deep level at which expressive modalities are activated, enabling the communication of culturally adhesive sentiments and confirmation of a society's mythic principles.
which invokes mood and association to promote use of affective modes by
students, benefits their musical enjoyment (Asmus & Harrison, 1990;

7. The Concept of 'Aesthetic' Music Listening in Western Society

Due to a tendency by Western philosophers of the formalist view to
emphasise the intellectual basis of aesthetic experience, a notion has
proliferated that its attainment is impossible for those not trained in musical
technicalities (Nettl, 1983). Cook observed a widespread consensus of
opinion among twentieth century aestheticians and critics that "listening to
music is, or at any rate should be, a higher-order mental activity which
combines sensory perceptions with a rational understanding based on some
kind of knowledge of musical structure" (1990: 21). The aesthetic approach
considered by many to be appropriate for appreciation of Western classical
music refers, with some variety in degree of emphasis, to the necessity of
the listener constructing an aural perception of structural or formal
properties in a work. By this means, listeners make an abstraction of the
sounds heard in order to conceptualise the music as a form with related
parts (Langer, 1953; Ingarden, 1966; Reimer, 1970; Evans, 1990; Kivy,
1990; Lind, 1992; Miller, 1994).

According to the formalist perspective, aesthetic gratification "is obtained
primarily from attention to the formal unity and/or the regional qualities of
a complex whole, and when its magnitude is a function of the degree of
formal unity and/or the intensity of regional quality" (Beardsley, 1987: 11).
The task in aesthetic appreciation of a work has also been described as "to
discriminate all discoverable relations of identity, equality, proportion,
similarity, and differences among the presented elements of experience - all
formal relations" (Lind, 1992: 120).

Other aesthetic positions have been taken in Western philosophy. The
expressionist aesthetic emphasises and values the capacity of music to
express emotion. According to absolute expressionists, emotion or mood
are believed to be strictly communicated by musical structures without the
intervention of extramusical meaning. Beyond such absolutist limits, on the
other hand, the referentialist expressionist position does not preclude the
value of extramusical associations which may enter the musical
understanding of listeners (Machlis, 1955; Meyer, 1956).
Abstraction of a work to the level indicated by the formalist position, and possibly by the absolute expressionist position, concerning aesthetic experience, requires perceivers to have developed a knowledge base and quite sophisticated skills in aural discrimination. Such a sophisticated cognitive approach is not taken by Western youth in listening to their own musical genres (McClary & Walker, 1990), and is not customary in many non-Western cultures. Adorno (1990) expressed the view that due to the standardisation of musical forms in Western popular music, its listeners attend solely to detail, frequently at the level of performance practice which exhibits individualistic expressive devices, resulting in "stronger reactions to the part than to the whole" (p. 302).

Research has found a relatively high agreement between individual Western listeners, trained and untrained, in defining aesthetic experience (Madsen, Byrnes, Capperella-Sheldon, & Brittin, 1993). Cook (1990) noted that trained Western listeners frequently choose not to invoke their technical or analytical skills when listening (p. 3), and considered it reasonable to maintain that:

few people actually experience musical compositions as such, in the sense of constituting them as fully co-ordinated, objective structures. Unless they have both the training and the inclination to track the form of a piece of music in theoretical terms as they listen, people experience recurrence without actually observing what it is that recurs; they experience coherence but not the unitary organization in terms of which a theorist or analyst would explain that coherence. (p. 68)

It is thus necessary to distinguish between the concentrated listening which Nattiez (1990) defines as "a form of arrested perception" (p. 95), engaged in by the composer when selecting musical materials and by the musicologist in examining them, and the perceptive behaviours of listeners who for the purpose of aesthetic experience perceive the music as a sequence of events through time (Nattiez, 1990). Aesthetic perception and critical reflection may be classed as separate activities (Crickmore, 1968).

Attempts have been made to express the act of aesthetic appreciation as a holistic mode of perception (Dewey, 1934; Goodman, 1968). Reimer (1992) emphasised this unity from the viewpoint of arts education, stating that the contribution of an education in the arts is a unique "dimension of
cognition ... [in which students grasp] the ways to share the vividness, clarity, significance, and depth of experience the arts provide" (p. 48).

8. Components of Aesthetic Sensibility in Western Thought

The distinction between affect and cognition has been a central theme in Western thought since Descartes. Western philosophers have agreed regarding the involvement of cognitive and affective aspects in an aesthetic appreciation of the arts (Kant, 1964; Dewey, 1934; Beardsley, 1970), and in aesthetic appreciation of music (Reimer, 1970, 1992; Regelski, 1975; Smith, 1979; Cook, 1990; Nattiez, 1990; Alperson, 1992; Geahigan, 1992; Csikszentmihalyi & Schiefele, 1992). A subjective experiential aspect in the act of aesthetic perception was recognised and clearly defined in the works of Dewey (1934) and Goodman (1968). Objective knowledge and discriminatory skills are thus not all that is required in an aesthetic appreciation. Indeed, philosophical discussion has gone so far as to suggest that the arts have only one aim, "the interpretation of human feelings" (Busoni, 1911: 76), and to ask whether emotional response to beauty which resides in nature, or beyond art, may also be described as aesthetic feeling (Hargreaves, 1986; Radocy & Boyle, 1997).

From the acceptance of a proactive role for feeling in aesthetic experience, a cognitivist explanation arose. It was suggested that all mental behaviour, including emotions and intuition, employed a degree of cognitive activity (Parsons, 1992). Appreciation of an artwork through "perceptual/affective processing", as a major means of discovering its meaning, was referred to as "nonverbal cognition" (Reimer, 1992: 39). Reimer expressed the logic that "if it is an act of cognition to feel, through absorbed perception, the implied subjectivities an artist has imagined within a perceptual structure, it is cognitive as well to employ attentive feeling as a major means for discovering those implied subjectivities" (p. 39). This was the basis for his claim that feeling plays a significant role in such cognitive operations as "making discriminations among events, classifying event-clusters, abstracting parts from wholes, integrating levels of hierarchical interrelations, comprehending relations, anticipating incipient events, synthesizing wholes out of parts and forming gestalts at higher levels" (p. 39).
9. Stages in the Development of Aesthetic Sensibility to Music

Zimmerman (1971) described early childhood as a period of synesthesia, a
time when sounds may be translated from their auditory nature into images
of a different modality, such as "sort of hazy" or "like a funeral" (p. 21).
Davis and Gardner (1992) claimed that very young children have a
propensity for "the sensing of the universal in the particular" (p. 110). These
observations demonstrate use of a holistic approach, as the act of aural
discrimination is attached to a feeling communicated by the music. It might
be suggested, thereby, that young children naturally perceive music in a
holistic manner, interpreting the sounds into a feeling format.

The ensuing stages beyond early childhood were seen by Davis and Gardner
as reasonably explained by the development of language skills, to be a
sequence of cognitive levels reached through exposure to the domain. These
included a growing ability to attend to "aesthetic properties of individual
works of art", followed by development of an awareness of the creator of
the work and its "tradition, context and values" and finally an integration of
"personal aesthetic responses with the contextual knowledge they acquire"
(p. 112). Rodriguez and Webster (1997) found in children from kindergarten
to fifth grade "a gradual trend for responses to become increasingly global
and reflective of emotional sensitivity with age" (p. 24). According to
Hargreaves and Galton (1992), by the metacognitive phase of adolescence
the capacity exists for individuals to possess "full and mature understanding
of artistic conventions" (p. 134) which enables them to judge works of art
in relation to these. Gilbert (1990) found sixteen to eighteen year-olds able
to synthesise information in a more holistic approach to music.

It seems to be suggested by the above observations (Davis & Gardner,
1992; Gilbert, 1990; Hargreaves & Galton, 1992; Rodriguez & Webster,
1997; Zimmerman, 1971) that the response to music reflective of a feeling-
oriented holistic approach to listening, which was reported by very young
children, actually continues to develop through primary years into
adolescence. It may be argued that this is a fundamental listening style
which is ideally to be strengthened by the contributions of enculturation and
music education, with increase in both cognitive awareness and emotional
sensitivity. If this is the natural course of aesthetic development on the scale
of years from early childhood to early adulthood, could this pattern also
provide a guide as to a natural course to be followed in the introduction of unfamiliar music in educational circumstances? It may be a natural progression for music to be initially received in a holistic manner, thus establishing a connection with feeling in the listener, after which an aesthetic appreciation may be developed with an enrichment of artistic sensitivity, through increasing knowledge of cognitive and affective relationships in the music.

10. An Aesthetic Approach to Music Listening Education

The understanding which dominated 'Music Appreciation' during the first half of the twentieth century emphasised purely cognitive analytical skills and historic information. Since the perspective of music listening education has generally been musicological, the aesthetic approach frequently accepted as fundamental has been predominantly based in a formalist view. During the second half of the that century, exploration of the expressionist absolute and referential positions became increasingly acceptable, in a role of providing supplementary experience to enrich the core activity. A qualitative change in music education with regard to listening was demonstrated in Broudy's (1991) proposal that music education has a duty to lead students to the mastery of listening skills and that musical listening requires both discrimination and enjoyment.

10.1 Cognitive and Affective Components

The cognitive component in high school music listening courses is represented by a body of knowledge, and skills in aural discrimination. The cognitive powers generated in arts instruction have traditionally been regarded as important ingredients of aesthetic experience. Smith defined the central component of the aesthetic experience as the "excitement of meeting a cognitive challenge, of flexing one's powers to make [art works] intelligible" (Smith, 1992: 59). Since it is generally accepted by music educators that aesthetic meanings are "perceptually and affectively experienced as qualities of [an artwork's] purposeful structure" (Reimer, 1992: 38), musicological study to enable recognition and understanding of the musical concepts which give such structure content and form has been undertaken as a necessary aspect of music listening instruction. Aesthetic education involves a systematic attempt to influence "the degree to which students can incorporate aesthetic meanings in their experience of works of
art and other phenomena* (Reimer, 1992: 35) and in order to activate students' aesthetic capacities, some instruction is also needed as to what aesthetic value is, and how to discover it in art works (Smith, 1992).

A suggested list of informational tasks to be included in any sequence of activities concerning a musical work includes enquiries seeking to identify by whom, how, when, and for whom the object was made; the work's style; the work's meaning in both culture of origin, and in the culture of the observer; and any particular problems the work presents to understanding and appreciation (Smith, 1992). In some courses, musicology may be extended into analytical depth such as that described by Lind (1992), (see above). Cognitive learning sequences for music have been the bases of instructional methods (Choksy, 1974 [translation of Kodaly's work]; Gordon, 1984; Orff & Keetman, 1958; Suzuki, 1969) and addressed in texts (Hargreaves, 1986; Lundin, 1953; Radocy & Boyle, 1997; Regelski, 1975).

Although it may well be argued that the cognitive component in music education is co-dependent with the affective component, the latter appears to have been generally assumed to follow upon the former. The performance-based teaching methods of Kodaly (Choksy, 1974) and Suzuki (1969) certainly placed much value on enjoyment in music, but affective learning sequences have not been adequately investigated within any hierarchical systematic basis for instructional methods in music listening.

The affective component in high school music listening courses refers to the emotional association between students and the music, which develops principally through the modes of affective response. Verbal knowledge which assists this eventuation has been acknowledged (Lind, 1992; Reimer, 1992; Smith, 1992) and has been traditionally incorporated to some degree by music educators. Experiential knowledge derived from modes of affective response, the nature of these modes and how to access them may have suffered neglect.

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17In verbalisations concerning conceptualisation of musical examples, a negative correlation was found between the incorporation of affective connotations and the level of musical training, particularly in subjects with expert analytical skills (Hargreaves and Coleman, 1981).
10.2 Sequencing Cognitive and Affective Components

Within the domain of educational psychology there has been a growing awareness that "learning arises from a continual interplay between cognitive and affective factors" (Alexander & Jetton, 1996: 89). It is particularly important for music educators to be aware of maintaining a balance between feeling and intellect in experiences of students, because if "verbal knowing [is] emphasized over aesthetic/artistic knowing, [it undermines] the very reason for the existence of education in the arts" (Reimer, 1992: 43).

Aesthetic experiences vary in their position along the continuum between feeling and intellect (Goodman, 1968; Reimer, 1970). In Goodman's (1968) view, the cognitive and affective are not equally balanced or even both always present, but either can predominate in a balance which fluctuates according to the particular experience, as "in aesthetic experience the emotions function cognitively" (pp: 247-251). The central activity in effective aesthetic education is the direct experience of works, supported by whatever knowledge is essential in order to make aesthetic sense of them (Reimer, 1992).

With regard to the music-listening component in music education, Reimer (1970) made the practical suggestion that at every stage in their development, students should predominantly be presented with music which is "aesthetically satisfying but complex enough to warrant continuing study over a long period of time" (p. 115). The learning of listening techniques, and of facts and theories, which are tools to assist in achieving the goal of "musical" listening, may put that very goal at risk by an overemphasis on the process of "musical" listening (Cook, 1990: 152-160). McMullen (1980) proposed a two-dimensional framework for studying perceived stimulus qualities, energy and structure, the former representing results of holistic processing of stimulus material, the latter comprising linear comparisons between separate acoustical events. The recommended structure of such a course of study, therefore, is a sequence which enables the emergence of a pattern of "experience - study - experience" to preserve the delicate balance in which sensitivity is neither swamped by technicalities, nor starved for lack of conceptual knowledge18 (Reimer, 1970: 116).

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18 Bernstein's lively demonstration of music on the continuum from Variety Show to Wagnerian Music Drama (1954: 152-179) and his program on the discarded sketches of Beethoven's Fifth Symphony (1954: 73-93) are admirable examples of a balanced process.
The fact that "Analysis" and "Synthesis" may be seen as cognitive prerequisites for true appreciation of works of art may lead to the use of cognitive learning as a means to affective objectives (Krathwohl et al., 1964: 56). According to Krathwohl et al., "there are some instances where the cognitive route to affective achievement has resulted in learning just the opposite of that intended" (p. 56). On the other hand, such affective-domain objectives as interest or motivation have also been frequently sought as means to cognitive ends (Krathwohl et al., 1964). The relation between the first affective classification, "Receiving", and the first cognitive classification, "Knowing", is that "attending to a phenomenon is prerequisite to knowing about it. Further, only as one is willing to attend to a phenomenon will he learn about it" (p. 50). The importance of the second affective classification, at the level of "Satisfaction in Response" is great. Krathwohl et al., had difficulty in locating this category at any one particular place in the hierarchy, and stated that "it should not be thought of as appearing and occurring at this one point in the continuum" (p. 131). They referred, as did Reimer (1970), to the practice of alternating activities between affective and cognitive domains, each stage permitting achievement of a higher goal (Krathwohl, et al., 1964).

Mindful of the need for arts educators to provide learning activities which foster sensitivity along with understanding, Smith recommended that the first question to be addressed with regard to an artwork was the core question: "What is the quality of experience it affords?" (Smith, 1992: 54). Following this, a sequence of pedagogical enquiries regarding the work, its origins and cultural meanings is carried out in alternation with a sequence of experiential listenings during which students are free to explore the music subjectively, possibly experimenting with various affective listening modes.

This technique, as a means of jointly seeking affective and cognitive goals, has been compared to alternation between the steps on two ladders (Krathwohl et al., 1964). Such an activity pattern better maintains the relationship between the artwork and such contextual information regarding the artwork, as a "figure-ground" relationship in which artwork is the figure, and the information is "primarily an aid to appreciation", guarding against the possibility of the work of art being "dissolved into its context" (Smith, 1992: 66). Research has shown that it is possible in programming prelistening instructions for any single exposure to a selection of music to
specify a focal direction for the occasion as being principally towards enjoyment or towards understanding of the music (Zalanowski, 1986).

For fuller understanding of a piece of music, three views must constantly be taken into account: the outward form, the inner meaning and the relationship between the two (Byron, 1995). The term 'music appreciation' when applied to a course of study in music listening, ideally refers to "learning experiences that can provide the student with the most meaningful insights into the true nature of man and [this] art" (Lehman, 1968: 75). If study of the outward form is undertaken before opportunity has been offered for the individual to construct an inner meaning for this music, the core value of the musical experience is likely to be lost in the process. "It may be necessary to establish some familiar patterns before an art experience can occur - the cultural environment sees to that - but the actual art experience must happen before it can be analysed" (Fletcher, 1987: 44). By rotation of activities, such as repeated presentations of a piece in as many different contexts as possible (Gamble, 1984), provision is made in study sessions for the building of knowledge and sensibilities which will deepen the impact of each successive listening experience (Reimer, 1970).

10.3 Optimal Initiation of the Sequence

As educational theory has recognised the need for structured sequence in the acquisition of cognitive skills, there is a comparable need for sequence in the attainment of affective goals (Lewy, 1971). During the process of music listening education the overall, long-term affective objective of developing a valuing of music is accomplished through sequential activities directed towards increasing students' capacity for aesthetic reward. This process may be broken down into medium-term projects whose aim is to broaden the range of musical genres and styles through which students may experience a degree of aesthetic reward, and relatively short-term projects whose aim is to enable deeper aesthetic experience of the musical works that make up the genres and styles. In order to examine the affective components which underpin music listening education, it is necessary to investigate the entrance level which may be seen to operate in the initial stage of development of aesthetic appreciation for a musical item or genre. Rodriguez and Webster (1997) observed a developmental pattern through childhood years leading to a more holistic listening style, and recommended
further research into the developmental stages of affective response to music.

Although the elements postulated by contemporary theories to exhibit interest include "object relation", "positive affect", "value orientation", "autotelic activity" and "cognitive or epistemic orientation" (Prenzel, 1992: 72), the last of these may be more latent than active in the case of aesthetic appreciation of music. This process involves the employment of "attentive feeling" (Reimer, 1992: 39), which may be experienced more consciously as feeling, whilst perceptual discriminations may be occurring subliminally, so that the listener is not aware of the cognitive contribution to that appreciation. As a result, listeners are likely to be more conscious of a wish to hear more of the music, than of a desire to know more about it. Although research has shown (Fung, 1996; Gregory, 1994; Hargreaves, Comber & Colley, 1995; Smith & Cuddy, 1986) that increased knowledge may increase enjoyment of the music, listeners are often less conscious of a cognitive orientation towards the music than they are of an affective orientation.

Behavioural research, dating back to Pavlov (1927), and more recently Weiner (1980), has suggested that emotion is the prime motivator of behaviour and that a less than positive response to a task results in the association of negative emotions with that task in the future (Jenkins, 1979). Educational research has shown that a response of positive affect in students at the very point of initiation to a topic facilitates ensuing learning (Bills, 1975; Emmer & Millett, 1970; LeBlanc, 1981; Lewis & Schmidt, 1991). In the case of classes in music listening to develop appreciation, the presence of positive affect in students is even more important, due to its role in aesthetic appreciation which involves both cognitive and affective participation. The importance of evoking a positive affect, or hedonic valuing, in students during the initial presentation of a musical item for study lies in the fulfilment of a unified dual purpose which is to support and enliven an ensuing course of study, while increasing its intrinsically musical value.

Whilst music selected for students to study should be sufficiently complex to warrant study over a period of time to enable deeper aesthetic satisfaction (Reimer, 1970), it is ideal to invoke in students an initial positive affective response to the music. On the other hand, whilst it might be said that a listener's judgment of a musical experience, as either satisfying or unsatisfying, is neither a success nor a failure, the feeling of satisfaction
acquired through musical enjoyment equates in feeling with success at the listening task. Although rejection of the music as not pleasing may also provide the satisfaction of passing a judgment, this is not to be compared with the quality of satisfaction experienced in enjoying music, and there is a risk that non-enjoyment may bring an associated sense of failure. According to findings by Weiner (1980) success or failure at a task produces an affect which will either motivate a student to greater effort, or result in a feeling of incompetence which impedes motivation on similar tasks in the future. More importantly, Weiner (1980) concluded that "feelings are motivators of behavior" (p. 10) which lends weight to every effort being made by the educator to ensure that the initial presentation of music provides for the most positive response possible.

In order to achieve the initial positive response, a piece of music must be intuitively grasped by a listener who may not understand its structure and may be unfamiliar with its style. The success of any listening experience depends both on the high quality of the music (Abeles, Hoffer & Klotman, 1984), and on the listener’s ability to relate to it. This relationship is affected by individual differences of temperament and of the conceptual and sensitivity frameworks built up by past experiences in music, other arts and life. The optimal listening experience is characterised by a stronger than usual match between the attributes of the music and the ability of the individual to use and extend previously acquired musical engagement skills. When this occurs at optimal level, perception becomes "ideographic" in nature because the perceiver grasps, in their concrete nature, "all aspects and attributes of the object simultaneously or in quick succession", rising above the parts to perceive the whole (Maslow, 1959: 56-9). Reimer (1992) described this level of experience as a "meaningful gestalt" (p. 41). Such an experience within the virtual time dimension framed by a piece of music gains a quality of intensity which is associated with a positive affect.

Crickmore (1968) hypothesised interest to be an essential characteristic of the gestalt formation which provides optimal musical enjoyment. Since it has been shown that whatever the quality of enjoyment experienced, a positive affect enhances motivation to listen further (Lewis and Schmidt, 1991), any influences on musical enjoyment such as a possible effect of holistic listening style appear worthy of further investigation. The question therefore arises as to whether students who attend to music in a holistic manner do so because of their intrinsic interest in music, acquired through previous
enjoyable experience, and whether a deeper level strategy, associated with task orientation (Deci & Ryan, 1985; Nolen, 1988), may be employed as a technique or attentional style in order to access the holistic appreciation of music.

Pintrich and De Groot (1990) identified three motivational components in relation to self-regulated learning: self-efficacy about a task; intrinsic interest (personal significance); and affective response to the task. With regard to aesthetic music listening, both self-efficacy and intrinsic interest are accessed from precisely the same source, enjoyment of music. For music teachers wishing to invoke the additional learning power students can access through a self-regulated learning process, musical enjoyment is a key tool. The importance of this theory, is that even if intrinsic interest is already established, the feeling of self-efficacy is also an essential prerequisite which must also be attained to initiate the process. This necessity reaffirms the importance of matching the musical selection with the listener's ability to relate to it. Maslow (1977) considered the provision of optimal or "peak" experiences (p. 12) to be a real possibility available to educators, and recommended such experience as the ideal "intrinsic reward".

The general educational importance of enjoyment and interest is that engagement in an activity of interest brings happiness, therefore such activity is desirable - an object of motivation. It would be reasonable to suggest, therefore, that the better the match between listener ability and the task at the outset, for the initial hearing of the music, the greater will be both the resultant intensity of aesthetic reward, and the motivation for study. Noting that interest is composed of an interaction between "an energised individual" and the "external world" (Hidi, 1990: 550), Hidi saw these two factors as aspects of cognition that have been neglected by research. The former item is represented in this study by observation of the dynamics of enjoyment and interest, the latter by presentation context, whilst attention style is conceived of as a possible interaction factor.

10.4 The Role of Enjoyment in Optimal Initiation

Two constructs have been selected to represent the most basic affective functions necessary for development of aesthetic appreciation of a musical
work, 'enjoyment' and 'interest'. Enjoyment and interest are strongly linked as the chief affects in aesthetic appreciation. The feeling of enjoyment derived from exploring the sensory data of music was described by Lind (1992) as a "meta-interest" compelling one to engage further in the activity which is a "sub-interest" (p. 119). The feeling of enjoyment enhances cognitive activity while listening and, in memory, becomes the promise of similar reward in future listening, a motivational attraction to engage further with the music (Lind, 1992). Previous experience of failure to enjoy music listening is likely to demotivate future engagement in the activity (Asmus, 1980; Weiner, 1980).

The basic response associated with the term 'enjoyment' as applied to music listening is a sense of satisfaction in the experience, which could range from being simply a pleasant feeling, or hedonic, to representing some degree of aesthetic fulfilment. When a listener is totally absorbed in music there is a lack of self-consciousness, and the resultant facility of concentration causes enjoyment (Elliott, 1995). Boyle and Radocy (1987) described the affective product of musical experiences as "internalised neuropsychic states" (p. 196) which reflect positive or negative predispositions toward musical phenomena and guide future approach/avoidance behaviour toward phenomena perceived as similar. Enjoyment in musical activity is thus the affect which provides anticipatory motivation to participate, reward during the experience, and consequential intrinsic motivation (Elliott, 1995).

Cook (1990) claimed the true object of the listening process to be "the sense of satisfaction engendered through absorption in a piece of music" (p. 160). Such satisfaction, the result of successful activity, generates an affective product denoted a "growth of power" (Dewey, 1913: 66) which gives the activity significance for the self, creating a potent energy field for the work of education (Dewey, 1913). A similar point was made by Pintrich and De Groot (1990) in describing the sense of ability to achieve in an activity as self-efficacy, which would assist initial cognitive engagement in a similar task on ensuing occasions, a process which has been supported by research (Gorrell, 1990). Satisfaction in listening to music is thus felt to be a

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19These constructs were derived from Krathwohl et al.'s (1964) hierarchy of Affective Educational Objectives whose categories have been verified as applicable to the field of music education (Lewy, 1971). Taking into account the cognitive constructionist view (Mandler, 1989), these psychological constructs are classed as substantially affective in their nature.
successful achievement, promoting confidence to engage further in listening activity (Asmus, 1986; Bardwell, 1984; Pintrich & De Groot, 1990), and a significant experience (Cook, 1990), creating an energy field in which to conduct education (Dewey, 1913).

By optimising students' enjoyment level during music listening classes a foretaste of aesthetic enjoyment is provided. The additional benefits of a gain in self-efficacy and valuing of the listening task also contribute to intrinsic motivation, thereby improving conditions for cognitive learning (Gagne & Briggs, 1974; Harter & Jackson, 1992; Harter, Whitesell & Kowalski, 1992; Lanza & Roselli, 1991; LeBlanc, 1982; Lewis & Schmidt, 1991; Midlarsky & McKnight). When musical enjoyment is compounded with a cognitive appreciation, the listener receives "pleasure in the perceiving", and this "emotive arousal by artistic means provides the mind with pleasurable activity" (Kivy, 1990: 39). Kivy did not find musical cognition and musical emotion to be incompatible, but that their coalescence "escalates enjoyment" (p. 154). According to Smith (1992), the central component of experiencing an artwork is the excitement in "flexing one's powers" (p. 59) to make the work intelligible.

The association by listeners of a musical item or genre with a response of enjoyment, has become synonymous with the term 'preference' (Finnas, 1989) which thereby acquires the connotation of having a motivational function. When music is unfamiliar, there is no pre-existing preference. Interest must be aroused by an initiation which accesses enjoyment.

**10.5 The Role of Interest in Optimal Initiation**

Interest has been described as being on the verge between a cognitive response and a pleasant feeling (Krathwohl et al., 1964). It seems reasonable to suggest that interest is a response to enjoyment which has a cognitive component. The experiential component of interest is "a certain quality of attention and a certain sense of delight ... a positive hedonic valence ... related to the feelings of excitement and enjoyment" (Deci, 1992: 49) associated with an object or activity. The principle of interest has been described as the recognition that an object or idea is of personal value, lying in the direction of self-growth (Dewey, 1913), and as an affect which is created when an event is experienced as meaningful (Hidi & Baird, 1986). Its function as a powerful motivator (Deci, 1992) represents an affective dynamic capable of regulating engagement in behaviours including cognitive
activity. As an integral factor of cognition, interest has been found particularly beneficial in improving the performance of poor comprehenders (de Sousa & Oakhill, 1996).

Interest emerges from characteristics of the individual, factors in the stimulus, and the interaction between these (Bernstein, 1955). A prerequisite for the success of this interaction between person and object is that "a person's needs, desires, and capacities" must be matched with "the affordances of an activity" (Deci, 1992: 46). One experiences interest in an object when it is encountered in a context that exposes its potential to promote self development by fulfilling basic psychological needs (Deci, 1992; Deci & Ryan, 1985; Lepper & Cordova, 1992), primarily of autonomy, and secondarily of competence (Deci & Ryan, 1992; Dewey, 1913). If the challenge provided by the activity is well matched to the ability of the individual, the need for competence is fulfilled. If the individual experiences a sense of choice to engage in the activity, the need for autonomy is being met. The additional factor that is necessary to explain what inputs are interesting to people is their preferences. In essence, these are dispositional interests. People have preferences among optimally challenging activities (or objects) because of the personal relevance or aesthetic appeal of the activities or objects. In general, these pre-established preferences have been developed as a function of "three critical factors: innate capacities, environmental affordance, and interpersonal contexts" (Deci, 1992: 51). When a match occurs between an individual and a new object or activity, the resultant new interest is experienced as a phenomenon with which the self identifies "in action, and hence in desire, effort, and thought" (Dewey, 1913: 90), an identification which combines the affect of preference with an essential cognitive ingredient.

Krathwohl et al. (1964) identified three levels by which they classified the interaction between an individual and a phenomenon of potential interest. The first was an "awareness" (p. 106) in which the perceiver notices a potential stimulus without active interest; the second was a state of acquiescent willingness to receive and possibly to take notice, qualifying as "basic attention" (p. 107); the third was "selective attention" (p. 113) which was associated with a strong cognitive component of intrigue and an element of preference invoking strong intention (Krathwohl et al., 1964). This is the level of interest experienced by students in "wishing to hear more of the music", which is higher on the scale of affective dispositions than a mere
acquiescence in listening to an initial presentation of a piece in the classroom.

While interest has been described as a cognitive variable (Iran-Nejad, 1987) because the behavioural response it elicits involves engagement of mental attention, it is also experienced as an affect. An urge (affective) of curiosity (cognitive) to engage with a work of art, is rewarded with "insight and understanding" (Geahlgan, 1992: 15) which provide aesthetic enjoyment. Dewey (1913) described behaviour concerning the object of one's interest as primarily self-expressive activity, approximating aesthetic appreciation, and linked the two emotive factors satisfaction and interest. Lind (1992) suggested that although every complex phenomenon is of some perceptual interest, when it becomes sufficiently enjoyable to motivate engagement in "heightened and sustained discrimination" (p. 121), to make the object intelligible, the interest becomes 'aesthetic'. Aesthetic interest has also been more specifically defined, particularly in terms of its object, as the desire to discover and judge the value an art work possesses by virtue of its capacity to provide aesthetic satisfaction (Beardsley, 1987). A musical source of interest draws and holds the attention until successful culmination of the experience, resulting in satisfaction, after which interest is still available as a pleasurable memory (Crickmore, 1968). Listeners thus form an aesthetic motivation to hear more of a musical item or genre, which coincides with Krathwohl et al.'s (1964) "selective attention" and at least level 2\(^{20}\) of LeBlanc's (1980) model of the formation of musical preference.

10.6 Intrinsic, Extrinsic and Mediated Interest

Through experiencing interest when relating to particular activities, an enduring desire to engage more with the object of one's interest becomes the energy behind intrinsic motivation. As mentioned above, intrinsic interest in an art work is the foundation of aesthetic interest (Beardsley, 1987; Dewey, 1913; Lind, 1992). Boyle & Radocy (1987) described interest as a feeling which manifests itself by "active participation or involvement" (p. 197) with a phenomenon. Topic knowledge and individual interest are related but have been shown to be separate constructs (Benton, Corkill, Sharp, Downey & Khramtsova, 1995). The principal behaviour associated with a

\(^{20}\) Level 2 of LeBlanc's (1980) model represents a degree of preference, at which attention is heightened for repeated sampling prior to a preference decision. Level 1 occurs when a decision is made to accept or reject the stimulus as a taste decision.
response of interest is an increase in intellectual activity in response to the "greater significance of incoming information" (Hidi & Baird, 1986: 185). Intrinsically motivated behaviour is "characterized by concentration and engagement; it occurs spontaneously and people become wholly absorbed in it" (Deci, 1992: 45).

The importance of the nature of a listener’s interest in the music lies in its relevance for the quality of attention which is the line of communication between music and listener. Dewey (1913) claimed interest to be "the sole guarantee of attention" (p. 1), and that if one is less than interested in a task, it may be completed with divided attention while the mind is working on matters of real interest. This claim was to find support in research by Renninger and Wozniak (1985) who found interest to be a powerful determinant of the direction of attentional shift, and that it exerted a "marked influence on shifts in focal attention to objects in the peripheral visual field" (p. 631). Hidi (1990) suggested that in the act of giving such spontaneous attention, comprehension requires less effort and places "less demand on processing resources" (p. 562) thus allowing more cognitive resources to be devoted to the generation of thoughts aroused by the object of interest. Not only is interest an energy provider for mental activity, but it plays an energising role in commanding the selection of subject matter, and is the driving force for persistence in processing the selected types of information (Hidi, 1990).

The use of external motivation to coax students into undertaking tasks that are sheer strain, or for which they lack intrinsic motivation, was described by Dewey (1913) as "uneducative" because only an intrinsic drive can introduce a clear "consciousness of ends and a search for proper means of realization", and as "miseducative" because such a flawed intellectual process is likely to lead to confusion and activity unaccompanied by understanding (p. 55). In differentiating between intrinsic and "mediated" interest, Dewey (1913) saw a purpose in selecting educational material related to students’ prior experience thus assisting the formation of connections with established interests. The question regarding the strength of an interest was one of emotional distance: "how far is one interest externally attached to another, or substituted for another?" (Dewey, 1913: 25). The activity which serves as a means to an end is not necessarily of interest, and will not receive full attention unless the means and the end are seen as stages in the development of a single activity. Weiner’s (1980)
finding that emotions, rather than logical thoughts, are motivators of action, by extrapolation suggests support for this theory.

The classification of motivational goals as ego-involved or task-involved (Nolen, 1988) closely parallels Dewey's distinction between extrinsic and intrinsic interest. In music listening, the intrinsic interest of task-involvement is important and achievable, as this activity is not usually carried out in any comparison with the performance of others, potentially providing its own affective reward within the task performance. Butler's (1988) finding that grades perceived as salient incentives undermine intrinsic motivation, carried the implication that normative information about achievement promotes ego-involvement rather than task-involvement. It was found that in promoting task-involvement for the purpose of enhancing the interest and performance of most students, it was important to avoid any association of a task with an ego-involving evaluation (Butler, 1988). These issues may be charged with particular significance in relation to attentional strategies in music listening since it has been found that with task-orientation students are inclined to access deeper level strategies for understanding material, while ego-orientation is associated with surface-level discriminations (Deci & Ryan, 1985; Graham & Golan, 1991; Nolen, 1988).

Dewey described "means" activities which have gained importance due to their relation with the end, as indirect interests which represent "the growth or expansion of simple activities into more complex ones" (1913: 38). New direct interests may form by transferral from indirect interest provided that the new activity or object "functions as a genuine means of carrying on a more inclusive activity" (Dewey, 1913: 43). This means that the excitement of true interest, does not arise due to the association of some irrelevant item. What is of intrinsic value is that which is rewarding in itself, rather than "because it leads to something else" (Berlyne, 1971: 59). In other words, once the enjoyment of music has instigated an intrinsic interest, there is a potential mediated interest in pursuing study of that music, especially if the study involves further listening enjoyment.

Self-regulated learning is a more powerful educational process than a teacher-regulated approach (Pintrich & De Groot, 1990; Boekaerts, 1994), and intrinsically motivated behaviour is the "prototype of self-determined activity" (Deci, 1992: 44). Intrinsically motivated learning is more active, thus resulting in "greater learning and in more positive self-related affects and cognitions" (Benware & Deci, 1984). Intrinsic, task-oriented motivation
determines the level of comprehension, use of deep-level learning strategies and quality of emotional experience. It should be thought of not only as an independent factor in the learning process, but also as a desired outcome which can be evoked by instruction (Bergin, 1994; Dweck, 1985; Schiefele, 1990). In accordance with Weiner's (1972) attribution theory, it was recommended by Corno and Rohrkemper (1985) that task conditions be designed to assist in the development of interest and a self-regulated learning approach, by a structure founded on experiences of success which would overcome the potential obstruction of initial self-appraisals of inaptitude.

10.7 Initiating Intrinsic Interest in Unfamiliar Music

Renninger and Wozniak (1985) considered it valid to presume that interests "reflect the knowledge/value systems that individuals bring to a task" (p. 631). Dewey's (1913) explanation that engagement in an activity of interest brings happiness implies likewise, that the individual possesses knowledge that the object or activity is within an area of personal value. An interest represents an object of motivation, and in relation to music listening may also be termed a musical preference. When presented with unfamiliar music, students may not be presumed to yet possess the requisite intrinsic motivation. This would ideally be aroused by the initial experience of the music.

The initial listening activity is the opportunity for engaging student enjoyment and ensuing interest in a musical item. The view of Dewey (1913) and of Deci and Ryan (1992) that pressure to achieve displaces intrinsic interest, would preclude any instruction which suggests the purpose of the listening be to enjoy the music. Deci and Ryan's (1992) Cognitive Evaluation Theory (p. 23) suggested that the degree of autonomy permitted by the social context of educational activity, and the degree of competence or self-efficacy experienced by students in the match between task and individual ability, are critical factors in determining motivational processes. An optimally challenging activity experienced without pressure or control, would be more likely to result in preference, thus enabling the establishment of an intrinsic motivation which would direct students toward repetition of that activity (Deci and Ryan, 1992). This suggests careful selection of material to match students' ability, and provision of a feeling of autonomy by allowing free exploration of the music.
Inputs relevant to initiation or regulation of behaviour are experienced in one of three characteristic ways: informational inputs support autonomy and facilitate competence therefore maintaining intrinsic motivation; controlling inputs (even when self-imposed, as when one’s self-esteem depends on performance outcomes) are experienced as pressures to respond in specific ways and tend to undermine intrinsic but may strengthen extrinsic motivation; and amotivating inputs are experienced as signifying incompetence (such as patronising) and tend to undermine both intrinsic and extrinsic motivation (Deci & Ryan, 1992). Since pressure by others or by the self, to achieve, undermines intrinsic motivation, Deci and Ryan (1992) expressed concern that as students progress through educational stages in institutional settings, increasing demands to achieve may lead to a corresponding increase in reliance on extrinsic motivation. This suggests that while instructional input should be carefully constructed to facilitate students’ self-discovery of the music, experiential outcomes need to be encouraged in a manner which does not imply expectations.

Nolen (1988) found that neither perceived ability nor science grade predicted use of deep-processing strategies in a science task. It was also found that while perceived value of deep-processing strategies was not significant in influencing their use, general task-orientation influenced their use, and task-specific orientation strongly influenced their use. This indicates the importance of individual differences in motivational orientation (Nolen, 1988). Nolen found that despite knowledge of the usefulness of deep-processing strategies in promoting learning, students only engaged in their use when the demand of an interest in understanding presented a spontaneous cue. Nolen therefore considered it dubious as to whether one can explicitly emphasise the use of deep-processing strategy which is characteristic of task involvement and likely to suffer from the interference of ego orientation in any conscious attempt to perform successfully. The learning context of Nolen’s finding was not in the arts, but in science, where high test scores are an explicit objective and the role of affect is more likely to be seen as a means than an end. The problem may well be avoidable in music listening by encouraging students to experience music according to their own individual style. If the aim is to fully experience the music as an individual, the task may be intrinsically motivated, but if the aim is externally qualified by a specific requirement, even that of experiencing enjoyment through the music, an extrinsic goal has been set. Even when suggesting exploration, care must be taken not to raise expectation of any predicted
outcome lest the task become instrumental to a predetermined purpose, thus risking an ego orientation. This highlights the importance for listeners of maintaining their sense of self determination, by experiencing the self as being the source of control in the task, and exploring the potentials of the activity as freely as possible (Dewey, 1913; Lepper, 1988).

In music listening, where task-involved motivation is sourced from musical enjoyment, the sequence suggested by Reimer (1970) is commenced by an initial experiential listening session during which the motivational enjoyment is allowed to occur. Any explicit instruction to enjoy, however, would involve ego in success or failure. The explicit task, which will free the listener from ego involvement, is to permit the music to transport listeners, as individuals, wherever and however it will. This task is an act of receptivity, and the resulting experience retains the ownership of the individual, thus retaining the power of the self, and significance to the self so strongly emphasised by Dewey (1913) as the ingredients of intrinsic interest.

Prenzel (1992) found that "in the absence of external provocation, feelings of enjoyment and rewarding exertion, flow, or increasing competence were found to take on the quality of 'intrinsic motivation'" (p. 93). It was demonstrated that through engaging in an experience which absorbed, providing enjoyment and a feeling of sufficient competence that a similar experience could be brought about, a persistent interest was initiated (Prenzel, 1992), although the attribution of that success to internal personal factors was found to be a crucial factor (Forsyth & McMillan, 1981). These findings were significant with regard to the challenge of establishing intrinsic interest in unfamiliar music, in suggesting the input of non-controlling information, task-orientation, and the setting of an achievable task level (such as holistic enjoyment of a carefully selected item) to assist in surmounting the difficulty to which the activity is inherently susceptible - high complexity level.

10.8 Educating for Aesthetic Listening to a Broad Range of Music

The role of the music educator encompasses the dual task of both deepening and broadening students' capacity for aesthetic enjoyment (Peery & Peery, 1986; Shehan, 1986; Stock, 1991). It is both inevitable and desirable that music education should broaden the range of music that students will appreciate. The Rationale for secondary music produced by the
NSW Board of Studies (1999) stated the purpose of providing students "with the opportunity to acquire knowledge, skills, understanding and attitudes within a broad musical context" (p. 6). For the achievement of that aim, music education must enable students to approach a wide spectrum of music - of familiar and unfamiliar genres - with positivity.

This is a task whose importance has become more emphatic in recent decades, as music within many of the world's societies has been rapidly changing and diversifying, and increasing intercultural contact has extended the scale of unfamiliarity that music frequently presents to its audience. The study of musical traditions of the world is of great value in the development of an acuteness of aesthetic sensibility and an ability to construct meanings from a diversity of musical encounters (Nketia, 1988). While important, the task is not without potential difficulty. Dewey (1913) theorised that while a certain amount of familiarity acts as a stimulus for activity, material that is too familiar or too unfamiliar would fail to engage the listener by lack of both connection to established interest, and a feeling of being successful. With too much unfamiliarity, direct perception experiences resistance to an obstacle. This brings the activity to consciousness, and diverts attention from the perceptive activity (Dewey, 1913).

The rapidly increasing juxtaposition of different cultural groups within localised communities of our global society is reflected in the rise of interest in music of the world's cultures in the media, and in education (Volk, 1993). The Rationale produced by the NSW Board of Studies for secondary music (1999) stated that "the study of music ... fosters an understanding of continuity and change, as well as the connections between different times and cultures" (p. 6). Curricular implementation has suffered delay in that the required pre-service and in-service music teacher education has only recently been becoming available (Volk, 1998). The demand that our music specialist teachers communicate intimate understanding of multiple musical cultures is an enormous expansion on their role, detrimentally compounded by lack of access to live performances of such a multiplicity of genres (Wheeler, 1985). The rapid development of educational technology is therefore propitious. Sound recordings have long been in use by music educators, films and video recordings have become widely used, and an expanding range of educational materials in technological formats such as the CD-Rom must now be viewed as essential resources capable of supplementing audio and video material with virtual intimacy and copious informative detail. Research has applied
itself to educational techniques for optimal learning from the new technology (Brockenbrough, 1994; Johnson & Oltenacu, 1991; McPherson & Guthrie, 1992; Olivier & Shapiro, 1993; Rautenberg & Cachin, 1993; Sales, Tsai, & MacLeod, 1991; Steinberg, 1991; Thomas & Bostow, 1991; Väänänen, 1993; Van den Berg & Watt, 1991; Vernon, 1993), but has not attended to techniques for optimising the aesthetic qualities of technological teaching materials.

Summary

Since the primary human function of music is the enrichment of life, the value of music education to the individual is an enhanced capacity for the satisfaction that music can provide. In Western society, listening is the predominant participatory musical activity, and therefore an important goal of music education is to optimise students' ability to enjoy listening to music. An over-emphasis on the intellectual basis of aesthetic experience, focusing on musical technicalities, can prevent the very musical enjoyment it was intended to increase, and destroy motivation to continue with the activity.

The success of a listening experience depends on a match between the music and the listener's ability to relate to it. When a listener grasps the music, it is perceived as a whole in a meaningful gestalt which is rewarding and breeds a desire to hear more of the music - thus creating intrinsic motivation for repeated listening. The greater the initial enjoyment of a piece, the more vital will be the quality of ensuing learning, due to intrinsic interest, and the greater the opportunity to deepen an aesthetic capacity by a balance in educational activities which alternately emphasise either experience or study.

To maximise the benefit of music education in a pluralist, multicultural society, the musical material needs to be drawn from as broad a spectrum as is possible, in keeping with the range of music that is presented in life experiences. In recent decades, the range of musical material accessed through the mass media is far broader than in previous history, when musical sources were more localised. The role of music educators to broaden the spectrum of music that students will enjoy, has thus been vastly expanded in a much wider scale of unfamiliarity, introduced by the rapid increase of intercultural contact. Since the affective dimension determines motivation, it also governs the success or failure of the music
education process, and, in the long term, whether one continues to value music. Music educators wishing to open students' aesthetic sensitivities to a universe of possibilities for musical enjoyment may therefore need to access techniques designed to meet the expanded demands on their field of expertise. Any influences on musical enjoyment such as a possible effect of holistic listening style appear worthy of further investigation.

In Chapter Two, the operant issues behind a problem faced by music educators with regard to students' enjoyment of unfamiliar music will be examined. An attempt to understand why the problem occurs will be made with reference to related theories and research concerning the formation of affective response to a musical stimulus. Reasons why the problem has not been readily solved in the past will be revealed in a review of the findings of previous investigations of principal variables in the listening situation. These are the features of the individual listener, the features of the musical stimulus, and the manner in which their interactions influence musical preference behaviour.
CHAPTER TWO

ENJOYMENT: LISTENER AND MUSIC COMPATIBILITY

Research has revealed a potential impediment to the enjoyment of music that is new to listeners. Its function is inherent to the very unfamiliarity of the perceived stimulus. A relationship between the perceived degree of familiarity of a stimulus and its complexity level for an individual is seen to be influential in the process which produces affective response to music. The following examination of the constructs 'familiarity' and 'complexity', and their relationship will lead into a discussion of their significance with regard to the affective responses of enjoyment and interest. It will be seen that affective and aesthetic factors are responsible for some valuable, and indeed essential, contributions to learning.

A review of recommendations for research into affective and aesthetic variables of education and music education shows these to have been many and diverse, but to have remained largely unfulfilled. The question of why this might be so, leads one to consider the possibility that neglect of this field is due simply to a lack of recognition of the importance of these issues. The restricted view of the mass media, that education is the cognitive activity of implanting information in students' minds, might be described as belief in a type of immaculate conception. In this section, reasons for the prevalent cognitive focus of educational research will be discussed, and music education research into issues centred on cognition briefly reviewed. Research concerning the influence of affective response on learning was excluded from this review in cases where it related only to the affective response of students to examinable achievement ratings, rather than their response to the intrinsic process of learning or to the aesthetic experience of the content.

A further deterrent to research into affective and aesthetic issues in education may be ascribed to the multiplicity of variables involved in such study. The intricate network of interactions that need to be taken into account when observing human affective and aesthetic responses tends to present a rather complicated task for the researcher. A review of the theory and research concerning the primary variables involved in response to music, the
characteristics of the music and of the listener, and their interactivity, will bring this chapter to completion. Research into some potentially useful agents of mediation between the listener and the musical stimulus is more recent and will be reserved for Chapter Three.

1. The Problem: Effect of Unfamiliarity on Initial Affective Response

1.1 Affective Response to Unfamiliar Music

It is well known that musical innovators have historically encountered the derision of their contemporary audiences. Although later recognised as masterpieces, the original performances of works by such composers as Beethoven, Stravinsky and Debussy were unfavourably received due to their novelty or unfamiliarity. As an important aspect of music education is to broaden students' capacity for aesthetic enjoyment, it may be assumed that students will be presented at times with music with which they will be initially unfamiliar. Although the initial hearing of unfamiliar music may produce positive affect for the listener, such is frequently not the case (Bradley, 1971; Duerkson, 1972; Bartlett, 1973; Fung, 1994; Heyduk, 1975; Hargreaves, 1984; Smith & Cuddy, 1986). It has already been noted (see Chapter 1) that a response of positive affect in students at the point of initiation to a piece of music makes a vital contribution to the quality of ensuing learning.

In examining the initiation of an aesthetic interest, some useful empirical knowledge is offered by behavioural psychology. The following review discusses aspects of a problem which results in reduced likelihood of positive affect occurring on initial hearing of unfamiliar music.

1.2 An Observed Relationship between Familiarity and Enjoyment

In order to investigate the role of familiarity in musical enjoyment, researchers tried to control this variable by exposing subjects to repeated hearings of a piece of music. Bradley (1971) found repetitive listening, with no accompanying instruction, to be effective in developing a stronger liking for tonal, polytonal and atonal examples of contemporary art music. Duerksen's (1972) subjects, who were told only that they were to hear two different performances of the
same composition, consistently rated the second presentation of the same recording as better than the first. Bartlett (1973) also found that liking for music in the Classical style improved with some training, whereas for music representing the Romantic style, mere repetition achieved similar affective results.

The reason behind the relationship between familiarity and liking was ascribed to the threat posed to the stability of one's self-concept when a new experience presents itself. A phenomenon which is perceived as likely to enforce a change in self-concept is seen as threatening. People commonly engage in a defensive reaction "by narrowing or restricting perception, by denying experience, by distorting experience, or ... all of these" (Bills, 1975: 15).

The function of familiarity in relation to liking for a stimulus was subjected to research involving visual stimuli. In a study of recognition and liking for Japanese ideographs, it was found that positive attitude towards a stimulus increased with exposure, regardless of whether recognition occurred, and that objective and subjective familiarity were equally effective in influencing an individual's liking for a stimulus (Moreland & Zajonc, 1979). The objectivity and/or subjectivity of a familiarity response may be seen to lie on a continuum. The objective phenomenon which feels familiar to an individual may be recognised either as an objective memory, or as possessing some quality which resonates with experience which has been appropriated by memory (Shore, 1991).

Earlier studies measured preference response levels after repeated hearings of the music, thus objectifying familiarity. For example, when Payne (1980) and Radocy (1982) rated subjects' preferences for musical items on a single hearing, their self-reported rating of familiarity with each item was the basis for measuring "familiarity". The following studies therefore concern subjective familiarity, although the distinction was not verbalised in reports. Payne found that subjective familiarity with a musical item appeared more closely related to an individual's enjoyment of that music than to training or personality, and Radocy observed a strong positive linear relationship between listeners' subjective familiarity with a musical genre and their preference for examples within that genre.

Where familiarity is rated subjectively, its relative correspondence with a degree of preference is difficult to discuss in terms of causality, due to the host of possible intervening psychological variables, such as associations,
attitudes, and motivation levels, which an individual listener may bring to the experience. Where familiarity ratings are measured objectively, a clearer view of a more absolute relationship between preference and familiarity is identifiable, and this relationship has been described in terms of complexity. The studies of Bradley (1971), Duerksen (1972), Bartlett (1973), Payne (1980) and Radocy (1982) indicated increased liking for pieces with increasing familiarity, when stimulus music was selected within the mainstream of subjects' cultural background. In later investigations of music education research (Hargreaves, 1986; Shehan, 1985) it was shown that in response to music very different from that in which subjects are encultured, mere repetition is a much less powerful agent of increase in liking for music, with Hargreaves (1986) concluding that it is impossible to study familiarity in isolation from complexity.

1.3 Empirical Aesthetic Research on Complexity and Enjoyment

An examination of acoustical stimuli in the light of information theory led Berlyne (1971) to conclude that the complexity of a pattern rises with the increase in the "number of independently selected elements it contains" (p. 149). He argued that if two patterns contain the same number of elements then the pattern containing a greater degree of similarity or redundancy amongst its elements is of lesser complexity. This was one of the "collative" variables which were used to describe the structural or formal properties of stimulus patterns, such as variations along the lines of simple-complex, familiar-novel, expected-surprising, clear-ambiguous, and stable-variable, whose common underlying characteristic was that they create conflict and uncertainty. Investigation of their motivational function showed these variables to be determinants of "hedonic value" (Berlyne, 1974b: 8), a term representing a degree of pleasure, reward and incentive, which in turn played a role in determining behaviour.

By measuring physiological responses to stimuli, differing qualities of hedonic value were revealed. Interest in simple tasks was found to be accompanied by deceleration of the heartbeat, while in more demanding tasks which involved manipulations of mental representations, it was accompanied by acceleration of heartbeat (Libby, Lacey & Lacey, 1973). The collative variables were shown to function in a different manner for liking and interest. For liking, moderate levels of complexity are optimal (Berlyne, 1970), whereas interest increases
with greater levels of novelty or complexity (Berlyne, 1974a). A distinction was thus suggested between interestingness and pleasantness in their relation to complexity.

Early studies in music education research tended to disregard the fine distinction which had been shown with respect to small differences in complexity levels separating the response of liking from that of interest. Since pre-existing schemata assist in the processing and interpretation of new information (Prawat, 1989), it might be deduced that objective familiarity could potentially reduce complexity. Findings of a study by Heyduk (1975) had suggested that a subject's liking for a musical composition is influenced by its proximity to his or her preferred complexity level which is, in turn, influenced by musical experience. This led to a theory that a certain level of complexity is optimal for each listener and bears upon that individual's preference decisions (LeBlanc, 1980; Sluckin, Colman & Hargreaves, 1980). This theory was interpreted to suggest that "excessive complexity can lead to frustration while the opposite extreme promotes boredom" (LeBlanc, 1980: 30). Radocy (1982) compared the reaction to that of a hedgehog which rolls into a ball in the face of threat, and referred to this relationship between complexity and approach-avoidance as the "hedgehog theory".

In experimental aesthetics, perhaps the strongest recent influence has been the work of David Hargreaves with the Aesthetics Research Group at Leicester University, England. Hargreaves (1984) was studying the relationship between music's complexity and listener enjoyment. The theory under investigation was that as a listener increases familiarity with a piece, an optimal level of subjective complexity will be reached, at which point, maximum liking for the piece occurs. On passing beyond this optimal complexity level, a point of over-familiarity is reached and liking decreases. The idea had been foreshadowed in the contention by Goodman (1968) that "the peak of interest in a symbol tends to occur at the time of revelation, somewhere midway in the passage from the obscure to the obvious", and that "where there is density in the symbol system, familiarity is never complete and final; another look may always disclose significant new subtleties" (p. 259).

Due to the fact that subjective complexity is a function of the objective characteristics of the music and the musical experience of the listener, if an inexperienced listener hears a very complex piece, the subjective complexity will be very high, and liking will be low. Similarly, when a highly experienced listener hears a very simple piece, the complexity is too low and liking will be low. If
listeners have roughly equivalent levels of musical training and objective familiarity with a piece of music, the relative levels of subjective and objective complexity of the piece should correspond to some degree. On this basis, the objective familiarity of different pieces can be manipulated directly by repeated exposure to a group of subjects, with a corresponding decrease in complexity being roughly equivalent across subjects.

By using repeated listenings to control familiarity levels, Hargreaves (1984) completed a controlled study which supported the "inverted-U" theory regarding complexity and enjoyment ratings. Smith and Cuddy (1986) confirmed the inverted-U theory in relation to their optimal-complexity model of aesthetic preference. Their summary proposed that:

the critical aspect of a stimulus that determines its hedonic, or positive affective value, is its complexity. Complexity is measured by the amount of variability or uncertainty associated with an event. In terms of information theory, it is directly related to the amount of information conveyed by an event and indirectly related to redundancy (pp. 17-18).

A later finding by Geringer and Madsen (1995-6), in which increased salience of timbre or of several elements at once corresponded with higher preference ratings by musicians, was seen as supporting the inverted-U function between complexity and preference. Hidi and Baird (1986) summarised the non-monotonic function of such factors as knowledge and uncertainty succinctly: "relatively small deviations from expectations are optimal in creating interest" (p. 183). Smith and Cuddy (1986) concluded that the model related in its function to the degree of conformity of a musical stimulus to "enculturated Rule-familiarity", a view which resonated with Meyer's (1956) theory of response to fulfilled expectations in relation to harmonic progressions. This view was endorsed by Miller (1992) and applied by Jackendoff (1991) to other structural dimensions of Western art music. Carlsen, Divenyi and Taylor (1970), thus conducted a preliminary study in perceptual expectancy, in the belief that by preparing listeners to correctly anticipate musical stimuli they might be "better disposed to correctly perceive those stimuli" (p. 5). In a study concerning rule construction in the cognitive processing of unfamiliar music, Narmour (2000) concluded that most of the human strategies for projecting expectations depend on mapping abstractions of similarity or dissimilarity.
The cognitive process of familiarisation was described by Scheffler (1986) as one in which the mind responds to each surprise with curiosity demanding an explanation. Thus each dissonance or novelty in music is transformed into a question, becoming an "educative occasion" (p. 359). In order to answer the question, the new perception is reconstructed in the light of prior knowledge, and thus assimilated. By this means, each surprising event is converted into knowledge by which future parallel events may be anticipated and no longer surprise (Scheffler, 1986). Reichling (1990) described this discovery behaviour as a function of metaphorical imagination, exercising the facets of intuition, perception, thinking and feeling, the yield being both understanding and pleasure.

Bruner's (1960) description of stages in intellectual development is contingent upon this cognitive issue, in that readiness for new learning is reliant on presenting the material in terms of the student's way of viewing things: "the [teacher's] task can be thought of as one of translation" (p. 33). Dewey's recommendation was that one identify the active powers of the students concerned, and judge the suitability of new subject matter and new "modes of skill" by the "way in which they promote the growth of these powers" (Dewey, 1913: 63).

The Hargreaves (1984) study had also shown that after experiencing repeated hearings of a complex contemporary piece, subjects' preferences showed only a minimal rise. It appeared that their very first ranking of a piece reflected a level of preference more consistent with subsequent ratings for repeated hearings than with a series of ratings for a piece in a different style. This led to the conclusion that although repetition could change levels of liking within a musical style, the rank order of preferences between different styles (or very different complexity levels) was not affected by this. Little attention has been paid to the problem exposed by this finding. If the initial response of students to a musical item reflects a low level of enjoyment, the music educator may face a difficult task in attempting to raise their enjoyment to a high level. What influences are at work in the initial ranking? Is this purely a matter of familiarity and complexity, or is the need for investigating the possible involvement of further variables indicated?

In reviewing research on musical preferences, Finnas (1989) noted that results of a series of studies had raised the question of whether a very complex piece would receive higher preference ratings even after a number of hearings. Finnas asked whether this might be because the complex stimulus does not
reveal "perceivable and predictable structures" (p. 14) or because of the intervention of initial preferences and attitudes, and tenuous motivation levels. If the latter is the case, although educators may have little influence over students' preferences and attitudes, which bear a resistance to change, could not one's initial response to a musical item be influenced by some motivational preparatory process or manner of presenting the listening experience?

1.4 A Problem Affecting the Initiation of Interest in Unfamiliar Music

McMullen (1980) distinguished research in empirical aesthetics from behavioural or learning psychology. He saw the nature of aesthetic mental operations not as a simple cause-and-effect relationship between physical events and physiology, but as an interpretive paradigm whereby causality is not unilateral but a complex event involving interaction between acoustical properties, human perception, and individual musical interpretation of that perception. It is the latter variable which suffered from some disregard in music education research into increasing student enjoyment levels through objective familiarisation with the music. Reynolds (1975) ascribed difficulty with unfamiliar music to a fear of the unknown, attributable to the lack of an "established framework" (p. 17). If there is a lack of familiar elements in the music, listeners experience this as "too great a profusion or paucity of events", and unless the listener is sufficiently motivated to be "deliberately attentive", he or she will not actively process the material in any detailed or meaningful way (Reynolds, 1975: 41). This view on excessive complexity concurs with Berlyne's findings on information theory, and indicates the role of motivation as the key available to educators for solving this problem.

Although it has been shown that an initial encounter with unfamiliar music is not necessarily attended by positive emotion, "interest-oriented engagement with an object is usually accompanied by positive or pleasant feelings" (Krapp & Fink, 1992: 406). Use of an effective motivational device would create an initial charge of interest to assist listener engagement in the process. The educative growth required in working with new material is valuable, but due to the required effort, the immediate availability of a trigger of interest may be essential in order to ignite the mental process.

Dewey's (1913) theory of interest incorporated the outline of a theory about subjective familiarity in the suggestion that a motivational 'spark' is not situated "purely in the feelings" (p. 61) of an individual, but inside the subject
matter with which the individual has identified the self. New subject matter
gains intrinsic interest to the degree that it enters the operation of existing
interests. It has been noted (see Chapter 1) that interest may be motivated
by a desire for enjoyment and/or by needs of competence and autonomy
(Deci, 1992; Deci & Ryan, 1985; Dewey, 1913; Lepper & Cordova, 1992;
Pintrich & De Groot, 1990; Prenzel, 1992). The required link lies between the
material and the person's tendencies, powers and habits. Dewey suggested
that likely interests could be deduced from a consideration of the existing
personal attributes "and the ways in which these can be carried forward by a
given subject matter" (Dewey, 1913: 62). Therefore, a music educator needs
to know the existing preferences, attitudes, interests and abilities of students
in order to select music for which interest may be readily ignited, or to devise
motivating techniques for musical items not thus selected. The further a
musical item is distanced from students' existing preferences, the more
ingenuity may be required in the construction of a motivational device.

1.5 The Unfamiliarity Introduced by Cultural Differences
in Music

Blacking (1984) called music "an unknowable truth" (p. 226), and pointed out
that its meaning cannot be understood in isolation from its position as an
event within a system of social interaction. It was later proposed that
culturally unfamiliar music could transmit meaning for an individual at some
level, due to a commonality in modes of musical thought which Blacking (1990)
described as a "supracultural cognitive resonance" (p. 239). Before reviewing
research concerned with the appreciation of the musics of other cultures, it is
necessary to look more closely into the connections between a culture and its
music.

Our response to music is the outcome of a synthesising process (Cook, 1990;
Dewey, 1934; Smith, 1979) by which the listener is able to derive meaning at
various levels (Balough, 1988; Cook, 1990; Elliott, 1995; Goldman, 1990;
Langer, 1953; Shore, 1991) from the experience. The progress of this
synthesis depends on some link existing within the listener, enabling a
connection with the music. Such a link has been termed a symbol (Nettl, 1994;
supported Reimer's (1970) contention that the association of certain moods
with particular forms of musical expression are learned within a culture. The
formation of meaning may be seen as a creative, imaginative process by which
cultural schemata, which provide the basis for understanding between people in a community, are appropriated by the individual in a personal, subjective manner (Shore, 1991).

Many music educators and ethnomusicologists (Blacking, 1990; Darrow, Haack & Kuribayashi, 1987; Edmonston, 1969; Farnsworth, 1969; Fung, 1996; Kivy, 1989; Lundin, 1953; Nettl, 1994; Nketia, 1984; Reimer, 1970; Reynolds, 1975; Rosen, 1994; Shore, 1991; Smith & Cuddy, 1986; Terwogt & Grinsven, 1991; Tolbert, 1992; Walker, 1986, 1990) have favoured the enculturation explanation, that musical meaning is determined by cultural convention. The implication of Rosen's (1994) claim that music exists "on the borderline between meaning and nonsense" (p. 75) is that music is a symbol which requires the success of some mental translation process if it is to make sense to the listener. Translation of an unfamiliar symbol poses a potentially complex task. The greater the effort required to overcome the difficulty of a complex activity, the stronger the interest must be to arouse the person to participate (Dewey, 1913). The more unfamiliar the music, the more care is necessary in the preparation of input which will assist in the construction of interest, and "the more elaborate the action, the longer the time required by the activity" (Dewey, 1913: 44). When engagement with an object results in a desire to engage further with that object, purely by individual volition, an intrinsic interest has been triggered at least to the "catch" stage (see Mitchell, 1993 below), although the duration of the interest cannot be predicted. The duration of the activity is related to developmental stages, and the activity must bring a sense of accomplishment in order to sustain interest. Such an accomplishment may be the acquisition of understanding at some level.

It has been suggested that the analytical study of Western music, often presumed to be an objective topic, may be empty of meaning unless the detailed relationships that are revealed by analysis, which have no intrinsic significance, are interpreted in the light of musical language or the psychology of the composer (Rosen, 1994). Outsiders of a culture may "respond to facets of the art which appear to correspond to elements within [their] own culture" (Reynolds, 1975: 37), and may learn to understand a music, but not as it is understood by the cultural insider (Nettl, 1992). It has been suggested that instruction accompanying the presentation of music from other cultures should entail concepts original to the musical cultures under study (Elliott, 1989; Trimillos, 1983). It was pointed out by Bamberger and Zipporyn (1992), however, that this is best done through a discovery approach, in order that
concepts are grasped in a meaningful way. Trimillos (1988) emphasised the potential benefit for students in grasping the nature of different modes of musical thought which operate in various cultures.

Kivy (1990) accepted that aesthetic reward may be found by Western listeners in certain musical output from beyond that of the West, giving the example of Indian raga music being appreciated in the manner in which one would listen to the theme-and-variations. In Kivy's view, however, "what we are meant to do" with music is to perceive abstract patterns, forms and qualities, which may also be expressive, and enjoy them "in an abstract, non-interpretive mode" (p. 24). Kivy considered enjoyment to be escalated in the ability, afforded by sufficient knowledge, to admire the craftsmanship of a composition while listening and thought that the better we can verbalise about music, the better we must understand it, and therefore the better we enjoy it. Within the Western tradition, Kivy observed, we may not enjoy particular styles with which we are not familiar because we have not grasped the syntax of their language. By this reasoning, enjoyment by Western listeners of non-Western music would require acquisition of knowledge, preferably verbalised, regarding the music's syntax. Kivy's view may be seen to belong to a conservative school of thought within the Western tradition, in the light of Cook's (1990) observation, and research findings (Madsen, Byrnes, Capperella-Sheldon, & Brittin, 1993), that trained and untrained Western listeners tend not to use a verbalised analytical approach for musical enjoyment. Palmer (1992), emphasised that when introducing students to music of another culture "the essential aspects of the performance to retain are the terms of its socio-cultural, communicative, and personal meaning dimensions" (p. 36).

The fact that Western listeners judge aesthetic enjoyment to occur by their affective response, does not mean to say that no musical analysis has been carried out at a less conscious level. Nketia (1984) described aesthetic education in music as "a process of building up knowledge and awareness needed for relating to different types of music in their own aesthetic terms" (p. 13). The content of such learning would include descriptive analyses of music, accounts of the cultural background, and insights into its aesthetic principles, considered from the viewpoint of that society. Nketia (1984) considered it important to provide information on "what a people have, what they do that is different from what we expect, what alternative concepts they
use or emphasise" (p. 23), and what special musical features can be expected, without relying on the definitive terms specified by Western aesthetics.

An approach described by Walker (1990) as being "pancultural", as opposed to "unicultural", requires "initially, the development of auditory gestalts that relate more to the autonomous qualities of sound per se than to the sounds of any single musical culture" (p. 221). In this approach, the exploration of sound itself is a necessary precursor to learning how societies imbue sounds with communicative meanings, after which students examine the beliefs of the culture, and finally become engaged in creative and listening activities concerning that culture (Walker, 1990).

Balkwill and Thompson (1999) considered that there might be certain musical features which hold universal connotations of expressed emotion. It was proposed that listeners may be able to interpret emotions conveyed by music outside their own culture by processing variations in such psychophysical dimensions of music such as tempo, timbre and stimulus complexity when their use can be perceived independently of musical enculturation. It was found that Western listeners were sensitive to psychophysical dimensions in Hindustani ragas, and to corresponding intended emotions, even though they were unfamiliar with the tonal system and its raga-rasa system of conveying moods. Particularly with ragas representing joy and sadness, Western listeners who were naïve to Indian music, strongly correlated in their ratings with expert Indian listeners. The psychophysical dimensions specifically used in interpretation included tempo, melodic complexity, rhythmic complexity and timbre.

The task of a teacher who is attempting to engender in students a positive response towards unfamiliar music is not simple. The higher level of unfamiliarity experienced by students when the music they hear is not part of their own cultural background, exacerbates this difficulty. The hypothesis that musical response is largely culturally acquired (Farnsworth, 1969; Lundin, 1953) was supported in research which showed that even untrained listeners respond to a rule-detecting system based on their intuitive grasp of the musical tradition in which they are enculturated (Smith & Cuddy, 1986). It was demonstrated that the rule-detection system could influence affective response through the relation between pleasingness and perceived complexity. This observation supporting a relationship between complexity of a stimulus and subjects' encultured musical experience implies that greater musical training within a musical tradition may not assist in enjoyment of music from
other cultures. Research has shown the influence of enculturation to be a more significant factor than musical training in relation to preference ratings for musical stimuli drawn from outside subjects' encultured musical tradition (Darrow et al., 1987; Edmonston, 1969; Fung, 1996).

It has been accepted that at least part of the difficulty for Western listeners in processing some music of other cultures is related to the tonal harmonic framework within which they are encultured to process melody and harmony (Radocy & Boyle, 1997). Although capacity for perception and cognition of complex stimuli is set by individual limits, Radocy and Boyle considered the proposition that information theory could provide "a construct for examining perceptual capacity for music" (p. 141). They concluded, however, that the degree of complexity in a musical stimulus, compounded by the variability of experience available to the individual for processing that stimulus defies the possibility of accurate quantification. Therefore, the difficulty facing music educators who wish to broaden the base for aesthetic enjoyment for their students, is the unquantifiable but potentially high degree of complexity to be encountered in the initial hearing of music from different cultures. The high degree of complexity, and/or unfamiliarity decreases the likelihood of students enjoying their initial hearing, thus potentially lowering the quality of ensuing learning. Whilst the solution has certainly been intuitively identified by educators as the use of motivational device, little research has attended to the techniques which might be of use to music educators. Recognition of this problem has resulted in calls for related research which are summarised in the following review.

1.6 Recommendations for Study of Affective Variables in Music Education

1.6.1 Enjoyment

Prince's (1972) proposed paradigm for music listening research, and LeBlanc's (1980, 1982, 1986) series of models of the variables influencing musical taste, were produced with the intention of promoting systematic enquiry into the listening process. Prince recommended research into "the effects of forming Gestalts on affective responses to music" (p. 454), while Lewy (1971) pointed to need for research to establish a proper sequence of affective goals in music education. More recently, calls have been made for further research into the tendencies of affective response to musical sound at any given age for its
assistance in "improving music teaching and learning at that age" (Rodriguez & Webster, 1997: 9), the use of expanded and more sensitive measures of music appreciation (Zalanowski, 1990), the relationship between discrimination of the elements of music and preference decisions (Geringer & Madsen, 1984), identifying musical elements to which listeners should attend for the purpose of enjoyment (Madsen & Geringer, 1990), and the function of variables which might influence preference for music (Cutietta, 1992; LeBlanc, 1980; Madsen, Byrnes, Capperella-Sheldon & Brittin, 1993). Finally, Gregory (1994) recommended research be undertaken to identify variables which might influence preference for unfamiliar music.

1.6.2 Interest

It has been suggested (Kuhn et al., 1981) that future studies in preference behaviour should include, as well as ratings of liking, assessment items which imply behavioural intentions, interest. Schiefele (1990), noting the influence of interest on task-oriented motivation and thus upon comprehension, use of deep-level learning strategies and quality of emotional experience, called for empirical studies by educational researchers to examine the concept of interest. Although triggering conditions for interest have been located, in such variables as novelty, thematic interest, and incongruity, Hidi and Baird recommended that research investigate conditions which maintain interest. It was suggested that this would involve investigation of the ways in which information is mediated through affective experience involving the individual's value system, to become of significance to individuals (1986). Noting that interest is composed of an interaction between "an energised individual" and the "external world", Hidi (1990: 550) saw these two factors as aspects of cognition that have been neglected by research. The former item is represented in this study by the dynamics of enjoyment and interest, the latter by presentation context. Since situational interest may be affected by features of the material as well as its presentational context, Schraw (1997) called for research into the multidimensional nature of interest and study of "the degree to which personal responses may facilitate the construction of holistic interpretations" (p. 450).

1.6.3 The Influence of Presentational Techniques on Enjoyment and Interest
Research has been recommended into the influence of presentation variables on preference decisions (Madsen, Brittin & Capperella-Sheldon, 1993; Brittin & Sheldon, 1995; Shehan, 1984, 1985; Price & Swanson, 1990), and into the possible need for different presentational styles for different types of music (Zalanowski, 1986). Simonson, Aegerter, Berry, Kloock & Stone (1987) called for further investigation of the relationship between the content of material, the communication media, and the learning styles of the audience. Davidson (1993) suggested that investigations of music perception should probe the possible effects of accompanying the sound with visual information. Whilst presentational possibilities afforded by computers for individualisation of instruction have been exploited along cognitive lines, comparable studies along affective and motivational lines are scarce (Lepper & Cordova, 1996).

The above list of recommendations for research is evidence of recognised questions, and of the concern of educators with affective variables and with possible means of manipulating these to improve teaching and learning. Nevertheless, many of these questions are unanswered even up to three decades later. In the following section, some possible obstacles to finding the desired solutions will be summarised. The principal reason is thought to be an emphasis on cognitive research in education and music education, possibly due to value being placed almost exclusively on cognitive outcomes of education, including music education, by all or most sectors of the community. The channelling of research away from affective or aesthetic areas is possibly magnified by the known deterrent to empirical studies of this nature, in their multiplicity of influencing variables, and the complexity incurred by interactions of such variables with the various dimensions of affective and aesthetic response (Zagona & Kelly, 1966).

2. Obstacles to Solving the Problem of Initial Positive Affect Response

2.1 The Cognitive Emphasis in High School Music Listening Classes

The cognitive component of music listening skills has been much emphasised during high school years, due to its examinability and the importance placed on high school examination results. It is of some concern that the development of a complementary positive affect may not be concurrently achieved, and it has
been claimed that the development of cognitive gains in some circumstances may be inversely related to affective gain, such as a rise in interest (Krathwohl & Bloom, 1957; Klvy, 1980; Lehman, 1968; Lewis & Schmidt, 1991; Smith, 1979). Krathwohl and Bloom questioned the widely held "implicit belief that if cognitive objectives are developed, there will be a corresponding development of appropriate affective behaviors", suggesting that "affective behaviors develop when appropriate learning experiences are provided for students", as occurs in the cognitive domain, and that there was a definite need for research in this area (p. 20).

Research on affective objectives in education has found that original statements of objectives for courses typically gave as much emphasis to affective as to cognitive objectives, and that as the former were not explicitly evaluated, in time they were dropped from such statements (Krathwohl et al., 1964). Another reason proposed by Krathwohl et al. for the erosion of affective objectives is the practical difficulty with an implication that an interest or attitude might be developed within a prescribed period of time. The latter "characteristics are assumed to develop relatively slowly and to be visible in appraisal techniques only over long periods of time, perhaps even years" (p. 19), whilst some other objectives in the affective domain may be quite rapidly achieved. These assumptions have substantiated by results of research completed during the intervening decades (Brown, 1978; Peery & Peery, 1986; Price, 1988; Price & Swanson, 1990).

Deeper reasons than any technical problems with administering affective measures, were found by Krathwohl et al. (1964) to be responsible for the failure to evaluate affective objectives. One such reason, arising from the democratic traditions of the Western world, was that whilst cognitive achievement is regarded as a "public matter", one's values are generally regarded as "private matters" (pp. 17-18). Closely associated with this "public-private status" of cognitive versus affective behaviour, was a distinction made between "education and indoctrination in a democratic society" (p. 18). Education assists the individual to explore his or her feelings and emotions as well as aspects of the world, thus expanding the possibilities for choice and contributing to an ability to make decisions of choice. Any attempt to persuade students to "accept a particular viewpoint or belief" which reduces possibilities for free choice is rejected as a form of indoctrination (Krathwohl et al.: 18). To lead students towards an ability to appreciate listening to music of a specific genre was thus considered
educational, but to persuade them that only certain musical genres are of value was considered a form of indoctrination.

At the time when Krathwohl et al. (1964) made the above observations, there was a heavy emphasis in the music curriculum on Western European art music and its historic development. Therefore, research into ways of assisting students towards positive evaluation of music studied may have been discouraged by this ethical issue. The recent advance in music education, of a formal broadening of the curriculum to include the study of any genre of music from any culture, removes the ethical stigma which might have been discouraging this type of research.

2.2 The Cognitive Emphasis in Music Education Research


A recent study on "audience listening" skills (Hentschke & Del Ben, 1999) provides much of interest on the development of aural discrimination. The approach is naturalistic in referring to students' responses to complete musical works, and verbal responses indicative of holistic attention style were recognised. The response of a child, six or seven years old "It was ... also great. It was also good. Tantartantantantantan [singing]. Nice and lovely. Also
sad. Because ... it is ... oh, I don't know what" (p. 137) exemplified global listening. Despite the obvious enthusiasm of this child, the value of the musical response seemed to be missed when inability to verbalise about the holistic musical experience was described merely as an inability "to discriminate between the different aspects of the musical event" (p. 136). The emphasis on cognitive goals in music education is fraught with the risk of devaluing, and even discouraging, affective response to music.

The possibilities afforded by computers for individualisation of instruction have been exploited along cognitive lines (Alessi & Trollip, 1991; Andre & Veldhuis, 1991; Atkinson & Burton, 1991; Casey, 1992; Hannafin, 1993; Janniro, 1993; Kulik, Kulik & Cohen, 1980; Murphy, & Davidson, 1991; Peters, 1993; Press, 1991; Sales, Tsai & MacLeod, 1991; Thomas & Bostow, 1991; White, Troutman & Stone, 1991), but comparable studies along affective and motivational lines are scarce (Lepper & Cordova, 1996), as is research in relation to aesthetic issues in computer instruction.

There is thus a need for developing greater understanding about affective goals and techniques for their attainment. Such research may have been somewhat limited as musical attitudes and values have at times been considered to involve "a kind of judgment based more on intuitive than rational processes" (Prince, 1972: 452). Krathwohl et al. (1964) ascribe the delay in exploration of this area to the difficulty of recording mental process, which is exacerbated in the affective domain "where feelings as well as thoughts mediate" (p. 61), and to a certain reluctance to ask questions relating to values, out of respect for the privacy of individuals' views. Although a considerable amount of research has investigated a range of possible influences on music preference responses, many gaps remain in the understanding of affective processes.

2.3 Complexity Involved in Research on Affective Response

An overwhelming difficulty with investigations concerning affective response to music is the individuality of listeners. The features of musical stimuli are also multiple variables, and the manner in which their interactions influence the musical preference behaviour of individuals could well be imagined to produce a diversity prohibitive of contemplation, let alone research. Affective response itself possesses complexity in the dynamics of its dimensions. The following review therefore commences with an outline of the dimensions of affective response; proceeds to an examination of the theory and research regarding
the process by which affective response to initial perceptions governs immediate approach-avoidance decisions; and concludes with a summary of research into the interactions between the principal variables: musical features and listener characteristics as they affect the preference\textsuperscript{21} response.

In response to the need for developing greater understanding about affective goals in education and techniques for their attainment, Krathwohl et al.'s (1964) analysis of educational objectives in the affective domain identified three levels of valuing on the basis of degree of internalisation. These may be applied to music listening (Abeles, 1980). In terms of Krathwohl et al.'s hierarchy of three levels of valuing, "taste"\textsuperscript{22} is the most internalised. Musical taste is the judgment made by listeners when satisfied that material has undergone sufficient testing in their individual processing system. The resultant attraction decision is called a "preference" decision by LeBlanc (1982) because "the listener will be inclined to make similar decisions in the future when presented with similar input information" (p. 39). This is a very significant claim, and justifies use of the term "taste". Two preliminary stages were identified in the process of developing a taste for a musical item or genre.

The term preference may usefully be applied to the intermediate stage which constitutes a trial period during which individuals subject the material to repeated testing with regard to preference, prior to making a more conclusive judgment (LeBlanc, 1980; 1982). A preference may be seen as the behavioural intention or desire to hear more of a stimulus, a state whose duration relates to the duration of the memory of the initial positive response, and is concluded with the final taste decision. Thus preference would indicate more than a fleeting reaction, but less than a long-term commitment. Listening during this period involves cognition of musical events, and thus produces aesthetic

\textsuperscript{21}Although Price (1986) and Cutietta (1992) described musical preference as a valuing of one musical stimulus in relation to the valuing of another, this was not the sense used by LeBlanc in his theory and research on preference. The preference decisions described by LeBlanc (1980, 1982, 1987) are made in relation to a single musical stimulus, rather than in a comparison of one musical work or genre with another.

\textsuperscript{22}Whilst some writers (LeBlanc, 1980, 1982, 1983, 1987; Shehan, 1984, 1985, 1986; Brittin and Sheldon, 1995) have equated preference with taste, the position of "preference decision" in LeBlanc's (1980, 1982, 1987) theoretical model begins at the point of approach-avoidance reaction. This initial response, if favourable, is followed in the model by repeated listenings with heightened attention until a point of acceptance or rejection is reached. This later decision, which LeBlanc also terms preference, might usefully be termed one of 'taste' since the item in question has undergone a period of trial. The interim state of incomplete decision, whilst the music is not yet fully accepted, might usefully be termed one of 'preference'.
experience. Such a preference might possibly be also described as a degree of interest since it describes the period during which the listener is in flux, interested enough to continue testing, after a previous positive response, but not yet convinced enough of this positivity to commit to a permanent valuing of the stimulus. When a taste decision is made, interest is confirmed - or lost.

The least internalised stage is that of the approach-avoidance response, which is the crucial affective response occurring on the initial hearing of a piece of music. Procedure into the second phase during which music is the object of heightened attention, will not ensue unless the approach-avoidance decision was favourable.

Since this study is investigating variables which influence the approach-avoidance response to music, the following summary of the theory and research related to that response leads into a review of research on characteristics of music and listener which are likely to influence this initial preference response. Listener characteristics which have previously been investigated include preferenda for the music or its features which are due to previously established musical preference, and may be influenced by listeners' age, musical training, gender and cognitive style.

2.4 The Approach-Avoidance Response

Zajonc (1980) found that the most immediate response to a stimulus is the type of affect known as approach-avoidance distinction and that this response requires minimal cognition. It was found that in recall of a stimulus, this basic affective reaction "is the first element to emerge ... [and] is capable of influencing the ensuing cognitive process to a significant degree" (Zajonc, 1980: 154-5). The first reaction is one of emotion, and this influences the cognitive process which may or may not ensue. For a music listening course to develop a positive affect concurrently with cognitive gain, therefore, it may be seen as desirable that a positive affect enlivens the process from its very point of initiation.

As perception is the driving force in responding to a stimulus (Zajonc & Brickman, 1969), it is important to understand the process by which an affective reaction induced by a perception will influence perception in the next instant. The two basic assumptions underlying perceptual theory, as outlined by Bills (1975), are firstly, that "human behavior is directed toward maintaining the status of the organism or [preferably] toward enhancing that
status ... when the perceiver deems it to be possible" (p. 7); and secondly, that the judgment of whether enhancement of self organisation is offered by a behaviour, is determined by the perceiver's perceptual field. The perceptual field is described by Bills as being constantly in flux due to the feedback resulting from behaviour, but unified as a continuum by the perception of self which flows through from one instant to the next. This latter dimension of the field, which perceives the self positively or negatively at one instant, maintains that same image as a state of being which is projected on to the next instant. Thus it can be seen that "first learnings take priority over other learning and often interfere with new learning" (Bills, 1975: 9).

The reason why we tend to trust in our first impression, even "after a complete invalidation of its original cognitive basis", is because we have made a judgment concerning our personal position in relation to the object or event, and are often unable to "verbalise the reasons for our attraction or repulsion" (Zajonc, 1980: 157). Zajonc contended that the initial affective reaction occurs prior to identification of features in a stimulus that are normally cognitively distinguished. He hypothesised the existence of "a class of features that can combine more readily with affect and thereby allow us to make these evaluations, to experience attraction, repulsion, pleasure, conflict, and other forms of affect" (p. 158). These features, too vague and global to serve as the basis for cognitive evaluation, interact with internal states of the individual. Zajonc called the features which associate with such inescapable affective reactions "preferenda", and noted that these may alter according to the state of the individual, while the object remains stable, "as, for example, when liking for a stimulus increases with repeated experience" (p. 159). Zajonc described preferenda as being "generally wholistic", very much influenced by the "context of the surround" and "less subject to control by attentive processes" (p. 156).

Due to the temporal dimension in which musical information is revealed, the initial response even to many of its global features cannot occur prior to listeners' exposure to some sequential events. The only musical features available at the first instant of the stimulus are the timbre and pitch, to which some preferenda may be attached. Unless a listener harbours a particular antipathy towards the initial characteristics of a musical stimulus, the approach-avoidance decision is likely to be more protracted than it might be with a visual stimulus. According to McMullen's (1980) paradigm for musical stimuli, therefore, affective response was activated on "an energy dimension, a
structure dimension, or some combination of both" (p. 186). The Energy dimension represented a continuum from low to high of excitement, energy, intensity, and stimulation, on which were formed the results of holistic processing of such elements of the stimulus material as tempo, physical intensity, colour and rate of change. The Structure dimension represented a continuum, shaped as an inverted U, of value, pleasure, or hedonic tone, on which are formed the results of sequential processing of such aspects as simplicity/complexity, familiarity/novelty, expectedness/surprise, ambiguity/clarity, and variability/stability (McMullen, 1980). Just as Pask (1976) found the holistic and sequential styles of processing perception to describe a continuum on which blends occur, it is conceivable that not only Energy elements, but also some Structural elements, might initially be perceived globally as preferenda.

As well as the properties of the stimulus itself, its referential meanings for listeners are situated on the entry level of LeBlanc's (1981) model of the "Sources of Variation in Music Preference" (p. 144). Due to their direct effect on affective response, the referential meanings introduced by listeners' associations with the stimulus (McMullen, 1982) may clearly be classed as preferenda. These learned meanings, which may be culturally shared or specific for an individual, include mood associations. Probably the most common form of verbal description of affective response to music is a mood adjective. McMullen described this as connotative vocabulary since its meaning refers not directly to the perceived stimulus, but to the personal feelings experienced by the listener in response to that music. Once listeners begin to perceive the stimulus with a basic, or acquiescent, level of attention, an interaction between the stimulus and listeners' mood or current affective state occurs and is likely to influence the ensuing mental processing of the information (LeBlanc, 1981). Although LeBlanc's cluster of variables representing the personal processing system refers to relatively stable personal characteristics of the listener, an individual's reflexive affective reactions to musical features, "preferenda" (Zajonc, 1980: 158), may alter according to the state of the individual, while the object remains stable.

In the face of Zajonc's "impressive array of anecdotal and phenomenal evidence" (Mandler, 1989: 5) to support initial response being largely dominated by affect, the cognitive constructionist view argues that underlying such a response is a preconscious cognitive analysis (Mandler, 1989). It may arguably be claimed that "there is some cognitive component in every affective
objective, [but] its nature is much more easily seen in some instances than in others" (Krathwohl et al., 1964: 53). Mandler described the construction of emotion as a holistic, subjective experience which is situation-specific and preempts conscious capacity which is thus not available to other processes. A negative evaluation of the learning situation usually results in negative affect which would thus interfere with ongoing cognitive processes, eventually leading to abandonment of the task (Mandler, 1989).

The difference between the explanations provided by the theories of Zajonc and Mandler falls into insignificance at the point of considering the relation between affect and learning, since both paths potentially lead to a similar point to be investigated. In consideration of the possibility of ameliorating the difficulties that individuals may have with tasks, Mandler (1989) recommended conducting "microanalysis" (p. 15) using an array of alternative approaches to learning tasks to discover any differences in the degree to which they elicit a particular affective response in learners. The view that preference for positive emotional states leads to hedonistic striving for repetition of experiences which provide that reward, was regarded by Mandler as "neobehaviorist" (p. 16), and probably the most useful position to take in accounting for the affective domain with regard to learning.

Through their experiences, individuals form links of positive or negative valence which are directed towards particular persons, objects or events (Dewey, 1913; Zajonc, 1980; Mandler, 1989) and to such affective valences, interest may attach (Dewey, 1913; Schiefele, 1991). This lends apparent support for Elliott's (1995) claim that "enjoyment or flow is the affective consequence of, the affective accompaniment to, and the prime motivation" (p. 203) for musical activity. The importance of an initially favourable approach-avoidance reaction to the stimulus lies in the fact that a fairly swift choice may be made by the listener as to whether he or she will listen for further information, or make an immediate preference decision. "If the decision is one of acceptance, the listener is likely to repeat the stimulus under heightened attention until reaching a point of satiation. Whatever the decision, the listener will be inclined to make similar decisions in the future when presented with similar input information" (LeBlanc, 1982: 39-40). If the stimulus is rejected, the listener ceases to process the information (LeBlanc, 1982). The fact of the amenability of preferenda to the instantaneous influence of context and mood state, suggests a strong reason for investigating the effects of different modes of
presentation which may provide optimal conditions for a positive response to the stimulus.

2.4.1 Stimulus Variables Influencing Approach-Avoidance Response

Berlyne (1971) identified three categories of stimulus properties capable of causing a physical arousal response. The psychophysical properties of a stimulus raise arousal through "spatial and temporal distributions of energy" (p. 69) exemplified in sound by loudness, intensity, suddenness, or extremity of pitch. Ecological properties of a stimulus are related to survival instinct and represent calmness, de-arousing, or threat, arousing. These properties may be physically soothing or painful, or being neither favourable or unfavourable, gain significance and produce their effect through learned associations. When a stimulus, or element of a stimulus, that is present at a moment, is compared with one that had been experienced in the recent or distant past, information is being collated from more than one source. The collative properties of a stimulus arouse individual respondents according to a decision that is reached on the novelty, surprisingness, complexity, ambiguity or congruity of a stimulus pattern. Berlyne (1971) saw these variables as structural or compositional features of a stimulus which, by an interaction with respondents, have an influence on motivation.

Much research has been carried out in an investigation of musical stimulus variables which influence preference. Certain preferenda were demonstrated to be widely shared in the finding of individual differences in preference for certain timbres and volume levels, and, with non-music majors, certain pitches (Hedden, 1974). Hevner (1934, 1935) found affective response to be most influenced by tempo, then modality, followed by pitch level. In a study of fifth grade students, LeBlanc (1981) found that musical style accounted for 23% of the variance in preference. A liking for faster tempos explained approximately 3% of the variance, and when the effect of style was removed, the liking for instrumental, as opposed to vocal, performance medium explained approximately 2.25%. A further study on the preferences of children in upper primary grades was conducted in a single musical style (LeBlanc & Cote, 1983). It was found that faster tempos and more prominent beat were preferred in general, as was the instrumental performance medium, while tempo and medium together accounted for 5% of the variance. The preference for instrumental over vocal performance medium, which LeBlanc (1981) had found with primary grade children, was found also with
undergraduates in a later study (Darrow et al., 1987) with nonmusic majors listening to art music of unfamiliar cultural origin. Fung (1996) rated instrumental excerpts selected from a number of cultures around the world for their attributes of tempo, dynamic, pitch relations, pitch redundancy, consonance, embellishment, texture and timbre. In a sample ranging in age from 18 to 69 years, it was found that the most generally preferred musical characteristics were: fast tempo, loud dynamic, tonal-centred pitch relations, use of a variety of pitches, consonance, moderate embellishment, smooth texture which is moderate to complex in its structure, and bright timbre. Whilst the concept of this study was interesting, the report did not provide sufficient detail concerning how instrumental excerpts were rated, nor how musical attributes were defined. Possibly of greater importance was the suggestion that the cultural source of music may be included as a factor contributing to variation in music preference (Fung, 1993).

Empirical aesthetic research relating to the collative variables has been described as information-theory based, relying on the interaction between melodic structure, an "activity dimension", and listeners' perception process, an "evaluative dimension" (Crozier, 1981: 437). Models of interest which were reliant on the relation between stimuli characteristics in terms of collative variables and the person's prior cognitive experiences, or on the experiencing of self-efficacy as a source of satisfaction to reinforce the activity, may be ignoring other important affective variables (Prenzel, 1992). Prenzel wished to emphasise the importance of listener characteristics, which play a vital role in the interactive dynamics.

The finding by LeBlanc (1983) that style alone accounted for 23% of the variance in preference, while tempo and performance medium together explained 5% of the variance is useful background information for this study. It is also useful to note that a number of different age groups have preferred the same type of tempo, beat and performance medium; and that further musical attributes appear to be shared preferenda (Fung, 1996). The type of generalisation, used in reporting statistical findings, indicates tendency, and is not intended to imply the lack of individual differences in any one of these musical preferenda. Characteristics of music were shown to have a greater influence on preference than either musical experience or provision of information (Gillis, 1995). No particular style, however, has been shown to be preferred by miscellaneous groups over any number of studies, and the
following review will elaborate on several dimensions of individual difference in listeners which influence preference decisions.

2.4.2 Listener Variables Influencing Approach-Avoidance Response

The highly interactive nature of a multitude of variables affecting preference decisions makes each influence difficult to isolate and measure (LeBlanc, 1980). Specific features of the musical stimulus and of its presentation, as well as those of the listener's cultural environment, basic attention, current affective state, and personal characteristics, experience and established preferences provide the information which are processed by listeners in making a preference decision (LeBlanc, 1982, 1987). Influences of listeners' sociocultural environment as represented by peers, media, teachers and other adults have been shown to have some degree of effect on music preference and selection (Alpert, 1982; Boyle, Hosterman & Ramsey, 1981; Dorow, 1977; Fathi & Heath, 1974; Greer, Dorow, & Randall, 1974; Greer, Dorow, Wachaus & White, 1973; Hedden, 1981b). Musical aptitude was shown to lack significant influence on musical preferences (Williams, 1972). Racial identity may sometimes influence preferences (McCrary, 1993; Morrison, 1998). The following review addresses research concerning important listener characteristics which condition their preferenda. These include age, training, gender and cognitive style.

Age

Age has been considered an important listener characteristic with the potential to influence musical preferenda. In considering effects which might be attributable to age, it is necessary to be aware of the dual components of a life's chronology. The first is maturation, biologically driven, the second is sociological or historical, related to a sociocultural environment (Schulten, 1987). The difficulty in separating maturational influences from those of such variables as the cultural environment, musical training, auditory sensitivity, socioeconomic status and memory was pointed out by LeBlanc (1982).

An early study showed that preschool children liked popular and classical musics equally, but that while liking for nonrock music decreased after third grade, liking for rock became stronger during primary grades (Greer et al., 1974). In a later study (Peery & Peery, 1986) it was found that, following a ten month course in classical music, preschool children had maintained a liking
for that genre as well as that for rock music. The control group suffered a loss in classical preferences while maintaining their rock preferences. It was concluded that "what you don't hear, you come to like less well" (p. 30). A possibility was thus demonstrated that what had previously been perceived to be an age-related effect might be attributable to a (socialisation-induced) lack of familiarity.

As the subjects of this study were adolescents in the age range of fifteen to seventeen years, findings concerning preference in relation to this age group were examined. Hargreaves et al. (1995) found that between the ages of eleven and sixteen years, liking for classical genres decreased and that even liking for some popular styles, whose overall level of preference was much higher, suffered some decline. LeBlanc, Sims, Siivola and Obert (1996) recorded the preference ratings of students aged six to ninety-one years for excerpts from classical, rock and jazz instrumental pieces, the three best-known styles of the cultural setting for the subjects. A general decline in preference was found between the ages of six and eleven, and the ten to twelve year-olds showed the lowest preference ratings towards all musical styles. From age thirteen to fifteen preference ratings rose continuously, in parallel across the three genres, and peaked between the ages of seventeen and eighteen. The rise in preference for all styles from age thirteen is in contradiction with the Hargreaves et al. (1995) finding of decline in liking for classical genres, but different methods of measurement may have had an influence in the conflicting outcomes. The instrument of measurement used in the Hargreaves et al. study, was an opinion poll referring to verbal labels of music categories, whereas LeBlanc et al. (1996) measured response to a listening test. A study by Shehan (1984) contrasted the preference response made in direct reference to an immediate experience with the attitudinal opinion which is more susceptible to a bias of conformity with peer culture. If this is the case, it may be said that a rise in genuine liking occurs across genres (LeBlanc et al., 1996), but that the rise in preference for classical genres may not be consciously recognised by young adolescents, and thus not verbalised (Hargreaves et al., 1995).

Gilbert (1990) found a rising concern with personal tastes in fourteen to sixteen year-olds. Their preference constructs were more affective, qualitative and personal, representing a period of transition toward "symbolic abstraction and aesthetic awareness" (p. 187). Sixteen to eighteen year-olds were more concerned with the affective character and mood of the music, and
less with personal affects. They exhibited greater ability to synthesise information in a more holistic approach (Gilbert, 1990).

**Long-term Musical Experience/Training**

A steadily increasing awareness of the importance of affect in music education has produced a body of knowledge surrounding the influences of another listener characteristic variable significantly bearing on preference response, prior musical training and enculturation. The influence of musical experience in the form of cognitive instruction, has been viewed as the most likely means of influencing preference behaviour. In order to broaden musical preference, therefore, music education research has predominantly explored possibilities that might result from various instructional methods, and found these to have differing effects on preference behaviour. Particular observations have included a resultant strengthening of preference feelings, broadening of musical taste, and raising of levels of preferred musical complexity.

In this study, training refers to the long-term musical instruction through which musical expertise accumulates over a period of years. The effects of training on preference have sometimes been difficult to separate from those caused by coincidence of other variables. It has been noted that training may play an intervening role where influence on preferenda might otherwise have been ascribed to age (Peery & Peery, 1986) or gender. Hargreaves et al. (1995), for example, found a decrease in liking for Classical genres between the ages of eleven and sixteen years, with a tempering of this effect in female subjects. Since musical training was found to be positively related to liking for Classical genres across the sample, and the level of training was higher in females than in males, it was considered that the trend shown by females might be attributed to their superior level of training.

Another variable whose influence has been difficult to isolate from that of training, is familiarity. Research has attempted to discover whether indeed objective familiarity might be a more essential ingredient for musical preference, than training involving any verbal input. Those findings showed that repetitive listening alone was effective in strengthening preference (Bradley, 1971; Duerksen, 1972), and that verbal instruction may, for particular genres, bring a stronger result than mere repetitive listening (Bartlett, 1973). It was also suggested that preference may be more strongly related to subjective familiarity than to training (Payne, 1980).
In research on whether encultured familiarity or musical training is more influential in a listener's evaluation of music, Edmonston (1969) attempted to assess the difference between a trained and a "natural" preference response. One group trained in Western music, a second group trained in Indian music, and a third group untrained but familiar with Western music only, were asked to evaluate an example of Indian music. The results suggested that evaluative ratings were positively related to familiarity through exposure to Indian music rather than to formal musical training in Western music. Through repeated listenings and instruction, a resultant increase in preference for items from a variety of musical cultures around the world did not transfer to other items from those musical traditions (Shehan, 1985). A finding (Smith & Cuddy, 1986) that highly trained listeners rated complex musical sequences as more pleasing than did subjects with less musical training, was consistent with the theory that rule-familiarity had lowered the complexity of the sequences for these subjects. Differences in preference response which may vary due to degrees of musical experience are likely to be much larger when the experience factor alluded to is one's musical enculturation (Fung, 1993). Crickmore (1968) considered that while enjoyment of music and knowledge about music are distinct they are usually complimentary, that "where there is enjoyment there is also understanding, though not necessarily technical knowledge" (p. 240).

Students with more extensive musical experience have been found to express stronger preference feelings. In response to excerpts taken from five familiar musical styles, the preference ratings of music majors were found to express a wider range in their scores when rating like or dislike (Duerkson, 1968). In comparison with lower class levels and nonmusic majors, they had stronger preference feelings, and showed notably less deviation, as a group, in their preferences for classical music. Darrow et al. (1987) found a similar result when testing preferences of American and Japanese nonmusic majors for excerpts of various Western and Japanese musical genres.

Training has been shown to broaden receptivity within and across genres. In a study by Gregory (1994), degrees of training within the sample were represented by the categories: grade six, high school music and music majors. Whilst the preferences of all subjects showed bias for excerpts in which the medium was their own instrument of performance, particularly when the music was unfamiliar, this effect was greatest with high school students. Music majors were less "own-instrument-biased" in classical genre and and they also gave higher preference ratings to unfamiliar classical music than did other
groups. Since the preference of sixth graders for jazz did not decline at higher class levels, while preference for Classical music increased, it was concluded that broadening was being achieved in the process of music education. This view was supported by Fung (1996) who found that the general preference ratings of musicians for a wide variety of world music excerpts were significantly higher than were those of non-musicians. It was shown that individual musical characteristics have less influence on the preferences of musicians than on non-musicians, and that musicians prefer higher levels of textural complexity.

Although several studies have reported a positive relationship between the level of musical experience and musical enjoyment (Keston & Pinto, 1955; Brittin & Sheldon, 1995; Hargreaves, 1995; Smith & Cuddy, 1986), the lack of a direct relationship has also been observed (Crickmore, 1968; Eastlund, 1992; Edmonston, 1969; Gillis, 1995). The musical training of young adults attending contemporary art music concerts was related to slightly higher enjoyment levels, but significantly more positive attitude towards the musical style (Gillis, 1995). Gillis also concluded that long-term musical experience has a stronger influence on responses and preferences than short-term instruction (1995).

Studies have investigated a relationship between formal music training and aesthetic sensitivity. Madsen, Byrnes, Capparella-Sheldon and Brittin (1993) used the Continuous Response Digital Interface (CRDI) to record graphic representations which would enable comparison between the aesthetic responses of music majors and nonmajors. It was concluded that growing up in a particular cultural environment may be sufficient for the development of an aesthetic sensitivity which is not appreciably improved by formal study of music (Madsen, Byrnes, Capparella-Sheldon & Brittin, 1993). A further report, however (Madsen, Brittin & Capparella-Sheldon, 1993), cautioned against the collective graphic response of that study, as they discovered that the high reliability for individual subjects retested, even after an extended time, outweighs similarity between individuals grouped as musicians or nonmusicians (Madsen, Brittin & Capparella-Sheldon, 1993). Brittin and Sheldon (1995) found that music majors' aesthetic response ratings were significantly higher than those for nonmusicians. Using the CRDI and conventional static ratings of art music, taken through Likert-type scales, they found an apparent interaction between type of measurement and musical experience. Nonmusic majors' continuous ratings were significantly higher than their static ratings, although music majors showed little difference in their results by the two measures. The
observations about differences due to methods of measurement were interesting. Fredrickson's (1995) study compared the CRDI ratings of musicians and nonmusicians for tension as well as aesthetic reponse. Although the tension contours of the nonmusicians were more pronounced than those of the musicians, their aesthetic responses were much flatter. Despite some conflicting results, two of these CRDI studies have shown some support for the existence of a relationship between musical training and strength of preference feelings (Brittin & Sheldon, 1995; Fredrickson, 1995).

**Short-term Training**

Courses in music listening, conducted on a short-term basis, have shown inconsistent results with regard to beneficial effects for listener preferences. Following an eight-week course in aural discrimination with first-graders, Brown (1978) concluded that the lack of resultant effect on preferences "might suggest that knowing is not valuing" (p. 445). In a later study, Peery and Peery. (1986) found that preschool children given a ten month course in classical music did not change their level of preference for that genre, but the control group suffered a loss in classical preference. It was concluded that "what you don't hear, you come to like less well" (p. 30). A possibility was thus demonstrated that what might have been perceived to be an age-related socialisation effect could be avoided by educationally induced familiarity.

Bradley (1972) found that a fourteen-week course on listening to contemporary art music, using sequenced activities in an analytical approach, was more effective in increasing preference than was a course which used repetition without instruction. Price (1988) tested students before and after a ten-week conventional lecture/demonstration course in music appreciation. Results were not convincing with regard to any increase in preference for the music of composers taught.

Price and Swanson (1990) compared the pretest and posttest results of a 10-week music appreciation course of lectures, guided listening, reading and concert attendance for any apparent influence. Positive change in attitudes to composers and corresponding purchase of recordings were shown, but no increased positivity to the musical excerpts. It was concluded that courses using the lecture/demonstration model may increase knowledge about specific works, but do not develop a pattern of enjoyment. Later studies have suggested, however, that the influence of short-term training on preference
might be better detected by non-verbal measures. Shehan (1984) conducted a four-week instruction program with children in upper primary grades. One group received heuristic performance and inductive reasoning based instruction, and the other, a more passive method of instruction in gamelan music. Although verbal responses showed no change in preference for the genre by either group, responses through the Music Selection Recorder showed a significant gain in preference by the group that was taught with the heuristic approach.

In the above selection of studies concerning the effects of short-term training on music listening preferences, the duration of courses ranged from four weeks to ten months, and the instructional methods varied from the lecture/demonstration model, to performance and inductive reasoning. Results were not strong, and it has been suggested that short-term changes in preference levels may be too subtle to measure by verbal report, but possible to detect using the Music Selection Recorder.

A finding noted by Hargreaves (1984) may well suggest an explanation for the low influence of short-term courses on student preferences. When repetitions of a musical item were played to students in a single session, low increments of increase in enjoyment occurred, but significant increments appeared when the session was repeated three times at intervals of a week. It was also noted that in both cases the rise in familiarity clearly exceeded the rise in liking. These indications suggest that familiarisation with the acoustical stimulus is not a nutrient for musical enjoyment which promotes instant growth by a simple increase in dosage, that acclimatisation over time may also be a requirement. The enculturation in a musical genre, suggested by Smith and Cuddy (1986) and Meyer (1956) to assist musical enjoyment, is known to take time to develop. A greater time interval may in itself enhance the success of a familiarisation process.

A rather disconcerting aspect for the reader of reports such as the above, concerning both long-term and short-term musical training, is the lack of essential detail provided. The difficulty of providing much detail on the nature of long-term training is obvious, but should be seriously attempted. Certainly in the case of the short-term studies it is felt that a lot more detail could have, and should have, been provided as to the nature of the course content, the method of delivery, and the affective style or temperament in which the course was conducted.
Gender

Gender is another important listener characteristic which can potentially influence musical preferenda. Research has noted various gender differences in preference ratings, but has frequently had difficulty in interpreting the differences found. In the upper primary grades, LeBlanc and Sherrill (1986) found that female listeners behaved more cautiously in all their rating activities. This tendency to express less extreme preferences than males was sufficient to produce a significant interaction between listener sex and the variables of the study (LeBlanc & Sherrill, 1986).

In a survey of music nonmajors, Hart and Cogan (1973) found that males reported less familiarity with classical music than did females. Although this finding seemed interesting, "familiarity" was measured through subjects' self-ratings of their level of familiarity with the classical genre, rather than in response to any musical example. The measure may therefore have represented a personal evaluation of a level of experience with the genre rather than a feeling of closeness to it. Subjects' preference levels were measured by their rating of musical examples as "stimulating, triumphant or joyous" (p. 1170). While the affective responses of females were more positive than those of males, this result may well have been related to a possible gender bias attached to the terms used in the rating scale. The affective attributes denoted were possibly too specific in their nature to cover the spectrum of 'positive' response experienced by a range of individual listeners.

A study on style preferences (May, 1985) with lower primary grade children showed interesting results. In response to excerpts from a wide variety of genres, females showed higher preference than males for the categories Muzak, children's, jazz/easy listening and instrumental, while males showed higher preference than females for rock, country and western, jazz/bebop, and vocal excerpts. It was noted that the female-preferred excerpts exhibited lower levels of "dynamism" than the male-preferred excerpts which were heavily accented, generally louder, and faster in tempo (May, 1985).

Several studies may be seen, by interpolation, to support the dynamism gender difference beyond that age group. Baumann (1960) noted that amongst teenagers, females generally made higher preference responses than males, but that a few specific items were more highly rated by males. The variety of excerpts in the researcher-designed inventory, which represented popular, classical and traditional items, was possibly weighted with items
lacking the more dynamic characteristics which were later found to attract male preferences. The Hargreaves et al. (1995) finding may also be related to a gender difference in preferred dynamism levels. Adolescent females showed liking for a wider range of styles than males, by their inclusion of more classical genres. Although this was attributed to the higher level of training amongst the female sample (Hargreaves et al., 1995), it is possible that females may complete more music training than males because of the lower level of dynamism characterising the genres traditionally studied. Shuter-Dyson (1979) found greater sensitivity in females' perception of the loudness of auditory stimuli.

An attitudinal study (Boyle et al., 1981) in students from upper primary through to college years, showed results which could possibly be related to a gender difference in preferred dynamism levels. Females rated lyrics, melody, and sentiment in popular music as being significantly more important, while males considered instruments and peer influence to be significantly more important (Boyle et al., 1981). The features preferred by females project an association with a gentler dynamic than the male preferred features in association with rock style.

If the female-preferred gentler dynamic is considered to be a feature of more conventional musical genres, the gender difference in dynamic preference could be interpreted in another light. Riesman (1990) proposed that the musical preferences of adolescent females are more likely to be moulded into an approval of conventionalised genres, as a greater degree of social conformity is demanded of them than of males. He noted that while both genders felt safer in stating their musical dislikes than their musical likes, the "protesters" who rated themselves as "hot jazz lovers" were rarely female (Riesman, 1990: 12).

Support for May's (1985) finding of gender difference in preferred dynamism seems to be reflected in many areas of study. Lomax's (1968) study correlating singing styles from around the world, found stylistic and dynamic differences in male and female expression, such as a roughness in male vocal sound. McClary (1991) showed how classical music expresses images of sexuality through its constructional devices, and van Leeuwen (1999) identified particular musical features as culturally gendered patterns. Concrete examples representing masculinity were ascending melody, wide pitch range, angular rhythms, disjunctive articulation, loud volume, assertive timbre, and active energy; and for femininity, descending melody, narrow pitch range, suspended
rhythms, flowing articulation, gentle timbre and passive energy (van Leuwen, 1999: 116-7).

Results of a study investigating relationships between musical creativity and cognitive style (Schmidt & Sinor, 1986) showed males to be significantly more creative. Whilst it was concluded that some socio-cultural variations may have contributed to the strength of the result, it was also suggested that the scoring favoured males by rewarding use of strong contrasts in dynamics, range and tempo, but not favouring the more subtle musical expressiveness used in performance by females (Schmidt & Sinor, 1986). It might be projected from this finding, that the aspects of musical expression found most attractive by female listeners are those which are more gentle or subtle, providing further support for the gender difference in preferred dynamism which was reflected in other studies (Beaumann, 1960; Boyle et al., 1981; Hargreaves et al., 1995; Lomax, 1968; McClary, 1991; May, 1985; Reisman, 1990; van Leeuwen, 1999).

Differences in the perception of emotion in music, reputed to be of gender origin, have been claimed to be associated with corresponding differences in the interpretation of and responsiveness to music (Citron, 1993; Kamenetsky et al., 1997; McClary, 1991). In a critical review of research on gender and emotion, Brody and Hall (1993) concluded that in Western culture, a generally greater emotional intensity in females is well established, and that females are superior in recognising feelings in others, identifying affect from nonverbal cues, and in allowing themselves to fully experience their emotions. Certain particularities of musical genres were identified by Citron (1993) as gender distinguishable preferenda. For males these were "the large, the non-functional, and the intellectual", and for females "the small and the functional (and the private)" (pp. 122-123).

Kamenetsky et al. (1997) instructed subjects that they were participating in a music appreciation experiment, and that music's purpose was for pleasure, creating moods and arousing associations. Female listeners assigned significantly higher familiarity, expressiveness and liking ratings to the musical examples than did their male counterparts. Significant correlations were found between emotional expression and liking and between familiarity and liking. The result indicated a stronger association with affective cues by females, and it was further reported that females were superior in identifying affect from non-verbal cues.
The female tendency towards a perceptive style which favours subtlety and intimacy of personal expression, and to identify with affect, became a second theme to the gender difference in preferred levels of musical dynamism. This theme, observed in the result of Schmidt & Sinor's (1986) study, is recurrent in Brody & Hall's (1993) finding of the female propensity for recognition of feelings in others through nonverbal cues and in fully experiencing their emotions, in Kamenetsky et al.'s (1997) finding that females perceive music as more expressive, in Citron's finding that they prefer intimate genres, and in Boyle et al.'s (1981) finding that females value lyrics and sentiment in music. Further interesting gender differences were also found with regard to cognitive and learning styles as they affect music listening. Before reporting on these findings, some relevant theory concerning cognitive styles will be outlined.

**Cognitive Style**

Learning styles, cognitive styles, perceptual and conceptual styles have been variously classified and described, usually as bipolar information processing strategies which are a source of individual difference. Due to the remarkable resistance to change exhibited by individual learning styles (Dunn, Beaudry & Klavas, 1989), the importance of providing instruction that is responsive to their influence on the learning process has been recognised (Billings & Cobb, 1992; Dunn & Dunn, 1979; Price, 1986; Zalanowski, 1986).

Pask's (1976) style classification, the Serialist/Holist dichotomy, appears to be relevant to music listening. According to Pask, Holists rely upon global description and build a broad overview into which details may be fitted, while Serialists rely upon local description, concentrating more narrowly on details, procedures and small chunks of information, before the overall picture emerges. Researchers and theorists in the intervening decades have varied in their terminology for the sequential-analytical style referred to by Pask as Serialist, therefore, to provide consistency through this study, the term Analytical will be used.

Although in Pask's view, Holistic and Analytical styles in their pure form were typified to encompass the disposition to adopt a strategy as well as the competence to execute that strategy, blends were found to occur on a continuum. It was found that a students' choice of learning strategy did not necessarily reflect their mental competence and "counterproductive dispositions" (p. 126) were quite common over a diverse range of subject
matters. Versatile students, however, were found to adopt either strategy by instruction or on whim, and could change strategy according to subject matter. Pask conjectured that the difference in competence, but not disposition, may be biological, and found that a mismatch between individual competence and the mode of tuition resulted in impaired student performance.

Holists were found to practise a somewhat divergent approach, in their utilisation of analogies to relate different aspects of a subject (Ford, 1985). A relationship between the holistic style and high tolerance for ambiguity (Rowland & Stuessy, 1987; Williams, 1980), may suggest the suitability of this style for the approach of ill-structured domains such as unfamiliar music. Ford (1985) reported that Analytics emphasise the relation of what is being learned to previous knowledge by means of logical links. Such a process may create difficulty when applied to the ambiguities of the ill-defined domain of highly unfamiliar music (Casey, 1992; Efland, 1993).

Comprehension learning, another term linked with holistic style, was associated with a "deep" meaning-orientation (Entwistle, 1981). Operation learning was associated with an Analytical style, and with a "surface" reproductive approach (Entwistle, 1981). Marton (1988), noting the association of Holistic style with an orientation to pursue deep understanding, proposed that the distinction between "deep" and "surface" approaches to learning actually represents a difference in learners' focus which is either on "what is signified", the meaning of the material, or on "the sign", the material itself (p. 65). Learning style or cognitive style, a learner characteristic which governs behaviour, is thus intricately related to attentional style, which will be seen in later discussion (see Chapter Three) as potentially somewhat pliant to instructable strategies and thus ultimately, to some degree, governable by the learner.

Cognitive style plays a significant role in the way students attend to music, and consequently in their potential affective response. Schmeck's (1988) description of a deep approach as a meaning orientation, requiring a versatile or synthetic style which integrates both Analytical and Holistic strategies, provides a possible insight into the process of gestalt formation. The peak aesthetic experience described by Maslow (1959), involving a gestalt which comprehends a musical item in its wholeness and its parts, may require a listener approach which utilises that versatile or synthetic style. This type of musical response is certainly of a far more sophisticated quality than the holistic global response which is enjoyed by naive listeners.
Certain cognitive differences due to sex (biological) have been noted. Males exhibit superior visual-spatial skills assisting in abstract analytical areas such as maths and science, while females exhibit superior verbal and communication skills (Kim & Michael, 1995; Rittschof, Griffin, & Custer, 1998). These differences have also been explained as resulting from the tendency in males to learn through exploring their physical environment, and in females to learn through communication with other people (McGuinness, 1975). In Kirk's (1992) view, the innate perceptual differences which exist between males and females may in turn explain certain differences in the types of information they are likely to pick up from the environment.

Halpern's review of literature on sex-related differences in cognition (1992) argued that findings of sex differences, however minimal, in spatial and verbal abilities were due to differences in the way the brain is organised to perform these tasks, and that cerebral lateralisation patterns cannot be ignored as a factor. The effect of this factor, however, was seen to decrease with age as compensatory skills are acquired, and to be weaker than psychosocial influences whose effect sizes are weakening due to progressive changes in social attitude to the equality of genders. In view of the lack of conclusiveness of such studies, Halpern recommended detailed investigation of specific differences as observed in particular cases, and questioning of subjects with regard to their mental strategies.

A gender difference in learning style noted by Sims and Sims (1995) was that females tended to use a holistic, intuitive approach, emphasising personal meaning, while males were more analytical, rational and dispassionate in style. With regard to music listening, the implication of this finding is that males may be better adapted for cognitive processing of music, while females may more readily approach the music in a holistic manner in a more subjective processing style. A Western historic association of music with subjectivity has led to its relegation during certain periods to a "feminine" realm, and counteractive defense of music's masculinity in claims of its "rational" dimension and objectivity (McClary, 1991: 17).

Recently published extensive reviews of the research on sex differences in cognitive style have concluded that specific differences do exist (Caplan, Crawford, Hyde & Richardson, 1997; Kimura, 1999). Differences were found to vary according to nature of the task and to details of the testing procedure (Caplan et al., 1997). In studies where it was expected that subjects of either sex would be disadvantaged in performing tasks which favoured the cognitive
style of the opposite sex, lack of effect was attributed to the utilisation of compensatory schemata (Coltheart, Hull & Slater, 1975; Ritschof et al., 1998). Findings suggested that such adaptations occur more readily with females than with males (Crawford, Herrmann, Holdsworth & Robbins, 1989; Herrmann, Crawford & Holdsworth, 1992). Anderson (1987) pointed out that differences in cognitive processes occurring within the gender groups are large, and should not be ignored. Rigorous dichotomies do not separate the overlapping distributions in features of gender difference, particularly in the case of psychological variables where the degree of separation between the two distributions is often small in relation to the overall variation (Richardson, 1997). Since findings of gender difference can only occur as correlations, Richardson suggested they are thereby open to suspicion of intervening confounding variables such as subjects’ socialisation experiences and educational background. Issues of gender difference “depend more on interpretation of the evidence than on the evidence itself” (Crawford, Chaffin & Fitton, 1995: 357). Kimura (1999) claimed that while the effects of gender differences are small, they can provide predictions about groups as a whole, even though the range of score distribution within a gender group is quite large. What may be applied as a valid descriptor of the group, however, may not accurately describe a particular individual of that group (Kimura, 1999).

**Summary**

The application of behavioural psychology to education suggests that a response of positive affect in students at the point of initiating learning makes a vital contribution to the quality of ensuing learning. Findings in empirical aesthetics and music education research indicate that this function poses a problem for music listening education.

This chapter has outlined a problem residing in the relationship between the subjective complexity of a musical stimulus and the affective response of listeners. Repetitive listening, which has been used to experimentally quantify “objective” familiarity (i.e., cognitive familiarity), reduces subjective complexity (i.e., a function of the characteristics of the music, and the musical experience and sophistication of the listener) and in general, increases preference. After a stimulus reaches an optimal complexity level for individual listeners, further repetition causes a decrease in preference. Due to this function, the excessive
complexity on initial hearing of unfamiliar music results in detriment to listeners' affective response, thus adversely affecting ensuing learning.

The findings of objective familiarisation studies, however, have not demonstrated an entirely consistent pattern of increasing preference across different types of stimuli. Repetition has failed to increase preference where there was excessive subjective complexity, and to change the rank order of preferences between different styles (Hargreaves, 1984). These findings suggest the existence of additional 'moderator' variables. The relationship between stimulus and listener in approach-avoidance response to the initial hearing of unfamiliar music, thus was subject to forces other than the subjective complexity of the stimulus.

Based on the findings presented in this chapter, the relationship between objective familiarity and subjective complexity may be moderated by the degree of conformity of a musical stimulus to encultured Rule-familiarity. Difficulties arise for students when they attempt to find meaning in music to which they have not been encultured. Research suggests that enculturation is a more significant factor than formal musical training, in relation to preference ratings for musical stimuli. Excessive subjective complexity of unfamiliar music can thus be ascribed to listeners' lack of prior knowledge of the syntax of its language.

The findings above are consistent with the broader view of theorists on the aesthetics of music, who recognise that the process by which music as a symbol is synthesised depends on the existence of an established link within the listener. The findings concerning subjective complexity account primarily for cognitive linkages. As discussed in this chapter, several studies have also suggested that a consciously analytical approach is not the principal route to musical enjoyment, providing further indication of the participation of alternative links in musical communication. Such links may be found to reside within the affective domain.

Whereas early research in empirical aesthetics had focused on collative variables of the stimulus (i.e., structural characteristics of a stimulus which arouse response by their similarity or difference with perceivers' prior knowledge) in relation to listeners, Zajonc's (1980) investigation of the approach-avoidance interaction tended to emphasise listener variables in relation to the stimulus. It was proposed that initial evaluation occurred in an instantaneous holistic reaction, based on affect, and was influenced by
listeners' pre-established preferenda. Mandler (1989) argued that this reaction was driven by a preconscious cognitive analysis, but agreed that the evaluation was experienced as holistic and subjective.

Educational research, seeking approaches capable of influencing affective response in learners, has asked how individuals form preferenda (the links of positive or negative valence which are directed towards particular objects, activities or events), and how interest becomes attached to these. Studies relating to collative variables have been information-theory based, relying on the interaction between melodic structure and listeners' perception process, while ignoring other important affective variables, especially concerning characteristics of the listener, which play a vital role in the interactive dynamics. Music education found that listeners relate to music in their own aesthetic terms, and are able, for example, to interpret emotions conveyed by music outside their own culture by attending to certain psychophysical dimensions of music which hold universal connotations of expressed emotion.

Despite the numerous sources of variation in musical preference identified by LeBlanc (1980), little attention has been paid to the task of investigating how these variables influence initial response, and might be manipulated, at this point, by music educators. Finnas (1989) concluded that other intervening variables, such as motivation, are likely to affect musical preference, and must be duly considered as potential solutions to the problem.

Studies in educational psychology have confirmed the motivational function of enjoyment, competence and autonomy, all of which may suffer from an overload of complexity when there is a lack of objective familiarity. Subjective familiarity (i.e., familiarity that derives from psychological variables such as associations, attitudes, and motivation levels) with a stimulus, however, appears to be also effective in enhancing enjoyment. The proposal that motivation might be formed by constructing a link through which individuals could identify with subject-matter suggested a possibility that educators might assist students to access a level of subjective familiarity with the stimulus.

The recognition of a continuum between objective and subjective familiarity provides a useful perspective on the dynamics of the interaction between listener and unfamiliar music. The more elements of a musical stimulus that are objectively familiar to a listener, the stronger will be the feeling of its familiarity (i.e., its subjective familiarity) to that individual. Subjective familiarity may
occur for individuals through their recall in memory of previous experience which has association by some similarity with the new stimulus. When similarity connects with a remembered stimulus to which an evaluative judgment was attached, preferences may be transferred to the new stimulus by association. By invoking associations known to have positive valence for students, therefore, it may be possible to manipulate subjective familiarity.

Music education research has called for systematic enquiry into the function of variables which might influence preference for music, and unfamiliar music; construction of holistic interpretations; the focus of attention on elements of the music; and presentation variables including provision of visual and/or verbal information. Educational psychology has recognised the need for research into the multidimensional nature of interest; the ways in which information is mediated through affective experience to activate and to maintain interest; the relationship between imagery and interest and their effects on comprehension; and possibilities afforded by computers for individualisation of instruction along affective and motivational lines.

The tendency of researchers to avoid affective and aesthetic areas has possibly been magnified by the complexity incurred by interactions of many variables involved in the dimensions of affective and aesthetic response. Examination of three dimensions implied by the general term "preference" has identified its initial phase as the approach-avoidance response which is sensitive to the interaction of many variables presented by both listener and stimulus. The highly interactive nature of these variables makes each influence difficult to isolate and measure. Influences of listeners' socio-cultural environment combine with personal characteristics of age, gender, musical training and preferences, and emotional associations formed in memories of life experience, to affect the preferenda which cause affective reactions to particular musical features.

Music education research has attempted to trace patterns of influence on individual difference in preference. Investigation of preferenda related to characteristics of the stimulus (LeBlanc, 1981) showed stylistic features accounted for 23% of the variance in preference, while tempo and performance medium together explained 5% of the variance; different age groups shared preferenda related to tempo, beat and performance medium; and characteristics of the musical stimulus had a greater influence on preference than either musical experience or provision of information. Familiarity and enculturation appeared to rival the influence of instruction,
particularly when this occurs on a short-term basis. Thus an unexplained 75% of difference in preference response remained due to individual difference in listeners.

Characteristics of listeners which influence preference have been found in gender, where females preferred lower levels of musical "dynamism" than males; and while females preferred smallness, functionality, and intimacy in music, males preferred largeness of form, non-functionality, and intellectuality. The preference constructs of adolescents in the age range of fifteen to seventeen years were found to be at a peak in the flux of changing from a concern with personal affects and taste, to concern with the affective character and mood of the music. At this age, listeners began to exhibit greater ability to synthesise information in a more holistic approach.

A cognitive style classification, considered relevant to music listening, was the Analytical/Holistic dichotomy. Theory proposed that the application of an Analytical approach to tasks in an ill-defined domain, such as listening to unfamiliar music, would be problematic due to lower tolerance for ambiguity in a style based on logical links with prior knowledge. The Holistic approach was identified with a connotation of involvement in the meaning of material, termed 'deep', and the Analytical approach with an observation of the apparent detail of the material itself, termed 'surface'. The synthesis of Holistic and Analytical approaches was recommended as ideal, and appeared to provide potential access to the gestalt formation described as optimal for music listening.

A particular question posed, however, is the possible effect of an analytical individual style with respect to the initial holistic approach-avoidance response. Does cognitive style impede the nature of that reaction, or does its effect govern only the ensuing attentional style? If initial enjoyment of music is important for ensuing learning, it is important to understand these operations.

In an attempt to ensure the greatest possible enjoyment of an initial hearing of unfamiliar music, the actions and interactions of a number of influential variables create a highly complicated scenario which tests even the most experienced music educator. Differences in listening style found to be associated with gender may be shown to reflect in resultant preference responses. A tendency to a holistic style in females, and to an analytical approach in males was seen to imply that males may be better adapted for the cognitive processing of music, while females may more readily approach music in a holistic, subjective manner. The historic association in the West of
music's subjectivity with the feminine, and its rational objectivity with the masculine seems to support this as a praxial gender distinction. Males may be more inclined towards the cognitive processing of music, and females for a holistic subjective approach.

The better the dynamics of the interaction between music and listener response are understood, the better the music educators' opportunity to facilitate a favourable response in students. The further a musical item is distanced from students' existing preferences, the more ingenuity may be required in the construction of a motivational device which will link the music to students' existing preferences, attitudes, interests and abilities; also the longer the time required by the activity, during which an increase in meaning must continue to occur in order to bring a sense of accomplishment which will sustain interest.

Subjective familiarity may be important for its susceptibility to manipulation by music educators in constructing relevant listener associations with musical stimuli, a link which enables meaningful processing of music. It will be shown in Chapter Three how studies in music education research which closely relate to this issue, indicated how enjoyment could be enhanced by a motivational device available to educators. At the time when these studies were conducted, the observed results were not connected to a psychological theory of causality which would advance an understanding of the operant functions.

Observation of the complexity of approach-avoidance behaviour led Mandler (1989) to recommend testing an array of alternative approaches to learning tasks to discover any differences of resultant affective response in learners. Educational psychologists recommended that studies in preference behaviour should include, as well as ratings of liking, assessment of behavioural intentions, interest. Hidi (1990) saw the motivated individual and the interface with a stimulus as aspects of cognition that have been neglected by research. The first of these two factors will be represented in this study in an observation of the dynamics of enjoyment and interest. The interface, or manner in which the stimulus presents itself, is to be represented by presentation context. The interaction between the two will be investigated with consideration of attention style as a possible interaction factor. Since the manner of presentation and attention style are situated between the stimulus and the individual, these are both to be discussed as agents of mediation, and will be addressed in Chapter Three.
Following this review of literature which concerned the interactions between features of the musical stimulus and listener characteristics in the formation of affective response to music, Chapter Three will investigate theory and research with regard to the mediating agents which influence perception and response. These include the quality of attention with which the listener is engaged in the music, and roles played by the educational medium, as well as the potential benefits offered by various presentational media.
CHAPTER THREE

MEDIATORY AGENTS BETWEEN LISTENER AND MUSIC

In a music listening transaction, the two principal agents are the listener and the music. The interactions between these agents and their features were discussed in Chapter Two. This chapter is concerned with variables which function as mediatory agents. Variables influencing the manner in which a musical stimulus is perceived by listeners, are of interest for their role in moderating the interaction between listener and music. Their particular potency, however, is due to the possibility that they may be open to manipulation by educators.

In the initial presentation of a musical item, educators may be aware of a degree of mismatch between students and features of the music. Mismatch may be incurred by complexity of the stimulus due to listener unfamiliarity, and the music's dissimilarity with musical features preferred by individuals due to their age, gender, musical experience, and preferred genres. Educators attempting to enable students to perceive the music as pleasing, thus initiating motivation, endeavour to design the best possible mode of presentation. Research has suggested the benefit of matching educators' presentational style and students' cognitive style for resultant musical enjoyment (Zalanowski, 1986 and 1990). Designing a presentational style that would assist a class of students to enjoy music, despite individual differences in natural cognitive style, has remained a challenge to educators.

The following review will demonstrate how cognitive styles may be expressed, in an Analytical attention style, possibly activated by the triggering of an 'Analytic' type situational interest, or a Holistic attention style, possibly activated by the triggering of a 'Holistic' type situational interest. It may be possible to prepare listeners of either cognitive style as receptors with their sensitivities suitably awakened in readiness for the music by encouraging an attentional style directed, for example, towards awareness (Analytical) or experience (Holistic), for outcomes emphasising understanding or enjoyment,
respectively. Having formed an educational intention regarding listener attentional style, it remains for educators to ascertain what techniques and media of presentation offer the best possibilities for enhancing the benefits of the event for student listeners.

The first section of this chapter will review literature relating to theory and research concerning attention as a mediator between listener and perception. The second section of the chapter reviews literature regarding theory and research concerning presentational techniques, as the situational variables in the music listening education scenario which are most directly accessible to manipulation by music educators. These will be addressed with particular regard to the provision of introductory contextual information, and the selection of the audio or video recording medium.

1. Attention Style as Controller of the Quality of Perception

1.1 A Taxonomy of Attention

The range of objectives in the affective domain may be represented as a sequence of stages in a process through which an individual's response to a phenomenon becomes an internalised behaviour pattern. The process is not seen as a unidimensional continuum, but has several aspects: "simple-to complex", "concrete-to-abstract", "external-to-internal control", "conscious-to-unconscious" (Krathwohl, Bloom and Masia, 1964: 31), with an emotional component which increases and then decreases, and cognitive aspects which enter at the organisation of values stage. Of these dimensions, the function of inner control has particular relevance for this study. At the lowest end of the continuum this serves only to direct attention, at higher levels it responds appropriately with external input, and finally it responds appropriately without external input, or even despite external obstacles (Krathwohl et al., 1964). In the context of this study, the external input which assists during the intermediate stages of valuing may be represented by the teacher's input in designing and implementing the presentation scenario for music listening.

The question addressed by this study concerns teaching techniques associated with producing "Satisfaction in response", level 2.3 in Krathwohl et al.'s taxonomy for music listening. To better understand this response
classification, it is useful to examine the response categories which precede this level of the taxonomy. A summary of the successive stages along the continuum of internalisation as outlined by the taxonomy of affective educational objectives is provided as follows:

The first classification in the affective taxonomy is "Receiving (Attending)" which initially presents as "Awareness". This may be a "simple awareness without specific discrimination ... of the objective characteristics of the object" (p. 99), as when a student is merely conscious of the sound of some music playing. At the next step, "Willingness to Receive", a student is not yet drawn by interest to the phenomenon, but does not reject it (p. 108). In music listening this could be described as being prepared to hear the music, in a neutral fashion, but with a basic level of attention. As the student pays attention to the phenomenon, it becomes differentiated from the surrounding perceptual field.

The second classification in the affective taxonomy, "Responding", refers to a more active attention style. A listener is doing more about the phenomenon than merely perceiving it (p. 119). This might be described as the difference between 'hearing' and 'listening'. "Responding" occurs at three levels of which the lowest is "Acquiescence in Responding" (p. 121). At this level, behavioural response to a given task is unenthusiastic, and the least possible amount of effort is exerted by the student in doing what the situation demands (p. 122). With differentiation, gradually comes a seeking out of the phenomenon as emotional significance and value is attached to it.

The next level, "Willingness to Respond", implies a voluntary contribution of effort. Any excess beyond the minimum requirements is a definite sign of this level (p. 127). The highest step in this classification is "Controlled or Selected Attention" (p. 112), which occurs in music listening when the learner begins to make some discrimination regarding any characteristic/s of the item heard. The term 'appreciation' is interpreted as commencing with a willingness to attend to selected aspects of a phenomenon (p. 36).

As the process unfolds, this phenomenon is related to other phenomena to which the student responds that also have value, and with regular practice becomes an automatic response to the stimulus and to other things like it. Finally the values are interrelated in a structure or view of the world, which are brought as a "set" to new problems (p. 33) in a taste decision. The additional element in the third level, "Satisfaction in Response" is that "the behavior is
accompanied by a feeling of satisfaction, an emotional response, generally of
pleasure, zest, or enjoyment" (p. 130). Response at this level, which is the
focus of the present study, is useful to the teacher who wishes "to build a
behavior which, once elicited, will have self-reinforcing qualities" (p. 130). The
securance of such a response from the individual requires that the new cues and
stimuli, such as unfamiliar musical items, be received under conditions that
make it easy for the individual to respond by actively listening and give
satisfaction from the act of responding by listening (Krathwohl et al., 1964).

This study is an enquiry into what might be the best initial presentation
conditions for eliciting a 'Satisfaction in Response' to music listening. A
manifestation of this type of response suggested by Krathwohl et al., the
desire to engage further in the activity, is used as a criterion in this study. This
desire is significant in a course of music listening as it propels the student on a
learning pathway which provides affective rewards while progressing toward
cognitive gains. The relationship between the affective and cognitive domains
has been addressed on two levels which are particularly relevant to music
listening. The first of these is the beneficial influence of hedonic tone on interest,
which has been clearly shown in research (Berlyne, 1974a; Mandler, 1989;
Zajonc, 1980), and the other, greater reward in positive affect, which requires
application of cognitive effort to achieve, is that of aesthetic gratification.
Both of these, the one immediate and the other gradually acquired, serve as
motivators providing a progressive reward system in a course on music
listening.

1.2 Basic Attention

Attentive processes, as contributors to aesthetic perception, have been of
interest to music education research. Listener attention, noted as a variable
central to the interaction between listener characteristics and musical
model for the sources of variation in musical preference, "basic" attention (p.
37) is classified as a gateway opened or closed partially by the listener's will,
to allow, or not allow, input information through to the personal processing
system. The affective acceptance or rejection of a stimulus is based on
"awareness of and attention to the stimulus, though not necessarily perception
of its specific musical elements" (Bullock, 1973: 332).

In research on experiential dimensions in text learning, Schiefele (1996)
hypothesised that interest, an important dynamic in the learning process, is
significantly and positively related to happiness, activation and concentration which represent three different dimensions of quality of experience. Two of these dimensions relate to attentional styles: activation and concentration. Analyses of possible predictors including gender, topic interest, prior knowledge and verbal ability, suggested that only interest facilitated positive results on the experiential dimensions during reading. Highly interested readers also showed the best assimilation of meaning. Verbal ability was a factor which assisted with the latter outcome, but was negatively correlated with all indicators on the experiential dimensions. Schiefele's subjects did not show a sufficient level of difference in the range of their prior knowledge for this measure to reveal any significant relationships. Text learning research also recognised attention as a mediating variable in learning, and identified two dimensions of attention: intensity and persistence (Schiefele & Krapp, 1996). Intensity was found to be significantly related to interest. In learning from text, a high correlation between arousal and intensity of attention supported the assumption that "both states are related to the same underlying process, namely the activation of resources of information processing" (Schiefele & Krapp, 1996: 156), a suggestion which may prove relevant in preparing receptivity for music listening.

1.3 Attentional Styles: Analytical, Holistic

Attention types have been reported from various perspectives. Selective attention to a specific stimulus has been associated with an "appetitive or consummatory" (Hall, 1976: 356) response, and shown to be a learned behaviour. Prince (1972) described selective attention in music listening as the volitional directing of attention to various aspects of the music which may occur from moment to moment. This may therefore be regarded as a sequential, Analytical approach, which is influenced by features of the musical stimulus, listeners' characteristics, including cognitive style, presentation context, and interactions between all of these. During a listening experience, the mind accesses information from the musical stimulus. Preferenda arise in response to the processing of that information. Listeners' focus of attention therefore plays the important role of determining what information is processed, thus influencing which preferenda arise, and consequentially influencing affective response.

In research on salience pertaining to what information is important when reading text, it has been recognised that salience is an idiosyncratic judgment
(Dole, Duffy, Roehler & Pearson, 1991) somewhat related to individual interests. Alexander and Jetton (1996) saw no distinction between the two constructs, importance or salience, and interest. The focusing of greater duration and intensity of attention on salient text segments has been described as selective attention strategy, and this analytical approach has been found to play an important role for readers of all standards in learning and recall of written prose (Lapan & Reynolds, 1994). The finding that mature readers were able to analyse more quickly the task demands of a reading situation, to focus more efficiently on the information salient to their objective, and to process material in units comprising larger chunks by use of such cues as text topography, was interpreted by Lapan et al. as the use of metacognitive awareness which directed the use of strategies. While the objectives in reading differ qualitatively from those of music listening, attentional strategies may be usefully applied in music listening. Training students to identify the basic structure of material and its components enhances comprehension in reading (Lapan & Reynolds, 1994), and has been a traditional component in musicological training for understanding of music while listening.

Music education research has examined processes of selective attention. In a study concerning the musical dimensions attended to for style classification, differences between music undergraduates and music experts were not pronounced (Eastlund, 1992). For their investigation into attentional patterns in music listening, Madsen and Geringer (1990) selected musical excerpts on the basis of salience ratings for rhythm, dynamics, timbre, melody, and "everything". Two excerpts were chosen to represent each of the four elements, and two to represent all elements. Musicians and nonmusicians indicated on CRDI their ongoing focus of attention to the four labelled elements or to the category of 'everything'. The 'everything' category was to be manipulated when the listener was attending to three or more musical elements simultaneously. Musicians attended mostly to melody, then rhythm, dynamics and timbre, and least to 'everything'. Nonmusicians spent most of their time focusing on dynamics, then melody, then timbre, then 'everything' and very little time on rhythm. In conclusion, it was asked why would nonmusicians attend even to the general category of 'everything' more than to rhythmic aspects. It was recommended that research be carried out to investigate which elements should be the focus of attention for the purpose of enjoyment in listening (Madsen & Geringer, 1990).
Using the same excerpts, Geringer and Madsen (1995-6) conducted a further study. Time allocation of attention to musical dimensions was measured on this occasion by subject estimates of percentage of time spent focusing on the various musical components, after listening to each excerpt. Preferences were also rated. Musicians rated timbre as salient more frequently than did nonmusicians. Excerpts for salience of timbre were preferred least by all, especially by nonmusic majors. The overall average preference was higher for musicians, especially for the excerpts featuring 'everything'. The higher mean preference of musicians for salience of 'everything', and the correlation between their timbre salience and preference ratings ($r = .564$), were interpreted as possibly due to a closer correspondence with their optimal stimulus complexity level, timbre being the most complex single element in music (Dowling & Harwood, 1986). Beyond noting the complexity level of the category of 'everything' (Geringer & Madsen, 1995-6), no particular significance was suggested to be attached to its salience or the higher preference rating it attracted.

In Madsen's (1997) study, subjects were instructed to manipulate a CRDI that presented either five elements: Melody, Timbre, Everything, Dynamics and Rhythm; or a single one of these elements. The 'Everything' dial, representing one of five categories, was to be manipulated when the listener was attending to three or more musical elements simultaneously. Subjects manipulating a CRDI for the single category 'Everything', were to apply this term whenever they attended to two or more musical elements. As Madsen suggested: "these elements are certainly not exhaustive considering the many different ways that taxonomies can be structured" (p. 86). The definition of 'Everything' in terms of a minimum number of elements, as in previous quantitative research on focus of attention (Geringer & Madsen, 1995-1996; Madsen & Geringer, 1990), continued the practice of defining the listening approach as discriminative, in a way that preempted holistic engagement. The task was therefore predominantly analytical in that although a whole piece of music was played, listeners were asked to respond in a sequential, Analytical manner, and to determine which musical feature triggered each response. In a study in which musicians were free to report their area of focus while listening to music by verbal note-taking, subjects showed strong contrast by their approach as being categorically holistic or analytical (Aiello, Tanaka & Winborne, 1990)

Platel et al. (1997) confirmed that selective attention to specific elements of music radically alters the brain activation pattern. They found that brain
activations tended to occur in the left hemisphere for familiarity (recognition and identification), pitch and rhythm tasks, and in the right hemisphere for timbre. In this study, the musical tasks were explicitly separated by the experimental design, and subjects were instructed to analyse successive stimuli with attention focused on the particular selected task. Platel et al. (1997) observed that "hemispheric specialization can ... be interpreted as the result of a strategy of global listening in the processing of [melodic] outlines, and of analytical listening to intervals" (p. 239), and pointed out that their pitch task belonged to the latter category. This task activated the left cuneus/precuneus, a brain region close to the primary visual areas "often interpreted as reflecting visual mental imagery" (p. 239). Use of a visual mental strategy for this task was interpreted as engagement by subjects in visual imagery in terms of high and low in association with pitch relationships. This use of visual imagery in the left cerebral hemisphere is not to be confused with the holistic style of visual mental imagery which has been found to be activated in the right cerebral hemisphere (Bradshaw & Nettleton, 1981; Seamon, & Gazzaniga, 1973), and demonstrates the contrast between listening to pitch selectively in an analytical task and listening holistically to a melodic outline (Bever & Chiarello, 1974; Breitling, Guenther & Rondot, 1987; Gates & Bradshaw, 1977; McElwain, 1979; Sidtis, 1980; Zatorre, 1984).

McMullen, (1980) considered that the atomic approach used in selecting stimulus material for psychoacoustical research severely limits the potential understanding for affective behaviour. The investigation of parts would not lead to an understanding of music as a whole in relation to affective behaviour - because "a whole, as interpreted by human mentation, determines the meaning and relationship among parts" (Serafine, 1983: 186). The assumption that the musical elements commonly used in musical analysis are "the elements of cognition", may be questionable due to some "confusion between the elements or artifacts of analysis and the nature of the human subject's processing of music" (p. 5). It has been hypothesised that encouraging students to respond to music in their preferred way would result in greater enjoyment (Lewis & Schmidt, 1991). Although analytic activity may lead some students to a greater appreciation of the music, alternate response methods, such as creating mental images while listening or moving in time to the music, may better promote a heightened aesthetic response in others (Lewis & Schmidt, 1991). This in turn might enhance students' intrinsic motivation toward music listening. Zalanowski's (1986) research demonstrated that listeners given a prelistening instruction to form free mental images
experienced greatest enjoyment. The use of free mental imagery as a listening activity was regarded as a holistic approach.

1.4 Visual Imagery as an Aspect of Holistic Attentional Style

The Crickmore Syndrome Test of Music Appreciation (1968) tested for sustained interest, increased happiness, lack of tension, desire to remain quiet, satisfaction, and absence of mental pictures. Sustained interest and absence of mental pictures, may also be interpreted as attentional modes. The Fisher Test of Musical Appreciation (1949) tested for responses to mood, rhythm and timbre, engagement in imagery/association, and knowledge. The listener behaviours of being absorbed in the mood; attending to rhythm and timbre; or engaging in the imagery/association response, may all be categorised as attentional modes. It is of interest that engagement in visual imagery while listening was viewed by Fisher (1949) as a positive element (imagery/association), and by Crickmore (1968) as a negative symptom (mental pictures) in their syndromes of music appreciation.

Prince (1972) classified the experiencing of visual imagery as a mode of attention. Zalanowski (1990) found that mental imagery was reported by approximately 90% of subjects in all but one condition. In the visual condition, only 42% of the subjects with a cerebral arousal asymmetry dominated by the left hemisphere, reported imagery. This group also reported significantly lower appreciation of the music, in terms of attention, enjoyment and understanding. For these subjects, the only instruction type which benefited enjoyment, was the sequential analytical program. Zalanowski (1986) found that free imagery promoted most enjoyment, while guided imagery (a story program) promoted greater understanding. In these conditions, however, enjoyment and understanding scores resulted in non-significant but sizeable negative correlations for left hemisphere oriented subjects. Both imagery approaches were seen as potential means of assisting listeners towards the unification of a sound sequence into a perceived whole - an aid to holistic listening (Zalanowski, 1986).

Tobias (1994) concluded that the contribution of interest to learning included deeper comprehension processes, greater use of imagery, and a "more emotional, personal, and extensive network of relevant associations" (p. 50). A finding that interest ratings and degree of reading pleasure were significantly associated with vividness of mental imagery in reading, led Long, Winograd,
and Bridge (1989) to recommend encouragement of imagery as an instructional device. They considered it likely that the genre of the text influenced the spontaneous generation of imagery while reading, and that imagery occurred "consistently, spontaneously, and naturally during and after reading for at least four different types of text" (p. 367). Having concluded that imagery is an ongoing process during reading, they hypothesised that since spatial, sensory, and emotive information appears to be carried in images, imagery in reading may increase the capacity of working memory "by assimilating details and propositions into chunks which are carried along during reading ... making comparisons and analogies ... matching schematic and textual information ... [and] coding and storing meaning" (p. 368). A similar function of imagery in the perception of melody was proposed by Gabriel (1978). It might well be suggested that imagery assists in the operation of synthesis.

1.5 Synthesis as an Aspect of Holistic Attentional Style

The aesthetic perception of music is a synthesising of experience in which the work is perceived as an "integrated whole" (Cook, 1990: 35), a complex unitary act, a gestalt, a holistic perception in which the whole is grasped as more than the sum of its parts (Crickmore, 1968; Masiow, 1959; Pike, 1972; Reimer, 1992; Zimmerman, 1971). The notion of a holistic attention style has possibly been passed over by music education research due to the nonverbal nature of the experience which makes it peculiarly difficult to introduce instructionally, or to discuss. Crickmore had recognised this, and described holistic attention as "a kind of effortless awareness, ... an intuitive act which involves no discursive or reflexive process" (p. 239). Although he considered it to be "more passive or receptive than active", he also emphasised that this is "not to be confused with idle passivity" (p. 249).

It is likely that Madsen (1997) represented many music educators in the wish to be sure that students are on task when listening to music. If the outcome of the task is not possible to verbalise or otherwise express, it could well be that music teachers have sometimes preferred to avoid the activity due to anticipated difficulty in conducting discussion ensuing from the experiential activity. It has been noted (see Chapter One) that music education may not be providing students with the vocabulary to verbalise effectively about music's expressive qualities, and that emotive description may have to become as respectable and valid as its technical complement (Bartell, 1992; LaRue, 1971).
Evans (1990) saw the juxtaposition between the technical language of musical analysis and the figurative language of the imaginative experience of the listener as a source of metaphor and conceptual linkage which is eminently discussible, and thus transmissable to others.

When Maslow referred to the moments of intensely positive affect sometimes achieved through aesthetic perception as "peak experiences", he also described a focus of attention in which the perceived object as "figure" occupied the entire field of attention, with no perceived "ground" (1959: 45). Goldstein (1980) described a physical thrill response which could recur for particular subjects with particular musical passages, frequently ascribed to that individual's emotional associations. Sloboda (1991) found such physiological responses in subjects to be associated with specific musical structures. Pike (1972) found that for trained listeners, affective appreciation occurs more readily when formal attention is relaxed. He described the pleasurable experience of a musical gestalt as one in which a listener perceives the "movement and expressive qualities" of musical events and becomes vicariously involved in "spontaneous and transient affective states" (p. 265), or more enduring moods. It was Crickmore's belief that the mental act of musical appreciation is relatively free of analytical process but more comprehensive and unitary than mere reaction to sounds and moods. Since the purpose of the holistic listening activity is experiential, verbal discussion may or may not readily follow upon the event. Its real value will have been achieved if students are left with a desire to extend their contact with the music concerned.

The attribute of optimal complexity which a stimulus may possess for an individual at a particular moment has been proposed as the essential ingredient for a gestalt experience (Crickmore, 1968). The relationship between complexity level and the individual listener has been addressed by theorists discussing the music listening experience. Elliott (1995) claimed that "active engagement" in listening occurs when the music matches our level of ability to process its musical patterns and that this would bring about "total absorption in the action; facilitated concentration which causes enjoyment; and a loss of self-consciousness" (pp. 114-117). Although the compatibility of a musical item with the optimal complexity level for students would be impossible to accurately quantify (Radocy & Boyle, 1997), music educators have the skills to enable a reasonably probable estimation in this regard. Those teachers who see the value of the experience, will allow appropriate opportunities to their
students for music listening occasions whose purpose is experiential and unencumbered with any analytical task.

Madsen expressed the view that it may be important for music listeners to refrain from "drifting" (p. 87) with the mood of the music or luxuriating in its sound. Whilst the principal concern being addressed by Madsen related to the matter of keeping on task while listening to music, it may be that for some listeners the most rewarding response to music is sometimes gained while engaging in less discriminatory modes of attention, which might be described as listening to the music as a whole. The implication that one does not remain on task or listen to music attentively unless focusing on its elements may be an unnecessary presumption. Hidi (1990) argued that "interest elicits spontaneous rather than conscious, selective allocation of attention" (p. 561), and Dewey (1913) claimed that attention is drawn in to that which is of interest. Moreover, the role played by interest in reducing the amount of effort required for processing (Libby et al., 1973), is potentially compounded when listening in a holistic manner. It was found by Hidi (1990) that the experiencing of visual imagery stimulates ideas, possibly by freeing cognitive resources for generating further representations.

1.6 Attention Styles, Analytical and Holistic, as Listening Strategies

Rodriguez and Webster (1997) observed a pattern of musical development through childhood years towards a more holistic listening style. Shirey and Reynolds (1988) found, in reading research, that mature readers use attentional strategies unavailable to young readers to achieve their desired results. It may be asked whether young listeners might be assisted toward holistic attention as well as being guided toward the traditionally respected analytic attention. Certain terms applied in the context of examinable learning, although not assumed to automatically transfer into musical response modes, will be seen in the following discussion to bear some points of similarity with attentional styles in music listening.

A brief review of research on reading comprehension instruction revealed a similar emphasis to that found in music listening education research on the importance of existing knowledge to enable comprehension. In addition, it has been reported that expert readers possess adaptable strategies both to aid in comprehension and to monitor ongoing understanding of the text. Strategies for comprehension in reading compare readily with a fairly analytical
music listening style. Three strategies for determining salience of reading material may be transferred to music listening, by substituting the musical task and content, in the following way: firstly, good listeners use their domain-specific knowledge (for example, the elements of music) to access and evaluate the musical content (to identify musical aspects of interest); secondly, good listeners use their knowledge of composer/genre biases, intentions and goals to help determine salience; thirdly, good listeners use their knowledge of musical structure to help them identify and organise information (Dole et al., 1991).

Despite a finding (Nolen, 1988) that deep-processing strategies might only be engaged when the demand of an interest in understanding presented a spontaneous cue, students were successfully assisted toward independent use of strategies by teachers who used explicit instruction, examples, modelling and elaboration (Dole et al., 1991). When the intended task is music listening, directed toward a holistic experience, different strategies would apply. Techniques for instruction in a holistic attentional style do not appear to have been fully developed, yet its existence and significance are implicitly acknowledged in literature on learning styles.

Torrance and Rockenstein (1988) referred to a meditational or preconscious incubation stage which facilitates the integrated intellectual and emotional processing of material. Activities to promote this process included plurality of encounters with the material, intense absorption and heightened awareness. Marton (1988) referred to learning outcomes in which the bodies of knowledge are acquired in the form of clusters of facts "without appropriating the conceptualizations on which those bodies of knowledge are based" (p. 75). This unsatisfactory result is an illustrative analogy of the musicological study which produces informational outcome without the experiential understanding of music. Marton's answer to this problem restated the thought of Reimer (1970) that the learning process should cycle from experience to thoughtful study and back to experience, in the search for further perspectives.

Students tend to direct their energies towards what seems important in the perspective of the instructional context and the signals it provides. This process, in the context of music listening instruction, must be distinguished from an individual's imaginative or idiosyncratic listening style which is complementary and equally essential to maintain and even develop. People tend to pay attention to what they enjoy, and to ignore or misinterpret what they dislike (Geringer & Madsen, 1995-6). The latter suggestion is supportive of a
hypothesis that attention works hand in hand with positive affect, combining to form what might be termed 'interest'. Such a combination could well be seen to relate with aesthetic perception when it is conceived to be a response combining cognitive and affective ingredients. Strategies for developing individual listening styles are both feasible and available.

While much research in music education has been devoted to instruction towards understanding music through analytical approaches, very little has been applied to the concept of teaching for the deeper understanding of music which may be gained through a holistic approach. The assumption that an analytical attention style is the only one to promote in the music classroom has been challenged by logic (Lewis & Schmidt, 1991; McMullen, 1980; Serafine, 1983). Research to investigate the possibilities for promoting holistic attention has been supported (Long et al., 1989; Tobias, 1994) and in music has shown promising results (Zalanowski, 1986). To ensure that this listening behaviour is promoted in music, listening education requires that a technique for instruction in holistic attention be developed to supplement the known technique for analytic attention, and that teachers create suitable opportunities within their program for experiential listening events. For a successful outcome, of optimal student enjoyment and interest, music that is highly compatible with student abilities needs to be selected, and optimal presentation techniques carefully designed.

2. Strategies, Techniques and Media of Educational Presentation

The search for effective means of exerting positive influence on the listening experience and eliciting increased attention to music continues to drive research into possible strategies, techniques and media which might assist listeners to make more meaningful cognitive and affective associations with music. This review commences with an examination and synthesis of literature concerned with the psychological operations influencing situational interest variables. Relevant theories and research on issues of educational communication media and presentation techniques will then be discussed.
2.1 Triggering Situational Interest: Analytic and Holistic

Research has coined the terms 'situational interest' and 'individual interest' (Hidi & Baird, 1988). The former refers to an interest in certain features or characteristics of stimuli, which tends to be evoked more suddenly by something in the environment and may have only a short term effect, marginally influencing an individual's knowledge and values* (Hidi, 1990: 551). Situational interest, thus triggered, may contribute to the development of long-lasting personal interest over time (Hidi p. 551). Individual interest represents an attitude or personal predisposition (Mitchell, 1993). A review of literature from 1987 to 1997 showed very substantial progress had been made in conceptualising and defining components and types of interest (Alexander & Jetton, 1996; Alexander, Kulikowich & Schulze, 1994; Hidi, 1990; Hidi & Baird, 1988; Iran-Nejad, 1987; Mitchell, 1993; Ortony, Clore & Collins 1988; Schiefele & Krapp, 1996; Schraw, 1997; Shirey & Reynolds, 1988). In order to assimilate the line of thought which was revealed, it is necessary to disentangle some discrepant use of terminology, thereby revealing what ideas are in fact shared by these authors.

Mitchell's (1993) model illustrated how educators might lead students towards individual interest by arousing situational interest in two stages: to "catch" interest required cognitive or sensory stimulation to increase activity, and to "hold" interest involved finding personal meaning in the experience, thus allowing students to experience empowerment towards achievement of their personal goals (Mitchell, 1993: 426). These two categories of situational interest are useful with regard to the issues concerned in this study. For reasons which will be argued and elaborated below, it is useful to classify these two interest types as 'Analytic' and 'Holistic'. The 'catch' situational interest will be termed Analytic interest, since it is associated with involvement in perception of the features of the stimulus. Analytic interest may be associated with a sequential, Analytical attentional style. The 'hold' situational interest will be termed Holistic since it involves a deeper experience of the stimulus which assumes a personal meaning and will be seen to be more global in its nature. Holistic interest may be associated with a holistic attention style. Although the latter interest was achieved situationally, the personal value it attains is likely to initiate a new Individual interest. The three categories of interest to be used in this discussion include two types of situational interest, Analytic interest and Holistic interest, and the predispositional Individual interest.
The concern of this study is with techniques for the arousal of situational interest, which is the topic of most interest to teachers, as although they have "no influence over students' incoming personal interests" (Mitchell, 1993: 425), they are in a position to creatively construct a learning event which will arouse situational interest. Both Analytic interest and Holistic interest, and their sources, need to be understood to enable their activation by the educator, when necessary.

Analytic interest may be described as "typified by feelings of involvement or stimulation" (Schiefelbe & Krapp, 1996: 143) that are associated with a perceived object or activity. During the initial stage in domain learning which is marked by limited subject matter knowledge, students are likely to be intrigued by more transient, concrete aspects of the stimulus, such as the "seductive details" (Alexander et al., 1994: 317), since at that stage they lack any deep or long-term interest associated with the stimulus. Findings in text-learning research supported the "hypothesis that both paragraph-level and sentence-level ratings of interest may be more closely associated with situational interest than individual interest" (Alexander et al., 1994: 332). Text characteristics do not play an important role in the construction of Holistic interpretations (Schraw, 1997) but they do play a role in the situational interest here termed Analytic interest. These references to paragraph, sentence and text may be to some degree transferable to comparable structural elements in music such as the idiomatic elements of melody and rhythm as observable in the work of Schenker (1977). Due to the relative ambiguity of music in comparison with the semantics of language, different definitions of its surface and deep structural components have been proposed by various theorists (Aiello, 1994) and the deepest level in music may be simply described as "an abstraction" (Cook, 1994) which could well be associated with Holistic interpretation.

Schraw (1997) found over half of the variation in Analytic interest to be explained by complexity, ease of comprehension and engagement, and concluded that this interest "may be a composite experience that is affected by many aspects of the text and reading context" (Schraw, 1997: 449). Analytic interest may be invoked by a lack of prior knowledge (Hidi, 1990) which contributes to the ability of formal, structural characteristics of a stimulus to arouse response according to the collative variables of "novelty, surprisingness, unexpected events and/or ideas" (Hidi, 1990: 559). It results in a spontaneous positive affective response, even if this is only represented by
preferenda (Hidi, 1990). Aspects of a stimulus which may attract Analytic interest have been described as the "richly elaborated" (Alexander and Jetton, 1996). Iran-Nejad (1987) found that interest is the outcome of a process in which anomalous, incongruous or surprising information is resolved. Interest was thus the result, rather than the cause, of intellectual activity undertaken to resolve incomplete or ambiguous understanding of new information in relation to existing knowledge structures. This finding appeared to indicate that the end result of Analytic interest activity is an effect of further interest.

Hidi and Baird (1986) suggested that as interest occurs due to an interaction between a stimulus and an individual "one can never stipulate its origin in one to the exclusion of the other" (p. 184), but in weighing up the tendencies, one might attribute the source of Analytic interest more to the stimulus, and Holistic interest more to the person. Whilst Analytic interest does represent a feeling of personal involvement with the activity or perception, it does not represent the deeper connection with the self which would be described as personal meaning or value. If the material is too abstract, or the task too demanding, educators will probably need to carefully anchor the exposition, not so much to the interesting features of the stimulus, but to the goals and interests of the students (Alexander et al., 1994) thus shifting the focus to a more Holistic level of interest.

Holistic interest may be described as referring to aspects such as the "highly imaginable", or that which seems linked to personal experience (Alexander and Jetton, 1996). It results in "the attribution of personal significance" (Schiefele & Krapp, 1996: 143) to the perceived object or activity. Hidi (1990) considered it likely that a second group of factors, more deeply embedded in the content may contribute to such interest. In relation to text these were topics of universal interest, such concepts as "human activity, intensity factors, and life themes" (Hidi, 1990: 559). Teachers may need to to enhance students' Individual interest in a domain in order to assist those students to levels of competence or proficiency (Alexander et al., 1994). Students can be enticed into Holistic engagement with a stimulus by connecting the material with aspects of personally involving content, or by being drawn deeper into the more important levels of meaning (Alexander et al., 1994).

Research has established that the triggering conditions for Analytic interest are located in the relationships between such variables as novelty, complexity and incongruity of incoming information and prior knowledge structures (Hidi & Baird, 1986). Since the majority of research on situational interest has been
conducted with a focus on processing of text, informational significance has been seen as the core predictor of interest. When conceptual relationships within the information presented have particular significance, they represent a "triggering condition" for affective response (Hidi & Baird, 1986: 190).

Zajonc's emphasis on preference as a type of affective control component, which may operate independently of cognitive processing, led to the proposal that further affective responses may also be elicited "through the association of a stimulus with internalized values, desires, preferences, or goals" (Hidi & Baird, 1986: 190). Shirey and Reynolds (1988) suggested that external information is of interest merely according to internal criteria. Interest generated by successfully enabling students to find meaning in an experience, or identify with an aspect of the experience (Dewey, 1913), "tends to be longlasting because an individual's personal goals were established before the content was taught and will likely continue after the teaching of the meaningful content" (Mitchell, 1993: 426). Research now needs to concentrate on studying the ways in which information has significance to the individual, which requires extending our understanding of human value systems. "Distinguishing between more and less important information is a task that cannot be underestimated in the acquisition of subject-matter knowledge" (Alexander et al., 1994: 334). Therefore, if the educational goal of the first listening is satisfactory experience, not aural discrimination of idiomatic, surface features, but allowing cognitive feeling to be applied while experiencing the music in a more holistic manner, it is imperative to discover what subject matter is essential to enable such affective/cognition to take place during a first listening. This would assist towards an understanding of how to trigger Holistic interest. The suggestion of Hidi and Baird (1986) that informational content can have some personal or more universal meaning to the learner "beyond the event structure" (p. 190) of the material, implies the relevance of value-triggered conditions, a concept which may not be readily acceptable to some educators.

Schraw (1997) found that thematic complexity and coherence of text, did each explain significant proportions of the variance in holistic interpretation, but in removing the variation due to Analytic interest from the equation, only thematic complexity explained a significant proportion of the variance. It was revealed that Analytic interest explains a modest but significant proportion of the variance in holistic interpretations over and above the effect of text characteristics, supporting a claim that Analytic interest is related to richer
levels of text interpretation. Schraw interpreted interest as causal to the forming of thematic interpretations. Story events were related to readers' experiences because their interest promoted deeper engagement (Schraw, 1997). By this logic, if an educator could instruct for a holistic attention style, to promote deeper engagement, students may be triggered into a process which provides the optimal conditions for relating the music to their own personal values.

Mitchell (1993) proposed that active involvement through the attention being absorbed was an alternative to making the content of learning meaningful for students as a means of empowerment. These two facets of empowerment may be compared with Dewey's (1913) two primary characteristics of interest, absorption and identification. Absorption in the process of an activity is experienced as moving one toward achieving a personal end, thus empowering, and leading to holding of interest (Mitchell, 1993). Absorption in an activity by this description has enabled the student to identify with the activity since it has become personally meaningful in its provision of empowerment.

While Mitchell's research supported the identity of separate scales for Individual and situational interest, the suggested attainment of meaningfulness through involvement appears to support the potential construction of a link between situational and individual interest. Involvement being the strongest indicator of situational interest, it was concluded that "the more students perceive themselves as active learners rather than as passive absorbers of knowledge, the more a classroom environment [can fulfill the role of] interest holder" (Mitchell, 1993: 434). Moreover, should the Analytic interest be strong enough to stimulate total absorption in an activity, it might provide a sufficiently empowering experience to be a possible means of generating Individual interest. In the case of music listening, it would seem highly likely that this is possible, due to the satisfaction likely to be rewarded for intense listening, and thereby attached as a positive valence to the musical item. For high school music students, music listening is likely to be a fairly well developed Individual interest, at least representing experience of reward from listening to certain musical genres, which serves as a "long-lasting personal interest" (Hidi, 1990: 551) to which a situational interest may become connected. The absorption factor may thus be seen as possibly related to either the analytical attention style associated with Analytic interest, or to the holistic music listening attention style which is associated with Holistic interest. If the function
of absorption may be equally catalysed by the analytical attention style engaged in Analytic interest, the necessity for educators to seek more evasive, value-triggered means of instructing for holistic attention might be avoided.

The link between a stimulus which is regarded as information, and a perceiver who processes information and discards it or retains it, depending on its relationship with that individual’s value system, has been described in terms of three variables. These were termed "global" variables, and were identified as cognitive conductors of an emotional experience (Ortony et al., 1988).

'Unexpectedness' may be likened to the 'familiarity' variable which is known to be complicated in its operation. This variable was considered to result in a tendency for evaluations to be more extreme, unexpected positives being evaluated more positively, and negatives more negatively. Its positive action occurs when a phenomenon shows a limited degree of discrepancy with a familiar class of known objects, in other words, when the individual possesses the necessary schemata. A negative force may occur when the sense of discrepancy from similar objects is too great, and a lack of familiarity predominates. A "sense of reality" (p. 61), concerns the degree to which a stimulus seems real to the individual. This was compared to the type of reality that is sometimes experienced in dreams or by the quasi-participatory identification of self with experiences absorbed through watching a movie. It was proposed that the intensity of emotion increases to the degree that the stimulus induces a sense of reality in the perceiver. "Proximity" (p. 62), refers to the psychological proximity of the object, in terms of the feeling of closeness it holds for the individual. An example given, was the tendency for emotion-inducing situations to give rise to more intense emotions when they are close in time than when they are more remote. The proximity could be of a temporal or spatial nature, or related to another dimension of experience, such as a connection with emotions known to the individual. It might also be suggested that 'proximity' could be influenced by close-ups in a video context, or by intimate acoustics in an audio context. Both 'reality' and 'proximity' are interrupted by the confusions which occur when objects are isolated from the contexts that would have given them meaning (Dewey, 1934, Lepper, 1988), and would thereby indicate susceptibility to influence from a communication medium, such as video recording, which potentially supplies a context of both reality and intimacy.

The importance of situational interest is the assistance it provides in subsequent learning, and in the potential development of more enduring
interests (Mitchell, 1993; Schiefele, 1992). For educators, the crucial aspect of situational interest is the potential it may provide as a manipulable variable in assisting the initiation of interest in a topic that is new to students. Since it is not merely features of the material presented, but also the manner in which it is presented that can have an influential effect on situational interest (Alexander & Jetton, 1996), investigation of educational communication media is warranted.

2.2 The Medium of Communication in Education

The ideal for a medium of communication may be said to be one of transparency, where its function is to reproduce the original material, its message or content, as faithfully as possible. Whilst the activity of education is dependent upon a medium of communication, the various devices which might be employed as the vehicle to transmit particular educational material may be seen to vary in appropriateness according to the specific educational purpose.

Prawat (1989) abstracted three principles which apply to educational communication in a problem solving task. These were that instructional media be adapted to access "knowledge, strategy and disposition" (p. 1) in students. In reference to the first, it was recommended that teachers investigate students' "naive or informal knowledge" (p. 7), select material that is related to their prior knowledge, and assist them towards linking the new information to that prior knowledge. A strategy seen as useful in this procedure was to bring to students' awareness the relevant knowledge they already possess. Further useful strategies would arise from the development of "various ways of representing concepts and procedures" which would assist students in raising to explicit awareness "how important elements of the knowledge base ... relate to one another" (p. 7). Provision of contextual information was seen as important in "applying known concepts to new situations" (p. 16). This means of promoting students' ability to discover underlying concepts in turn generates motivational power in students by the new competency experienced in their successful use of the above strategies.

Unfamiliar music is an example of a domain which presents "ill-structured situations that hardly qualify as problems" (Prawat, 1989: 18). In ill-structured domains, where the goal may be vague and the necessary steps unclear, one attempts to provide a "rationale for a particular interpretation of the problem and a justification for various proposed solutions" (p. 18).
Different communication media are likely to be suitable for various purposes occurring within a sequential design of activities. If the initial activity is to be an experience of unfamiliar music with the purpose of optimal enjoyment, the suitability of a particular medium for that task is worth considering. The educator's purpose in designing an experience determines the criteria to be met by the medium, and the character of the medium being considered is "important ... only as it affects success as measured by the relevant criteria" (Parsons, 1970: 278). It was suggested, for example, that there may be more to be gained educationally in the viewing of a film than in the actual experiencing of an event, due to the competing for attention by superfluous elements of the reality. By the simplification and choice of a viewpoint possible to the medium of film, distractions may be avoided, and attention directed to what is of greatest significance "for the richness of actuality may confuse" the student (p. 274).

It is also likely that the suitability of a particular medium for the particular task varies according to the learning style of individual students. Investigation conducted through a series of studies on the relationship between the content of material, the communicative powers of various media, and the learning styles of the audience concluded that there is a need for further research on these variables (Simonson et al., 1987). In a classroom group situation, it may be necessary to select the medium that is likely to suit the majority of students in that group. If success is achieved, the students experience enjoyment of the music, then their intrinsic motivation to hear more of the music has been achieved. Whilst the manipulation of interests has sometimes been considered out of place in schools, education has been striving towards intrinsic motivation.

2.3 The Situational Variables of Presentation Context

Interest denotes "the identification of mind with the material and methods of a developing activity" and is the inevitable result of furnishing conditions in which students' "natural impulses and acquired habits" are extended by "subject-matter and modes of skill" in order to "develop to their natural ends of achievement and efficiency" (Dewey, 1913: 95). "The problem of educators ... is to provide the environment that induces educative or developing activities, and where these are found the one thing needful in education is secured" (p. 96).
Whilst recognising that "mind is measured by growth of power of abstraction" (p. 92), Dewey proposed that "if material which does not have a connection to established schema is introduced in abstract form, this is the negative form of abstraction for education" (p. 92). The world of studies would be "abstracted from" the world of reality for the student, thus "lack of interest, lack of power to hold attention" (p. 93) which are bad learning conditions "because there has been no provision of situations in which things have to be intelligently dealt with" (p. 94).

Removing material from the context in which its practical utility and its links to everyday interests and activities would be obvious, undermines intrinsic motivation (Bruner, 1966; Cordova & Lepper, 1996). Tasks thus become abstract, lacking in a context which would provide meaning and interest. Research has shown that students for whom the abstract activities had been "embedded in meaningful and appealing ... contexts generally showed substantially greater motivation, involvement, and learning than those for whom the activities had not been so contextualized" (Cordova & Lepper, 1996: 726). Gestalt theorists have posed the question as to whether "the prevailing whole-conditions will themselves determine the effect of stimulation" (Ellis, 1955: 5), thus determining one's total perception and resultant concept of an experience.

In this study, the relevance of the contextual abstraction is very great since the unfamiliarity of the music is potentially excessive. The music for this study is drawn from a tradition so far removed from students' own experience that they may lack established associations to assist in perception of the musical idiom, or to provide any meaning the music would convey within its indigenous context (Smith & Cuddy, 1986). It is therefore important to be aware of any possible factors within the presentation scenario which might minimise the problematic effect of this unfamiliarity.

In recent years, research has been directed towards investigation of the influences which might optimise the affective response to the initial presentation of a musical item in an educational context. Two interesting aspects of presentation technique which have been subjected to some examination are the provision of introductory information, and the use of video recording as opposed to the solely audio recorded medium. The following, is a brief review of literature relating to provision of contextual information and use of audio or audiovisual modes which might be adapted to meet this purpose.
2.4.1 Information

Information about a piece of music prior to listening provides a context by forming a link between the listener's knowledge and the stimulus (Nattiez, 1990). This link may assist the listener towards understanding the intent of the stimulus (Newmeyer, 1970) or to perceiving the complexity as moderate rather than confusing or boring by enabling novelties to be experienced as variations on the familiar (Bartlett, 1973), and may possibly also reduce the subjective unfamiliarity.

Music education research has attempted to compare the changes in students' preference ratings for musical items and genres which might be brought about by repetition and/or training (Bartlett, 1973; Bradley, 1971, 1972; Brown, 1978; Darrow & Greer, 1987; Duerksen, 1968, 1972; Gregory, 1994; Hargreaves, 1984; Hargreaves et al., 1995; Heyduk, 1975; Madsen, Byrnes, Capperella-Sheldon & Brittin, 1993; Price, 1988; Prince, 1974; Sluckin, Hargreaves & Coleman, 1982; Smith, 1973; Smith & Cuddy, 1986; Standifer, 1970). Much research concerning the provision of information in relation to music listening has been longitudinal, in the sense that it has concerned itself with courses of study taken over a period of time (see Chapter Two).

Research pertaining to instructions for initial hearing of an unfamiliar musical item has compared the influence on affective response of programs using abstract, analytical terms versus those using expressive, affect-related language. Less enjoyment was reported by subjects provided with analytical programs about the music, than by subjects who were provided with information using terms of musical expression (Jensen, 1970), a story using emotional terms (Zalanowski, 1986) or details refering to the composer or the piece, using personal terms (Halpern, 1992). Larson (1971) found that historical background information did not assist enjoyment of classical music. Results indicated the likelihood that the type of introductory information has more effect on listeners' response than the type of music, and that a program with expressive, emotional or personal content, benefits affective response. Similar findings were reflected in the results of research in educational psychology which found that the formation of associations of personal significance with material could be assisted by establishing links with personal experience through reference to topics of universal human interest (Alexander & Jetton, 1996; Hidl, 1990; Schiefele & Krapp, 1996). It may be suggested that this affective type of information assists music listeners by constructing a
framework in which feelingful meaning can be attached to perceived sounds, in an act combining cognition with affect. The provision of affect-related information was seen as a potential means of assisting listeners towards the unification of a sound sequence into a perceived whole, an aid to holistic listening (Zalanowski, 1986).

Rolandelli, Wright, Huston and Eakins (1991) found that narration simultaneous with a television program enhanced visual attention as well as comprehension of visual and inferential information even though the same information was available in the visual modality of the non-narrated versions of the stories. This was interpreted as due to the potential of narration to make a program "more interesting and comprehensible and thus more attention-worthy" (p. 119). Narration was found to be a mediator of attention and comprehension. The mediating value of the auditory-verbal component was stronger for inferential comprehension, suggesting that "auditory information supplemented visual information even though the same information was available in both conditions" (p. 114-115). The auditory information being essentially the provision of verbal information, superimposed on the music and sound-effects which were experienced in the nonnarrated condition, suggested that this effect was in fact the result of verbal information. Auditory and visual information were processed more independently by seven year-old children than by five year-olds. It appeared that without auditory-verbal information, older children relied more on the visual modality to obtain program information, while younger children relied on both modalities, but this might have been due to the lower complexity of the material for older children. Nevertheless, comprehension and visual attention benefited from narration for both age groups.

The participation of a cognitive component as a fruitful aid to affective response has been demonstrated in research in motivation and learning from text (Alexander & Jetton, 1996; Alexander et al., 1994; Hidi, 1990; Hidi & Baird, 1988; Iran-Nejad, 1987; Mitchell, 1993; Ortony et al., 1988; Schiefele & Krapp, 1996; Schraw, 1997; Shirey & Reynolds, 1988). Hidi and Baird (1986) concluded that the ideal affective response is a transaction between an individual and "the significance of the information" (p. 191). Experiencing personal significance is the basis of enjoyment and intrinsic interest (Dewey, 1913). Harp and Mayer (1997) found that "the best way to help students enjoy a passage [of text] is to help them understand it" (p. 100), concluding that any adjuncts to a text which were aimed at increasing affective interest
should not disrupt the chain of scientific events being explained, but assist in their clarification. Listening instructions can modify how music is heard, and students can be assisted to track a form, but "it is hard to believe that following the unfolding of form in such a [conscious] manner can be an important source of listening pleasure if people who have the ability to do it don't normally bother to" (Cook, 1990: 46).

In reading research, findings have supported the contention that "interest for high knowledge readers may have more to do with intrinsic, long-term motivation than with external, temporal stimulation" (Alexander & Jetton, 1996: 110). This suggests that different types of provision may be useful in presenting material to differently prepared individuals. The finding that situational interest is more strongly associated with narrative texts than with expository or mixed texts, has been ascribed to the personal links available to readers through themes of human interest, and the tendency of readers to approach narrative with the purpose of immediate pleasure, as opposed to information gathering (Alexander & Jetton, 1996). The difference maintained by Alexander and Jetton in this matter, relates to the free-standing experiential nature of reading a narrative, in contrast with the temporal purpose of reading an exposition which is more of a preparatory exercise, a component in building a body of domain knowledge.

Reading research has addressed the question of whether differences in reading performance may be the result of selecting (attentional) schema which relate appropriately or inappropriately with the text, and varying degrees of ability "to switch schema in relation to switches in the text" (Deegan, 1995: 157). This question may be paralleled in the attention styles activated by individuals during music listening. It may be that information regarding the stimulus influences subjects to direct their attention to other styles than a strictly 'melodic' focus, which may benefit enjoyment of the stimulus.

O'Briant, and Wilbanks (1978) sought to influence response to music by altering the reception mood of listeners. Attempts were made to establish different mood responses to music by reading passages of vivid prose prior to listening. The passages were selected to represent either a cheerful or a grim and anxious mood, and did not bear any particular relation either to the music or to the students. This did not appear to be an effective way of altering the mood response to music. It was concluded that in order to manipulate the listening context, it may be necessary to take into account the denotative aspects of the music. The aim in establishing a listening context for
unfamiliar music is not to influence the mood of affective response, but to assist listeners in establishing a sufficient connection with the music in order to experience a musical response.

Zalanowski (1986) found that musical understanding was significantly greater for subjects who were given preliminary information of a story type than for those who were told to form free mental images or simply to pay attention while listening. Those who received preliminary information of analytical nature, achieved the lowest scores in attention and understanding. An exception to this result occurred for a group of left hemisphere oriented subjects when presented with printed analytical information which included musical excerpts as illustration. Zalanowski's (1986) research showed that prelistening instruction to form free mental images resulted in greatest enjoyment, whilst an informative story-type introduction resulted in greatest understanding of the music. The conclusion drawn from this work was that in planning listening instructions it is important to specify which component of music appreciation is focal on the occasion. "For a single exposure to a selection of music, a choice must be made between enjoyment and understanding" (p. 50). A further study (Zalanowski 1990) suggested that the type of listening instruction most conducive to enjoyment is likely to vary for individual students in accordance with their different learning styles.

Information provided to the audience by Gillis (1995) combined background concerning the composer, some 'story' details regarding musical features, and musical analysis including some abstract and some concrete (performed examples) components. The effect of this type of information on young adult subjects listening to contemporary art music was a significantly higher reported degree of preference for the musical style than occurred in control groups, but little difference in enjoyment of the performance. Musical training appeared to be more influential than the provision of information. By analysis of audience behaviour as recorded on video, higher on-task behaviour was reported for audiences receiving the narrated prologue during the most-preferred and the least preferred items.

Provision of information about a piece of music prior to listening may be seen as an alternative means of decreasing its complexity for the listener, by familiarising the listener, providing some context. In a strict, formally based approach to the study of musical works, while the historical development of musical forms, techniques and styles may be examined, no appeal can be made to the social, historical or cultural milieu in which the music
originated. Such contextual information is held to be extraneous to the music itself (Alperson, 1993). Whilst the analytical type of program in some instances assisted cognitive understanding, the program which more closely aligns with emotional expression appears to be more beneficial for enjoyment, although in view of previous findings (Gates & Bradshaw, 1977; Sims & Sims, 1995) this may be subject to gender differences. In the discursive review of attention modes (see Section 1, this Chapter) it was concluded that further investigation is much needed into the ways of identifying types of informational content which can have some personal or more universal meaning to the subject "beyond the event structure" (Hidi, 1990: 190) of the item being presented to students. These types of informational content are the source which provides essential motivational value to the listening activity.

2.4.2 Audiovisual

The question has been raised as to whether listeners' cognitive or affective responses to music might be different in the context of a simultaneous visual presentation. Grossberg (1993) claimed that music has tended to become the soundtrack for visual images portrayed by the rock video, but that the imagery is more consciously accessible to interpretation, whereas the music reaches into the unconscious. Research into the effect of visuals on instruction other than music has provided some potentially relevant results.

Prior to the ready availability of video-recorded educational material, it had been found that visual representations can aid in motivation (Levin, 1991) and in comprehending the abstract, or give form to concepts (Dean & Enemoh, 1983; Janniro, 1993; Moore & Skinner, 1985; Prawat, 1989; Royer & Cable, 1976). Results relating to the impact of visual representation on the learning process have, however, suggested the existence of a complex relationship. According to Baker and Popham (1965), embellished pictorial presentation associated with the introductory episode of an instructional tertiary program assists in engendering a positive attitude toward the content and the ensuing course. On the other hand, more complex visuals, with relatively high information density, have been shown to detract from attention given to the auditory mode (Travers, 1964). Similarly, illustrations have been found to assist second- and third-grade children in the decoding of word meanings if they are closely related to the content (Willows, 1978), but if given a storyline, to partly divide learners' attention from the instructional content (Frantzen, 1995; Samuels, 1970; Willows, 1978;
Donald, 1983). In a study of television programs with five-year-old children, Pezdek and Stevens (1984) found that video information did not interfere with processing audio information, but appeared to be more salient than the audio material.

Fleming's (1987) investigation of the effects of display techniques in computer-aided instruction showed relevant associations with the control of learner attention. An important principle proved to be the high selectivity of visual attention, which provides one with the capacity to focus clearly on only the tiny, central portion of the visual field. It was found that only the most relevant visual information should be included in a display, and that provision of instructions was helpful in increasing the amount of mental effort that learners were willing to invest in attention, and in directing attention to cued issues (Fleming, 1987).

The notion that deriving contextual information through visual representation (e.g., video material) rather than through provision of verbal information may align better with self-determination, as a discovery method, is worthy of consideration. Such a technique would be well supported by motivational theory (Bruner, 1966, Dewey, 1913). Use of visual materials such as video would also appear to be supported by Dewey (1913) in his explanation of tools afforded for enrichment of the activity.

A finding that children could be influenced towards socially valued behaviours through television, has raised the possibility that this medium may have some affective communicational potency (Leifer, Gordon & Graves, 1974). Katz, Adoni and Parness (1977) investigated differences which might occur as a result of experiencing news broadcasts on radio or television. They found a connection between visualisation and recall for "some of the less inherently attractive" (p. 239) news items, particularly foreign affairs. Whether the visualisation involved film, stills or just the presenter, did not appear to matter. It was also found that no form of visualisation substantially affected comprehension. An emotional dimension of television viewing was noted in an apparent tendency by viewers, rather than listeners, to agree with statements made in the program. This finding was suggestive rather than conclusive and was recommended for further research.

Lepper (1988) suggested that due to the problem of decontextualisation in classroom teaching, ways should be sought to maintain or approximate the functionality of knowledge, and that this can be done by embedding the
information in a simulation context. Although Lepper's suggestion was to use a context relating to students' prior interests, the notion is transferable to use in relating to students' prior experience, in the sense of a video showing humanistic details which to some degree, for example, might explain the unfamiliar sound of a music stimulus. Lepper and Chabay (1985) suggested that the provision of a concrete and familiar visual representation or a conceptual "point of view" (p. 220) may enhance transfer by assisting in providing links with existing schemata. In determining the potential of motivational devices such as visual embellishments to enhance intrinsic (enduring) motivation towards material, Lepper and Chabay (1985) proposed three general principles of prediction: 1. "the addition of motivational embellishments may have effects on the intensity and focus of students' attention as they engage" in the activity; 2. "the use of added motivational devices may also have effects on students' levels of arousal"; 3. "motivational enhancements may influence learning by affecting the level of students' involvement and the degree of deep or elaborated processing required by the activity" (p. 220). Lepper and Cordova (1992) showed that provided visuals draw attention to salient material, learning is enhanced; and that presenting instruction in an enjoyable format produces increased learning. The transfer of these ideas from other instructional fields to that of music, cannot be assumed to be simple, due to the reliance on two fields of sensory perception, the visual and auditory channels.

In a study with five-year-old children, Rolandelli et al. (1991) found that narration simultaneous with the television program enhanced visual attention as well as comprehension of visual and inferential information even though the same information was available in the visual modality of the non-narrated versions of the stories. Narration was found to be a mediator of attention and comprehension. Visual attention predicted auditory comprehension in the narrated condition, suggesting that it assists in processing of semantic information. In the absence of speech, visual attention is heightened. It was also found that girls attended more to the auditory modality and were less dependent on the visual modality than boys, while boys were more visually attentive. Boys appeared to rely more on visual processing, and in the nonnarrated condition their visual comprehension was somewhat higher than that of the girls, suggesting the greater value of looking for boys than girls, when no verbal information is available. Girls also appeared to be more auditorily attentive than did boys, but no differences were found for auditory comprehension. In Kirk's (1992) view, the innate perceptual differences which
exist between males and females may in turn explain certain differences in the types of information they are likely to pick up from the environment.

In considering the importance of patterns of movement in musical performance, Baily (1985) raised the question as to whether auditory and spatiomotor modes of musical cognition may be of equal importance. In its progress from the culture specific to the universal, the study of music should possibly adopt a wider approach which recognises the possibility of music being a motor event and a social event, as well as being a sonic event. Joseph and Dwyer (1984) found that for tenth grade students who have low levels of prior knowledge of a topic, abstract or realistic visuals were equally effective, although preparation of illustrations for students equipped with higher levels of knowledge required more careful selection. It appeals to reason that in presentation of music of another culture, the extra contextual information provided by a visual medium should be advantageous. Yamaguti (1986) considered that "a music performance can be perfectly appreciated only when it is perceived in its original context, habitat and climate, as well as the surrounding man-made environment, including food and drink, smells, audience, animals, etc" (p. 32). On the other hand, Feld (1986) suggested the possibility of advantage in excluding visual perception in order to focus on acoustic sensations, and to better access the imagination with its links to "culturally patterned historical consciousness" (p. 27).

Davidson's (1993) study with undergraduate music students investigated response to expressivity with recordings presented in audio, visual, and audiovisual recorded modes. Results showed the usefulness of visual information in the perceiver's understanding of the performer's expressive intentions, and suggested that vision can be more informative than sound in this regard. A gender difference (either biologically or role-based) which relates to Davidson's finding about watching musical performers, was supported in a review by Hall (1978). This review investigated the results of 75 studies in gender effects on decoding nonverbal cues. It was found that more studies showed female advantage, and reached significance than would occur by chance, and that the effect size did not vary according to subjects' age. Due to the latter stability of the effect, Hall concluded that it would be difficult to suggest whether the issue was one of sex or of gender stereotyping. A further review conducted by Hall (1984) again supported female advantage in decoding nonverbal cues. As suggested by Crawford and Chaffin (1986), this difference reflects the goals set for a task, which depend upon the priorities of
an individual rather than a difference in ability. The relevance of this gender difference, nevertheless, is that presentation of a visual image may provide information to females which is more affective in its content than that which is derived by males, due a difference in the degree to which individuals decode visual information regarding the performer’s expressive intent.

Adams' (1994) study with undergraduates compared the perceived emotional response of musicians and non-musicians to music-only, music-video and visual-only recordings of an orchestral performance. Musician subjects slightly preferred the music-video to the music-only recording, and all subjects showed a lower magnitude of affective response to the visual-only presentation. Using the same three presentation conditions, for three dance excerpts, Frego (1999) found no significant differences between responses of undergraduate and graduate students, whether they were musicians or nonmusicians. The only findings of significant difference were in relation to the differences between the three distinct stimuli.

Cook (1990) considered that enjoyment by Western listeners of music from other cultures might be facilitated by viewing in situ video clips to provide some basic awareness of the specific social context. Our understanding of the music cannot, however, be the same as that of an enculturated listener. We listen, "just as we can listen to Machaut's music, and enjoy it, without going to live in fourteenth-century France" (p. 151).

It may be concluded that visuals are a useful addition which enrich the context provided they do not detract from attention given to the auditory mode due to high information density (Travers, 1964), divisive content (Willows, 1978), more salient content (Pezdek & Stevens, 1984), masculine gender (Rolandelli et al., 1991). They potentially enhance conceptual transfer and motivation (Lepper & Chabay, 1985), enjoyment (Lepper & Cordova, 1992) and possibly self-determination (Bruner, 1966, Dewey, 1913) and understanding of a musical performer’s expressive intentions (Davidson, 1993).

Good metaphors are interactive in a way that parallels good concrete representations; that is they result in a meaning that is new, transcending the meaning of the subjects being compared. The metaphor creates the similarity, it does not simply capture what is already present." ...

"Metaphor is an important pedagogical tool for bridging disciplinary gaps that result from differences in the way people perceive phenomena. (Prawat, 1989: 10)
Geringer, Cassidy and Byo (1996) found that the music-video presentation of a programmatic excerpt (Dukas) resulted in significantly higher affective scores than did the music alone for undergraduates. The presentations of a more abstract excerpt (Bach) resulted in no differences. Subjects in the music-only group used more analytical descriptions of musical elements for both excerpts. A live performance video in which Bernstein conducted the orchestra, presented in their 1997 sequel study, resulted in higher cognitive scores. The animated videos (1997) appeared to be detrimental to cognitive scores, but, as for the 1996 study, beneficial for affective ratings. Geringer et al. (1997) concluded that

some types of visual information may increase attentiveness to the music itself, not just to the visuals, particularly for extended music selections. Informal observations revealed that students in listening-only presentations often seemed to be somewhat unsure as to what to do during the music, particularly during the longer excerpts, as opposed to the video presentations, during which students' attention was clearly and constantly directed to the visual stimulus. Thus, the videos do not seem to distract from the music and may, particularly in the case of the performance video (Bernstein), actually help novice music listeners pair sounds and sights in a meaningful way. (p. 231)

In both studies, the animations from Disney's Fantasia that were used carried a storyline, which may be suggested to have partly diverted listeners' attention from the music of the soundtrack.

These findings seem to suggest that the development of positive music learning may be enhanced by live concerts and performance videos that focus attention as well as providing additional visual information which assists in familiarisation for novice listeners by creating a context, and in reducing complexity by reducing the quantity of 'unknowns'.

2.5 Context for Musical Presentation, Verbal and Visual

Nattiez (1990) provided the following general definition of context:

An object of any kind takes on meaning for an individual apprehending that object, as soon as that individual places the object in relation to areas of his lived experience - that is in relation to a collection of other objects that belong to his or her experience of the world. (p. 43)
Verbal information may assist the listener, but the visuals tell more, and place the performance in relation to areas of lived experience. Students presented with a musical performance on video can interpret bodily movements or stillness, the performer's mood, attitude, costume, posture, breathing patterns and facial expressions. Still more information may be provided in the visual details of location, and social context. Nattiez (1990) suggested that the advent of audio recordings contributed to a reduction of our cultural conception of music to a single dimension, sheer sound, and that the "secret longing for the visual [might be] one of the motivations behind the blossoming of 'multimedia' events" (p. 44).

Summary

At the interface between stimulus and listener, the manner in which a stimulus is perceived by individuals may be energised by a quality of interest, which in turn influences the attention style adopted. It has been found, on the other hand, that attentional style is largely determined by listeners' dispositional cognitive style. If it were possible to influence the mode of attention adopted by individuals on a given occasion, by manipulating the quality of interest, this would provide an agent of mediation accessible to the purposeful use of educators. Chapter Three, therefore, firstly examined associations between cognitive style and attentional style, and their conjunction with the dynamics of interest and its partner, enjoyment.

Examination of the literature showed that expression of cognitive styles in terms of Analytical versus Holistic types was a relevant distinction in relation to music listening behaviour. Listening with an Analytical style involves a sequential approach, in which selective attention is directed toward features of the musical stimulus. For listeners with an Analytical cognitive style, therefore, the focus of attention determines what information is processed, thus influencing which preferenda arise to influence their affective response. When this style is engaged through natural disposition, salience of musical features is an idiosyncratic judgment somewhat related to individual interests. It has been found that selective attention strategy may, however, be consciously directed. Such metacognitive awareness assists learners to analyse more quickly the task demands of a situation, to focus more efficiently on salient information,
and to identify the basic structure of material and its components. This enhances comprehension which has been the traditional component in musicological training, for the understanding of music while listening.

Listening with a Holistic style involves being absorbed in the mood; attending to the sound in a qualitative, existential manner; or engaging in visual imagery or association responses, which may be considered attentional modes. This style of musical appreciation occurs more readily when formal attention is relaxed, as the mental act is relatively free of analytical process. Total absorption, assisted by the salience of more emotional and personal associations, results in a requirement of less effort for processing, facilitated concentration, and resultant freeing of cognitive resources for generating further representations in the stimulation of ideas and imagery. Since the nature of holistic listening activity is experiential, resulting in listeners' enjoyment, this style is well suited to the purpose of inspiring listeners with a desire to extend their contact with the music concerned. Imagery approaches were seen as potential means of directing listeners toward holistic listening, by assisting the unification of a sound sequence into a perceived whole. Contributions of a Holistic style to learning were found to be deeper comprehension processes, greater use of imagery, and assimilation of details in a synthesising process.

Although cognitive styles have been seen as difficult to shift, research in mathematical education proposed triggers for situational interest, which may potentially be useful to educators wishing to activate selected attentional approaches. These triggers were classified according to functions of attracting immediate, 'catch', interest, or drawing the learner into a deeper, 'hold', engagement. A strategy proposed for activating 'catch' triggers, emphasised the importance of creating energised cognitive links between learners and the stimulus. These links pertained to features of the stimulus which possess salience in the existing knowledge of learners. The triggering conditions for 'catch' situational interest are located in the novelty, complexity and incongruity of incoming information in relation to prior knowledge structures. Thus conceptual relationships within the information presented have particular significance. This strategy, enabling ease of comprehension, was readily transferable to music, facilitating an Analytical music listening style. The provision of concrete, analytical information concerning musical features, assisted participation in Analytical attention style, activating awareness, and resulting in greater understanding of the music. For listeners whose
dispositional cognitive style was Analytical, this approach provided also their greatest enjoyment.

Reading research found strategies for the initiation of deeper processing associated with 'hold' triggers to be somewhat more elusive. It was, at first, thought that the Holistic style might only be engaged when the demand of an interest in understanding the content of learning material presented a spontaneous cue. It was found, however, that by use of value-triggered cues, affective engagement assisted in initiating a Holistic approach. A parallel finding in music education showed that provision of an affect-related link promoted a Holistic approach in music listening. Since Holistic engagement with music has been associated with an enjoyment response, this finding of a motivational device available to educators is significant. The construction of relevant affective associations with musical stimuli, may represent a manipulation of subjective familiarity, that provides listeners with a link enabling meaningful processing of music, thus enhancing enjoyment. Is it possible that such a device could be endowed with sufficient strength to divert listeners whose natural cognitive style is Analytical, towards a holistic approach?

Previous research in music listening and psychoacoustics has emphasised aspects of aural discrimination in music listening, in an approach that severely limited the potential understanding of affective behaviour, and preempted study of holistic engagement. This type of engagement was described in learning psychology as a meditational or preconscious incubation stage which facilitates the integrated intellectual and emotional processing of material. Activities to promote this process included plurality of encounters with the material, intense absorption and heightened awareness and a cyclic alternation from experience to thoughtful study and back to experience, in the search for further perspectives.

Research in educational psychology, however, demonstrated that teachers could, in fact, teach metacognitive skills that would enable students to direct their own strategic use of attentional styles. The requisite process, undertaken over a period of time, involved explicit instruction, provision of examples, modelling and elaboration. When the intended task is music listening for a specified purpose of holistic experience, or analytical awareness, could an instructional device be designed to assist students with different cognitive styles to utilise different strategies?
It was found in research on learning from text that when complexity of the stimulus is high, presentational style needs to be tailored to the situation. Anchoring the exposition, not so much to the interesting features of the stimulus, but to the goals and interests of the students, or topics of universal interest, enabled students to connect at a deeper level with the material. This suggests the usefulness of educators providing such a cue, within their presentation context, thus shifting students' attentional focus to a more Holistic level of interest.

Involvement was found to be the strongest indicator of situational interest. Should an Analytic interest be strong enough to stimulate total absorption in an activity, the experience may be sufficiently empowering to generate enjoyment and further interest. Intense listening, has been shown to provide such reward, thereby attaching a positive valence to the musical item. If the function of absorption may be equally catalysed by the analytical attention style engaged in Analytic interest, the necessity for educators to seek more evasive, value-triggered means of instructing for holistic attention might be avoided. The finding that males tend toward a dispositional analytic learning style, and females toward a holistic learning style, may indicate that a special effort is needed to assist males towards engaging in a holistic attentional style.

For listeners whose natural style is analytic, the classroom presentation of music from another culture presents a task so abstract it may be devoid of meaning and interest. The music is drastically decontextualised. When unfamiliarity of the music is excessive, it may be so far removed from students' own experience that they may lack established associations to assist in perception. It is thus crucial to understand what interventional means might be called upon to optimise affective response to the initial presentation of such a musical item.

Provision of information about a piece of music prior to listening may be seen as an alternative means of decreasing its complexity for the listener, by familiarising the listener. Narration accompanying children's television was found to be a mediator of attention and comprehension. Information about a piece of music prior to listening provides a context by forming a link between the listener's knowledge or experience and the stimulus. The type of introductory information provided, however, has more effect on listeners' response than the type of music. Programs were found to span a wide range on a continuum of cognitive to affective. At one extreme was musical analysis,
using abstract terms and possibly concrete examples, at the other extreme was emotional or personal content using expressive, affect-related language. Research found that in general, the more informative programs assisted understanding, while the more emotive programs assisted enjoyment. In planning listening instructions, it is therefore important to specify which component of music appreciation, enjoyment or understanding, is focal on the occasion.

Music education research found that listeners' dispositional cognitive styles could, however, interfere with these intended patterns. For individuals whose tendency was Holistic, there was neither enjoyment nor understanding to be gained from the purely analytical approach. For those whose tendency was Analytical, there was no assistance from programs suggesting imagery, and the only beneficial program was analysis with concrete examples. Reading research, on the other hand, found that affect-related information may assist learners, generally, towards the more holistic approach. The type of instruction most conducive to enjoyment is therefore likely to vary for individual students in accordance with their different learning styles, and may possibly be also subject to gender differences. Investigation is much needed into the ways of identifying types of informational content which provide essential motivational value.

Within a sequential design of activities, different communication media may be employed as the vehicle to transmit particular educational material. These may vary in appropriateness according to the specific educational purpose. The ideal medium for the particular task may also vary according to the learning style of individual students. Presentation style must therefore take into account relationships between the content of material, the nature of the task, the communicative powers of various media, and the learning styles of the audience.

Cognitive theory has recognised three informational variables which may assist educators in triggering affective engagement. These variables, situated within the stimulus and its presentational medium, are seen to be cognitive conductors of an emotional experience. When the stimulus material presents the perceiver with a moderate degree of 'novelty', and maximum levels of 'reality' and 'proximity', it projects the greatest intensity of emotion. Both 'reality' and 'proximity' are interrupted by the confusions which occur when objects are isolated from their contexts, but may be compensated by thoughtful use of technological media.
A degree of reality may be recovered in musical presentation by use of a film or video-recording to restore a visual sense of the real performance. Proximity may be enhanced by video close-ups, or by intimate acoustics. Thus, not only the types of verbal informational cued to listeners, but also the presentational media used, may exert a potent influence on the type of situational interest that is aroused, and on the attentional style that this promotes.

Visual information associated with the introductory episode of an instructional program, has been shown to assist in engendering a positive attitude toward the content and the ensuing course. Visual embellishments are found to enhance intrinsic (enduring) motivation towards material by intensifying and focusing students' attention, increasing levels of arousal, and by affecting the level of students' involvement and the degree of deep or elaborated processing. Contextual information through a video rather than verbal information, may align better with self-determination, as a discovery method, supported by motivational theory.

Visual representations can also aid in comprehending the abstract, or give form to concepts. Consideration of the possibility of music as a motor event and a social event, as well as being a sonic event raises the question as to whether auditory and spatiomotor modes of musical cognition may be of potentially equal importance. Due to decontextualisation in classroom teaching, ways are sought to maintain or approximate the functionality of knowledge, by embedding the information in a simulation context.

Where there are low levels of prior knowledge of a topic, abstract or realistic visuals were found to be beneficial. Factual verbal information may assist the listener, but more information may be provided in the visual details of location, and social context. In presentation of music of another culture, the extra contextual information provided by a visual medium includes details of the specific social context. Provision of a concrete and familiar visual representation or a conceptual 'point of view', may enhance transfer by assisting in providing links with existing schemata. The humanistic details provided in a video, may to some degree explain the unfamiliar sound of the music, thus relating to students' prior interests, while also creating the desired human link which is important to affective response.

It has also been found that in the absence of verbal information, visual attention is heightened. Visuals may draw attention to salient material. A gender difference was found in visual versus auditory salience. It has been
found that when no verbal information is available, boys may be more visually attentive than girls. When visual and auditory stimuli are presented, girls maintain attention to the auditory modality, whereas boys may be somewhat diverted from the auditory in their greater dependence on the visual modality.

These innate perceptual differences which exist between males and females explain certain differences in the types of information they are likely to pick up from the environment. The usefulness of visual information in the perceiver's understanding of a musical performer's expressive intentions, may be subject to known gender effects in decoding nonverbal cues. It is significant that visual information which provides access to the performer's expressive intent is of greater value to females than to males in a musical experience. This predicts a likely female advantage in accessing affective content to music where visual information regarding a performer's expressive intent is the chief source of an affective link with the music. If males attend more to the visual mode, but do not access nonverbal cues, they do not thereby gain the affective link as females might. As a result, it may be that the link with a humanistic interest requires the input of verbal information. Access to an affective link may have some bearing on levels of subjective familiarity.

A finding that listeners used more analytical descriptions of musical elements when there was no additional element of verbal or visual information in the presentation, may indicate a training effect. Researchers have found that students listen to what they think they should attend to. Therefore, without any information to suggest another approach than aural discrimination of musical elements, which is the usual mode in music listening education, this may be the default listening mode of students in the music classroom.

In summary, visuals are a useful addition which enrich the context for music, provided they do not detract from attention given to the auditory mode due to the listener tendency ascribed to males, or to the visual content being divisive in high information density or greater salience. Visuals potentially enhance conceptual transfer and understanding of a musical performer's expressive intentions, as well as enjoyment, motivation, and possibly self-determination.

A problem exists at this stage, in the lack of research into aesthetic communication via technological media in education. There is a body of research on the types of information provision which may assist listener enjoyment of music, and some work has been completed regarding the relative
affective benefits of audio versus audiovisual media. No previous study of the music presentation scenario, however, has examined the affective outcome of utilisation of the combinations of these two components of presentation: audio- versus video-recording medium; and with- versus without an informative introduction.

Music education research demonstrated that affective associations can provide a motivational device to benefit the affective response to an initial hearing of unfamiliar music, through a propensity of holistic listening to result in enjoyment, while analytical listening results in understanding. The potential usefulness of monitoring, or directing use of the two approaches, as attentional strategies was also proposed. Questions exist as to whether differences in attention style and enjoyment occur within relatively equivalent groups of high school music students, and as to what approaches might be made towards presentation style as a beneficial area of study for music educators. A better understanding of the effects of presentation techniques is likely both to enable music educators to guide students towards more rewarding experiences in music listening, and to facilitate their task of involving students in cognitive activity. If a music appreciation course aims at development of a positive affect concurrently with cognitive gain, then a positive affect should surround the process from its very point of initiation.

**Overview of the Study**

The purpose of this study was to investigate means by which maximum provision can be made, in secondary school music classrooms, to arouse a positive affective response towards unfamiliar music during the first hearing. The implicit limitation in connection with classroom presentation, is the frequent impossibility of live performance, particularly in the lack of availability of performers of music from cultures throughout the world. Therefore research was directed towards ascertaining whether an identifiable relationship exists between the way in which recorded music is presented, and the degree of positivity with which students respond.

The primary aim was to ascertain whether an identifiable relationship exists between two aspects of classroom presentation technique and the degree of positivity with which students respond. The aspects explored were the effects of
visual and verbal contextual information. A secondary aim was to closely observe the roles of attention styles and familiarity, as the psychological boundaries between these factors and affective response have not been conclusively established by previous research.

An experiment was therefore designed to test the relative benefits of four different modes of presentation. A sample of 438 secondary music students from Year 9, 10 and 11 classes, was distributed evenly with respect to gender, school type, class-year and area, amongst four treatment groups. Half the sample listened to an audio recording of the stimulus music, and the other half viewed a video of the same performance. Half of each of these groups was provided with a brief, informative introductory announcement. Immediately after the musical performance, subjects in all groups completed a questionnaire. This researcher-designed instrument providing data on subjects' affective response, attention style, subjective familiarity, gender and musical experience was a core element of the study.

Chapter Four describes the construction of the questionnaire, the selection of a suitable musical stimulus, and the design of a brief paragraph which would succinctly provide such contextual information regarding the musical stimulus, as was pertinent to the needs of the study. The questions to be investigated by the study were shaped by information presented in the review of related literature and crystallised in the questionnaire. The design of the study was shaped by the need to investigate and measure musical responses whose intimate psychological nature is illustrated by the questionnaire. Whilst the development of this instrument is integral to the design of the study, the overall design arose largely from the need to establish a framework within which questions of this nature could most realistically be answered, as measurable responses, with the least detrimental effect imposed by an experimental situation. Thus an insight into the nature of the data being sought is presented here in order to provide a perspective from which to view the design of the study which is outlined in Chapter Five.
CHAPTER FOUR

Research has indicated that many students do not engage with or enjoy unfamiliar pieces of music. This is a problem for music educators who wish to introduce their students to a diverse range of musical genres. This study explored the effects of two factors on students' engagement with and enjoyment of an unfamiliar Shakuhachi piece. Subjects were assigned at random to listen to the piece in either audio-only or audiovisual form, and with or without verbal background information. This chapter describes the design and construction process of the instrument for the study.

THE INSTRUMENT: "LISTENER RESPONSE TO HONKYOKU QUESTIONNAIRE" (LRHQ)

1. Categories of Questions

In order to evaluate the impact of the presentation techniques on students' enjoyment and interest in the music, it was necessary to create an appropriate measure to assess:

1. Positive-negative response to the stimulus
2. Behavioural intention (interest) (as recommended by Kuhn et al., 1981)

To clarify the mediating mechanisms in this relationship between presentation techniques and affective response, it was also necessary to create measures which assessed:

1. Degree of subjective familiarity experienced in relation to the stimulus
2. Type of attention paid to the stimulus

In order to control for the impact of students' individual backgrounds on affective response, the following measures were also taken:

1. Demographic details (e.g., gender, class year, school type, school region)
2. Information on previous musical experience (both listening and performing)
2. Pilot Survey for Scale Development

In line with the recommendations of Payne (1974), Schuman and Presser (1981), Seashore and Hevner (1933), questions were prepared with the assistance of data gained in a pilot survey using open-ended questions (Abeles, 1973). After determining from a review of previous literature the constructs to be measured, items were written to gain statements relating to each theoretical construct.

2.1 Questions in the Pilot Survey

The following open-ended questions were used in the pilot survey.

1. Have you heard this type of music before? (Familiarity)
2. How did you feel while you were listening to the music? (Enjoyment)
3. Explain what you liked or disliked about the music (Enjoyment)
4. Was there anything about the music you found interesting? (Attention)
5. Did you find yourself paying attention to one thing in particular? (Attention)
6. What were you thinking about while you listened? (Attention)

2.2 Procedure of the Pilot Survey

Open-ended questionnaires were completed by the Year 9 class and Year 11 classes at each of two comprehensive high schools to ensure that item wording would be consistent with current Sydney adolescent usage, and as free of musical terminology as possible (Zimmerman, 1971; Hair, 1981). Participants were given the following directions before the music was presented:

This is not a test. There are no right or wrong answers and your papers will be anonymous. We are mainly interested in how you felt about the music.

2.3 Responses to the Pilot Survey

Responses to the open questions of the pilot survey were initially categorised as to whether they indicated an enjoyment/affective response, or a degree or type of attention in relation to the music or its features. Within these two categories, responses revealed several subcategories, denoting either a relation to the overall affect of the listener, to more specific moods and feelings in the music, to the movement or structural elements of the music, or to the timbre of the instrument (see Appendix C). Words and phrases in these lists were rated for the frequency of their use, and those containing most frequently chosen (Hair,
or most pertinently worded phrases, were used to generate a set of 40 statements reflecting subjects' degree and type of enjoyment as well as 25 statements concerning attention style and features to which subjects attended.

To judge the relevance and clarity of expression of statements assembled from the open-questions of the survey, three doctoral music students and three experienced members of music staff from two highly respected tertiary institutions examined, discussed, amended and indicated preferred statements, making their selections for use in the LHRQ on the basis of the relevance and clarity of each item. This procedure was used to establish the content validity of the questionnaire (Payne, 1974). Of the 40 statements concerning Enjoyment, ten were amended and fifteen approved; and of the 25 statements concerning Attention, seven were amended, and eleven approved (see Appendix D). It was suggested that the proportion of negatively stated items be reduced. Statements were included if rated as preferred by all, or five out of six judges (Anderson, 1981; Payne, 1974).

3. Assembly of the Instrument, the LHRQ (See Appendix E)

The closed questions for the resultant instrument of the study were comprised of a summary of the open data, with selections based on their relevance and clarity, organised into a structure to meet the needs of the research.

For important variables such as Positive Response and Attention to the stimulus, a variety of items needed to be devised in order to reduce the risk of "question effects" (Schuman & Presser, 1981) and to allow for a range of individual differences in musical appreciation style. The variables Enjoyment and Attention were to be measured by a number of scales which were considered to represent the most relevant attributes to define the concepts (Guttman, 1944). Selection of such attributes was based on theory, and their wording was designed with the help of survey responses.

3.1 Balance in the Content of Items

A number of different questions was used to measure important items such as positive-negative response to the stimulus. It was necessary to consider the response to the music as a whole, to its characteristics, and to ask on the quasi-behavioural level whether subjects would like to hear more of the music. It has been shown that the "general summary" type of question (such as "Did you enjoy the music, on the whole?") is "susceptible to context effects [which]
should be avoided if information can be built up from more specific questions" (Schuman & Presser, 1981: 311). A single question runs the risk of suffering "question effects" (Schuman & Presser, 1981) and lacking reliability (Payne, 1974). A somewhat larger number of items was initially incorporated to allow for an empirical reduction of scale items through the use of exploratory factor analysis. Factor analysis also assists in with establishing construct validity by indicating which questions are most strongly related in measuring a concept, and to what extent each question measures that concept (Kerlinger, 1965). Two items related to melody were both included in the LRHQ, firstly, because subjects in the case studies found these to be different, and, secondly because it has been demonstrated (Madsen & Geringer, 1990) that melody is a primary focal point for the musically trained.

3.2 Types of Statements used as Items

According to Anderson (1981a) it would be important to include an equal number of positive and negative statements in order to minimise "acquiescence", and the same recommendation by Boyle and Radocy (1987) was in order to avoid "response bias" (p. 204). This was the design used when preparing statements based on the pilot test. It was the recommendation of judges, however, that negative statements be eliminated or restricted to a minimal proportion on the basis that they could be confusing, and also because they were found to be integrally weaker as statements.

To bolster internal consistency reliability, certain statements were replicated with only inflected difference or by reversal of the positive-negative polarity of the statement. By correlation, the similarity of response to such statements would indicate a consistency level (Anderson, 1981).

For the enjoyment category, one internal state item, referring to subjects' reaction while exposed to a stimulus; one descriptive item, referring to collative properties of stimulus feature; and five evaluative items, relating to hedonic value were used (Racoczy & Boyle, 1997). For the attention category, seven items related to degree of focus on identified musical features, and four items related to more general attention modes. The familiarity item related to subjective memory of similarity of stimulus to previous listening experience. The final item related to behavioural intent, or desire to hear more of the music.
3.3 Level of Value to be Identified by LRHQ

The taxonomy provided by Krathwohl et al. (1964: 25-134) identifies levels of response to an educational stimulus. Levels of interest taken by students in the educational objective range from "being aware" to "avidly seek" and always "feel positively" toward. Levels of attitude range from having a "positive [or negative] feeling about something" to being prepared to "go out of one's way" to express it (p. 25). This study is concerned with response at level 2.3: "Responds emotionally ... seeks out, attaches value" (p. 25). Testing of sample is therefore aimed at identifying subjects' response level up to this level, and questions are devised in accordance with this. The study does not seek to identify a more permanent commitment to the stimulus music.

3.4 Items Selected to Measure the Variables of the Study

3.4.1 Items Measuring Subjects' Affective Response to Stimulus

Enjoyment

The criterion variable of the study, described as Enjoyment, was the positivity rating of subjects, in response to the musical stimulus presented. It was understood that the affective acceptance or rejection of a stimulus is based on "awareness of and attention to the stimulus, though not necessarily perception of its specific musical elements" (Bullock, 1973: 332).

Items Representing Enjoyment

The music made me feel relaxed.
I liked the mood of the music.
I liked the speed of the music.
I liked the strong notes that went on and on.
I liked the atmosphere the music created.
I liked the sound of the instrument.
The instrument was played with feeling.\textsuperscript{23}

\textsuperscript{23}Rodriguez, and Webster (1997) directed questioning toward awareness of expressive content in the belief that sensitivity to expressive elements is related to capacity for aesthetic experience. Although sensitivity to expressive elements does not necessarily transcend the boundaries of musical cultures [see rule-enculturation], this does not preclude aesthetic experience. 'Played with feeling' does not equate with 'experience a feeling in response to the music played'.
**Interest**

The interest measure was an assessment item implying behavioural intention, recommended by Kuhn et al. (1981). Since this construct represents a unidimensional value judgment, in relation to the listeners' synthesised experience, a single item was judged to adequately represent this construct.

*Item Representing Interest*

I would like to hear more of this music.

**3.4.2 Items Measuring Variables which Mediate Affective Response**

The principal relationship to be examined by the study, was that of presentation scenario to positive response, Enjoyment, of the stimulus music. Associated responses, also participant in that relationship, are individual listener differences in Attention style, and in Familiarity with the stimulus. Since these variables were also potentially influenced by the treatment, they were examined as mediating influences on the criterion variable.

**Familiarity**

The measurement of subjective familiarity with the stimulus is important as familiarity is known to mediate affective response (Bradley, 1971; Duerksen, 1972; Hargreaves, 1984; Moreland & Zajonc, 1979; Payne, 1980; Radocy, 1982). This variable, like Interest, was found to be unidimensional, and to be best measured by one clearly worded item on the LRHQ. Pilot responses showed that the wording used for the Familiarity question was clearly understood, therefore that question was converted to a statement for Likert-rating on the questionnaire. Its position as the first item of response was suggested by the finding of Zajonc (1980) that familiarity is the first response to register when exposed to a stimulus.

*Item Representing Familiarity*

I have heard this type of music before.
Attention

Attention style is known to mediate affective response (Bullock, 1973; Geringer & Madsen, 1995-6; LeBlanc, 1982; Long et al., 1989; Prince, 1972; Zalanowski, 1986 & 1990). The quality of attention given to the music is seen as a source of influence on listeners' enjoyment and may well interact with the Condition of Presentation and other independent variables. Vocabulary used in responses assisted in preparation of items for the LRHQ. The Fisher Test of Musical Appreciation (1949) tested for preference responses to mood, rhythm and timbre. As well as the response of liking for the mood, rhythm and timbre, it was considered worth enquiring about the degree to which the listener was absorbed in the mood, and was attending to rhythm and timbre. These might be categorised as attentional modes. The Crickmore Syndrome Test of Music Appreciation (1968) tested for sustained interest and absence of mental pictures which may also be interpreted as attentional modes.

Items Representing Attention

I was absorbed in the mood of the music.
I listened to the piece more as a whole than noticing details.
I was having a lot of ideas about the music while I listened.
I was distracted by thoughts unrelated to the music.
I was mainly listening to the melody.
I was focusing on the melody.
I noticed some very quick notes.
I focused on the vibrato (wavy) effects of some long notes.
I noticed variations in the tone colour.
I noticed the way some notes ran into each other slowly.
I was listening to the rhythms in the music.

3.4.3 Items Measuring Variables of Listeners' Individual Difference

Demographic Details

Additional information that was sought included demographic details of age, gender, class year, school region and type, and school gender (i.e., whether the school was single sex or co-educational). Details concerning the locality, gender intake and type of schools were recorded by the researcher. Subjects indicated their gender and school year on the questionnaire form.
**Music Experience**

Subjects reported the details on their previous musical experience (both listening and practical) in response to nine items which concluded the LRHQ. The topics covered in this section are listed below. The actual questions in format are provided in Appendix E.

1. **Practical Experience - Performance Media and Level of Tuition:**
   - Names of instruments (and/or voice)
     - Years self-taught
     - Years tuition before 1996
     - Highest grade each (if any)
     - Learning now?
     - Years playing in band or other instrumental group
     - Years singing in a choir

2. **General Class Music Experience**
   - Years music in classroom, secondary
   - Years music in classroom, primary

3.5 **Likert Rating scale**

The Likert rating scale is used when the strength of response is important in matters concerning affect, evaluation and attitude (Larson, 1971; LeBlanc & Sherrill, 1986; Flowers, 1988; Boyle et al., 1981; Peery & Peery 1986; Baumann, 1960; Hargreaves, 1984; Zalanowski, 1990; Darrow et al., 1987). A tendency to score "unsure" right down the middle of a rating scale is reportedly particularly common when subjects are unfamiliar with the material being rated (Kerlinger, 1965). As a "don't know" filter is unnecessary unless an "informed opinion" is required (Schuman & Presser, 1981) and scores in the median range make interpretation more difficult (Edwards, 1967), it was decided that subjects should be requested to indicate their suspected tendency when uncertain how to respond. Degrees on the Likert scaling were therefore set at eight categories, replacing the third degree, "unsure", with third and fourth degrees, "slightly true" or "slightly false", in order to force a choice (Anderson, 1981). In recommending the "forced-choice" method, Payne (1964) found that such instruments "yield more uniform distributions of scores and are efficient, easily scored, objective, reliable, and less fakable than other instruments" (p. 164). The verbal instruction supplied was "if you had to choose one way or the other, what would be most likely for you?" This was done to avoid too many "uncertain" responses in a
study which asks participants to report on issues they may not normally be aware of, or easily verbalise.

3.6 Order of items

Categories of questions are ordered in the questionnaire by a principle of closeness to the central issue, affective response to the stimulus. It has been pointed out that "affective characteristics generally maintain themselves over a long period of time", but that this stability "decreases as the referent becomes more and more specific" (Payne, 1974: 159). For this reason, initial affective reactions to the stimulus were sought immediately after the music stopped (Payne, 1974) and questions of attentional style were necessarily placed with more separation from the presentation of the stimulus. The conclusive judgment of behavioural intent was reserved final placement in the questionnaire.

With intent to gain the most immediate affective responses possible from subjects, the questionnaire was commenced as close after the listening experience as possible. Nisbett and Wilson (1977) claimed that probably the most important factor in accuracy of self-reporting is the "separation in time between the report and the actual occurrence of the process" (p. 251). They suggested that while memory of the mental activity may be lost within seconds, the effective stimulus is likely to remain accessible at this point, giving subjects some chance of accurately reporting the influence of the stimulus, if the cause and effect seem plausible to the respondent. It was for this reason that the researcher's immediate instruction as the music ceased was: "Keep the music in your mind while you answer the questions", a suggestion deduced from ideas underlying neurolinguistic programming (O'Connor, 1987).

It was found in research (Zajonc, 1980) that familiarity is the first response to occur naturally, followed directly by positive- negative reaction, so the familiarity question was inserted before those which related to the affective response to the music. The response toward the music as a whole was sought first and then its details, as questioning about the latter would already be removing subjects further from the state they were being asked to recall. Questions referring to attention, both in its general style and in the aspects of the music towards which it was directed, needed also to be close to the memory of the experience. The placement of questions was designed in awareness that to respond about liking aspects of the music meant replaying the music and one's feelings about it in the mind, whilst to respond about the type of attention one paid might be done with a little distance from those emotions. This meant that once
questioning turned to details of attention, the feeling might be somewhat removed as a more cognitive mode entered to recall details of the listener's mental activities. Context effects were taken into account, and at times encouraged, and since "general summary-type" questions are more sensitive to order (Schumann & Presser, 1981), these were dealt with carefully.

4. Contextual Information Regarding the Stimulus Music

A brief introductory announcement was made to half of the class groups hearing the audio performance and to half of classes viewing the video performance:

"You are about to hear a traditional piece for the shakuhachi which is the name of an ancient Japanese bamboo flute. It was played hundreds of years ago in Japan by monks who wandered around the countryside. These monks were members of a Zen Buddhist order, and they played the shakuhachi as a way of meditating. They did not consider this to be music, and they concentrated not on the sound they made but on their breathing and movements. Different sound effects which you will hear are the result of special breathing techniques, and ways of moving and shaking the head."

The aim in constructing the above passage was to provide an informational context for listening to the shakuhachi playing music which was expected to be unfamiliar to subjects. The purpose was not to influence the nature of affective response, but to assist listeners in establishing a sufficient connection with the music in order to make a musical response. Zalanowski (1990) had found different types of program were necessary for individuals with differing learning styles. This information, therefore, while intentionally brief, was multi-faceted in order to provide, in an unbiased manner, the essential background for listeners of either Holistic or Analytical tendency in cognitive style.

The informational components included an element of human interest in relating the origin of the instrument, and particularly in the Zen Buddhist monk history. The situational interest of this referential material was considered a potential a trigger for mental imagery and for a meditational mood. It could also possibly assist listeners whose style was Holistic in attaching feelingful meaning to
perceived sounds, and thus towards the unification of the sound sequence into a perceived whole.

Since the music had not been constructed according to the structural principles of Western classical theory with which subjects were familiar, information concerning structural analysis was not included. That type of information had been found least useful on initial hearing (Jensen, 1970; Bartlett, 1973; Zalanowski, 1986; Halpern, 1992). Analytical information which was included referred to those elements featured in the music which were shared, at least conceptually, by both musical cultures. These were the interesting use made by the performer of both timbre and vibrato whose potential as objects of perceptual interest was identified by Rahn (1983). It was important to direct attention toward these musical features since in the historical styles of Western music these dimensions are frequently overlooked as nuances (Erickson, 1975). This is likely due to the fact that these elements are both carriers of the sound as well as featural aspects of the sound. In pointing out such idiomatic features, it was intended that listeners whose cognitive style was Analytical would find situational interest in these, as well as a decrease in the potential complexity of the music, by an engagement with novel use of known elements.

Zalanowski (1986) had recommended that a single listening should be limited in its purpose to either enjoyment or understanding. For the single exposure to the unfamiliar musical stimulus, a choice was not made between enjoyment and understanding when selecting this information. Since the restrictions of this study imposed the limit of information or no information, for use with a random sample, the prepared information had to provide the essentials for subjects of either cognitive style. In so doing, a degree of provision was simultaneously accorded to the likely requisites for both enjoyment and understanding. In order to assist students to approach the cultural aesthetic experience, this information was constructed in the light of a recommendation by Trimillos (1983) that the program "should attempt to bring to the listener the dynamics, the logic, and the resonance of the music as sound and as a creative and re-creative process" (p. 46).

The contextual information provided is in conformity with principles set down by Nettl (1989) in addressing four specified areas of knowledge for use in interpretation of the universe of ideas about music of a culture. These were, firstly, conceptions of the general characteristics of the music; secondly, ideas about music as it exists in time, its origins and history; thirdly, the way in which
music is regarded by a society, including its connections with the supernatural; and, fourthly, conceptions of music as an artistic system of sound.

5. The Stimulus Music

5.1 Selection of the Musical Genre

The primary criterion for selection of a musical item was that it be unfamiliar. Previous research (Bartlett, 1973; Bradley, 1971; Duerksen, 1972; Hargreaves, 1984; Payne, 1980; Radocy, 1982) had found that prejudice could be formed by familiarity with a musical genre, and that this was likely to influence the enjoyment experienced by listeners. Established preference for a particular musical style has shown to be a strong influence on affective response (LeBlanc, 1983). It was therefore necessary to seek a genre to which the listening sample had received little or no exposure. This was found in the traditional shakuhachi music of Japan which at the time of the study was little known by Australian or even Japanese populaces. A second criterion in selecting an appropriate musical item was that interest in the performance should display large variance. This was shown to be the case in the pilot study.

The fact that the music is instrumental rather than vocal avoided additional difficulties which might have been introduced by language and gender barriers (LeBlanc, 1981, 1983; Darrow, 1987). Other influential musical characteristics include fast tempo and prominent beat which are likely to be important for a positive response (LeBlanc, 1981). Due to the preponderance of sustained notes in the stimulus for this study, its tempo may be described as slow, and the piece lacks a regular beat. Bright timbre, loud dynamic and moderate to complex texture have also been shown to be preferred over a wide age range (Fung, 1996). The stimulus music for this study would not receive positive response for these attributes, although, for some listeners, the complexity of timbre and moderate embellishment might conceivably compensate for the simplicity of texture in a solo performance on a flute-type instrument. Since flute timbre has low commonality with instruments of any other group - reeds, strings, brass or percussion (Wedin & Goude, 1972) the possibilities for experiential associations are restricted. The fact that the timbre variations and performance practices make the sound of the shakuhachi readily distinct from that of the Western flute further reduces the chance of bias due to established musical preferences. In
favour of the stimulus music for general preference, are its use of tonal centres in pitch relations, the use of a variety of pitches, its smooth texture and the frequent, although not constant, brightness of timbre (Fung, 1996).

The musical structure of "Shirabe" may simply be described as a group of melodic phrases, each arched in contour, as is the overall contour of the melody. Recurrence, the most fundamental and widespread structural device of music historically, throughout the world (Sawa, 1982) unifies the melody, and assists in its familiarisation. A honkyoku is quite well described by analogy in the following passage written of variation form in Western classical music:

It is the web of individual connections between its various components that gives it formal coherence. In other words, the form inheres not so much in the influence of the whole over the experiencing of the parts as in the influence of each part over the experiencing of the other parts. And this constitutes a very much more diffuse conception of formal organization than the one that is embodied in most theoretical and analytical approaches to musical structure. [Such structure is a source of] indirect, but ecologically valid, information about the organization of listeners’ experiences (Cook, 1990: 65).

The aesthetic intention native to the origin of the honkyoku, closely resembles Rahn's (1994) description of art appreciation, in the West, as "affirming the contemplative, with respect to that object" (p. 60). Rahn's reference to the operas of Philip Glass as directed beyond "expressivity" and relying on "structures of almost frightening asceticism" (p. 61), corresponds with the intent in honkyoku performance to reproduce an object whose every detail has been preordained, and yet which will only crystallise in conjunction with the spontaneity of the craftsman, resulting in a connection to "the Sacred". An aspect in which these two aesthetic modes may be noted to differ, is with respect to any value attributed to the personalisation of the improvisation which is part of a performance practice constrained by the discipline of its artform (Foley, 1985). In Rahn's (1994) view, individual creativity lies at the core of the act of art, whereas in honkyoku there is a purity of intent which transcends the individuality of performer and listener, and even the concept of artistry. The honkyoku artefact is simply a sonic meditation. Randall's (1994) instructions to listeners could be well applied to this genre: "Do not get outside the sound in any way ... Do not make value judgments of the sound as it occurs" (p. 96). Due to the honkyoku's meditational function which applies to performer and player, the distinction between activities of
artist and audience is not only blurred (Dewey, 1913; Maus, 1994), but in a sense, nonexistent.

5.2 The Selected Honkyoku, "Shirabe"

The stimulus music was a performance, just over two minutes in duration, of a traditional Japanese honkyoku (original piece) played on the shakuhachi, a meditational bamboo flute. This piece, entitled "Shirabe" ("Searching") stands within the repertoire of the Chikuho traditional school of shakuhachi music.

The performance was recorded in both audio and video. The video recording24 of Lee's performance commenced with a full view of the performer in traditional costume and formal kneeling posture, then moving in to close-up camera work for the rest of the performance. This was in keeping with the intimacy of the musical genre, and also enabled a clear view of performance techniques. Sections of the video sequence were enhanced with superimposed images of natural scenery, some of which could be described as emblematic of Japan. This additional visual element, emphasised the subtlety of the music and the mood of the performance. Selection of this video recording was considered to be appropriate to the purpose of this research, as it was deemed to achieve the purpose for which it was designed by commercial professionals in mass media. That purpose was to tastefully engage the audience in a serene mood, providing a context of nature, aspects of which could be related to Japan. Since the purpose of the listening experience in this instance was to promote maximum enjoyment of the music, not for musical analysis, this production was judged to be very appropriate. The principal functions served by the visual content were judged to be representational and interpretational, according to analysis of validating functions of visual aids (Levin, Anglin & Carney, 1987).

The performance was by Riley Lee, the first non-Japanese to attain the rank of "grand master" (dai shihan) on shakuhachi. Lee has published articles, lectured and written his doctoral thesis on the subject. He is a professional performer with numerous recordings to his name (see Chapter One), and has given concerts internationally, throughout Japan, the USA, Canada, Australia, and Western Europe including performances with the Boston, Japan Philharmonic, and Honolulu Symphony Orchestras.

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24A copy of this video accompanies this volume.
The performed version of Shirabe has been notated by the researcher in a transcription (see Appendix F) in accordance with the recommendations of Abraham and Hornbostel (1994). Since the shakuhachi is made in a range of sizes, notation is based on a standardised set of finger positions, thus the transcription appears in a pitch range which is a transposition of the actual pitch range of the performance.

Research in music preferences has shown that the characteristics of the music are an important influence on affective response, as is the musical training of the listener (Darrow et al., 1987), and listeners' reported rating of familiarity with the genre (Fung, 1996). The stimulus music is therefore examined for its attributes, particularly with regard to the issue of complexity for listeners unaccustomed to this genre.

5.3 Musical Analysis of Shirabe

5.3.1 Rhythm

The broad unit of temporal organisation in honkyoku is the breath span, comprising a phrase length. Within each phrase of Shirabe (the stimulus) is one or more notes of sustained duration, each of which is embellished with some relatively short notes. Rhythms within the music are framed by the phrases within which they occur, and these are in their turn organic or natural in their close relation to a breathing cycle.

In an examination of the musical structure of the honkyoku it is necessary to take performance practices into account because, the style is "quasi-improvisatory". Details concerning rhythmic durations which must be faithfully imitated in lessons may be varied at will in a performance situation by the experienced player (Lee, 1986). Although the classical honkyoku "has no discernible beat or meter, being performed in what is commonly referred to as free rhythm" (Lee, 1992: 134), its comprehensibility is assisted by the breath-based phrasing (Winckel, 1967). Lee points out that "variability is essential and unavoidable in every performance, even by the same performer" and that "the honkyoku may be defined more by the process than the product" (Lee, 1992: 139). The accuracy of periodicity in honkyoku is not preordained by a set metric pulse, but more closely relates to the Western concept of a rubato style of movement. Due to the combined use of embellishment and rubato, Lomax (1968) would have defined this genre as rhythmically complex.
The perceptual organisation of rhythmic stimuli involves differentiation (Lundin, 1953). Seashore (1947) described rhythmic organisation as objective when a stimulus provides organisational devices such as accents or metre, and subjective when a stimulus lacking such properties requires the listener to supply organisation by mentally grouping durational units of the stimulus. The fact that the rhythmic response is a learned response (Radocy & Boyle, 1979) may lead to the conclusion that the organisation of durations into phrasing according to a natural breathing cycle is an unfamiliar structural device. The ametricality which results, however, is not of itself totally unfamiliar to an audience comprised of individuals who are accustomed in varying degrees to ambient genres currently promulgated by the mass media.

The rhythmic response is both perceptual and a motor response which involves the entire organism (Lundin, 1953). Lundin proposed (p. 111) that in general, the response pattern during listening is more perceptual than motor, and during dancing more motor than perceptual, and that motor response tends to coincide with rhythm in the music. It is possible to surmise that in listening to Shirabe the breathing of the listener may be inclined to slow down in sympathy with the performance, resulting in a sense of relaxation. As an involuntary response, however, this would be classified as a physiological rather than a motor response, which would need to be investigated. Subjects were asked, in the questionnaire, to rate their state of relaxation while listening as it was considered that this would relate closely to the degree of positivity experienced toward the stimulus.

5.3.2 Melody

Melody is formed by a succession of single tones with their pitch and durational relationships. The listener perceives such a tonal and temporal structure as a melodic contour. "The melodic contour is a Gestalt or holistic pattern to which a listener responds" (Radocy & Boyle, 1979: 112). The characteristics which enable a series of tones to cohere and be perceived as a whole are propinquity, repetition and finality (Lundin, 1953).

With regard to propinquity, Shirabe is well within the range described as normal for typical traditional Western melodies with its "proponderance of smaller successive intervals" (Radocy & Boyle, 1979: 112). The order in frequency of occurrence is as follows: (1) seconds (2) thirds (3) unisons separated by an ornamental note (4) thirds (5) fourths. The repetition of
the four most used notes, accounts for 76% of all the notes in Shirabe, and it exhibits a frequency of returning to certain notes similar to that found in traditional Western melody (Radocy & Boyle, 1979).

The principle of finality is achieved in Shirabe in a manner which coincides with the Western aural concept defined by Lundin (1953) as a final cadence in which "the last note of the series is one which is often repeated ... or emphasised in the body of the melody" (p. 70). The sense of finality in Shirabe is thus to some degree appreciable by the Western ear, even without the cadential element of an "implied harmonic accompaniment [which is often] although not necessarily" (p. 113), perceptible in Western melodic cadence (Radocy & Boyle, 1979). A source of possible distraction from the melodic flow could occur if undue interest in the ornamental notes, frequently interspersed due to fingered articulations, were to cause division of perception into two streams on the basis of frequency rather than temporal sequence (Bregman, 1990).

Lundin (1953) concluded that what constitutes melody is defined as much by the previous experience of the respondent listener as by the characteristics of the stimulus. The stimulus music may well be perceived as a melodic entity by Western listeners, nevertheless, it must be noted that the ability to perceive patterns develops as a result of "prolonged experience (learning), whether formal or informal, with the particular phenomenon" (Radocy & Boyle, 1979: 115). Experience with the conventions and scale system of a particular melodic style develops a certain set of expectations with which a new melody may conform to some degree. The relation between the melody and these expectations is important to listeners' perception and concomitant response. An encounter with melody from a tradition other than that to which a listener is accustomed is likely to conform less to expectation, and, at extreme, to fail to relate as melody for the perceiver. Shirabe satisfies requirements for a melody on the three structural variables mentioned above, but is not couched in the "tonal harmonic framework" commonly expected by Western ears, and does not use the diatonic scale.

The scalar structure of Shirabe involves some intervals which may seem "strange" (as described by a listener in the pilot test) to the Western listener. With regard to the particular musical attributes of tonality, harmony and scale,

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25Articulation of the individual tone is an important consideration in traditional Japanese composition (Burnett, 1980), and the tongue is not used for this purpose in shakuhachi performance although it is the norm in the technique of the Western flute.
the nonfulfilment of certain expectations, according to Radocy and Boyle (1979), lessens the fulfilment of Gestalt laws of organisation, thus weakening the potential for Western listeners to readily accept Shirabe as a melody. This effect, however, is not strong. The scale (see Appendix G) is sufficiently simple in its nature and sufficiently similar to Western scalar structure that it provides a suitable standard by which Western listeners can measure melodic motion (Helmholtz, 1877/1954).

The onkai (Japanese word for musical scale) in certain Japanese genres such as gagaku (court music) and sokyoku (music for the koto) uses one kakuon (tonic or nuclear tone), but in genres such as folk music there may be two or more such tones, usually distanced at a fourth or fifth (Koizumi, 1977) as occurs typically in the classical honkyoku genre of the shakuhachi. An onkai consists of a series of pitches constructed by superimposing two of the characteristic tetrachords (series of three pitches spanning a perfect fourth in total). Koizumi listed four such onkai types. The combination of tetrachords used for honkyoku results from an interchange of tetrachords built in relation to the kakuon/s of the piece.

The internal coordination of the onkai elements within each cell, or minimal component of the compositional structure, is fixed in advance (Tamba, 1983) and expounded into a musical phrase with varying degree of improvisational input26. The minyo, an ascending tetrachord usually associated with folk songs and children's game songs (Koizumi, 1977), is represented in this version of shirabe by the rising whole tone when approaching the prime kakuon (notated F-G). This pattern which occurs in five of the thirteen cells is labelled "A" and "A1" in the melodic analysis of "Shirabe" (Appendix G) where phrases are reduced to their skeletal structure as cells27. It is also used in one cell, labelled "C", leading to the secondary kakuon (notated D) which is a fifth higher than the prime kakuon. The Miyakobushi, a descending tetrachord found in urban and art music including classical shakuhachi music (Koizumi, 1977), is represented in by a falling semitone movement towards a kakuon. This occurs in four cells, labelled "B", "D"

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26Pekkila (1986) described how a musician commences memorisation of a piece in a "mechanically copied version" (p. 220), later incorporating embellishments and variations. Fülle (1986) explained how the introduction of the tape recorder as an aid in the memorising process has been detrimental to students' improvisational development.

27In order to facilitate recognition of the tonal construction, the phrases of Shirabe are illustrated in an interpretative simplification of the melody (Appendix F). Only main notes are included, and notes which occur briefly as embellishments are excluded. Durations have been reduced to relative values.
and "D1", leading to the prime *kakuon*, and in three cells, labelled "E" and "E1" falling to the secondary *kakuon*. A tertiary *kakuon* receives some emphasis in cells 3 and 4 in the gradual rise from the primary to the secondary *kakuon* which shares an ambivalent centrality in cell 4. The highest pitch occurs in cells 6 and 9, shaping the top of the rounded arch in the general contour of the melodic line, which dips to a penultimate low range in cell 12, only to leap to the high primary *kakuon* in the final cadential cell.

As broadly defined, tonality, whether in Western or non-Western music, means the use of a primary pitch as a "tonal centre" "to which other tones ultimately return ... [constituting] the ultimate musical expectation" (Radocy & Boyle, 1979: 123). The musical gravitation towards a tonic takes a more complex form in *Shirabe* by inclusion of secondary and tertiary melodic tonal centres. Nonconformity to an expected harmonic basis causes an effect of some disruption to the usual organisational laws of traditional Western melody, but the relationship of these *kakuons* to the Western tonic, dominant and subdominant has an ameliorating influence. The durations of prime *kakuon*, equivalent to a Western tonic, occupy in total 47% of the total duration of the piece, the secondary *kakuon*, equivalent of a dominant, occupies 16%, and the tertiary *kakuon*, equivalent of a subdominant, occupies 13% of the entire duration (Appendix G).

Recurrence is observable in the use of only eight cell patterns for the construction of the thirteen melodic phrases (Appendix G). Cell A, on the primary *kakuon*, is used for phrases 1 and 2, and its partial inversion, Cell A1, in phrases 5, 8 and 13. Leading to the same *kakuon*, cell D occurs in phrases 6 and 9, and at the lower octave in phrase 11. Cell E, on the secondary *kakuon*, is used in phrases 7 and 10. Only cells B, C and E1 appear to occur without repetition, although elements of their construction are clearly shared with other cells.

Whilst the structural characteristics of propinquity, repetition and finality reflect the organisational principles of Gestalt psychology in assisting the melody to be perceived as a unified whole, response to melody is likely to be influenced by many other factors. "Changes in loudness, timbre, harmony, texture, and rhythm also can serve to emphasize particular tones of a melody" (Radocy & Boyle, 1979: 114). In the transcription of *Shirabe* (Appendix F), vibrato, which is subject to stylistic variations, is denoted by wavy line demarcations; the term *furi* indicates the use of a breathy timbre, and the fleeting ornamental notes indicate pitches which were produced by finger movements in their idiomatic
function of articulation. When musical notations have been recorded as a memory aid for *honkyoku*, any indication of such variations occurs as denotation of performance techniques (Gunji, 1986), rather than of intended audible results. Such variables may be perceived as nuance within the whole idea, yet it is conceivable that through musical excess or emphasis, or through a shift exerted more by the listener, attention may be directed toward such details. Idiomatic attributes of the melody are thus perceivable on a continuum which ranges from their presence as nuance of the melody, to their occupation of central focal point of attention for which the melody becomes the backdrop.

5.3.3 Unfamiliar Characteristics of the Stimulus as Judged by Music Panel

Reynolds (1975) proposed that the very differences that are revealed in the detail of this music may enhance interest as there are "clearly limits to the method of trying to command attention by exceeding and elaborating upon normal patterns of sensation" (p. 44). In discussing the variety of timbre integral to *shakuhachi* performance, Reynolds rightly pointed out that the very "steps of a scale vary drastically in timbre and strength" (p. 57), reflecting the structure of the instrument. This practice runs against the tradition of more than three centuries in Western music, according to which the ideal professional sound maintains a fulness of timbral consistency. Any discontinuity in the timbre has been regarded as an imperfection to be avoided, although this restriction may also be regarded as a limit to the artist's expressiveness. This may have been in part due to the inability of the acoustics in many performance spaces to carry the extremely slight sounds which might have otherwise been utilised.

A panel of six, three members of academic staff and three doctoral students in Music Education, passed judgments regarding musical characteristics of the *Shirabe* performance which might be experienced as highly unfamiliar by Western listeners. Since Oku (1993/4) had ascertained that the recognition of Japanese cadence was poorest in listeners who were the most highly trained in Western music, this panel was considered to be at a good level for such a judgment. Their familiarity levels with the genre ranged from fair (two members) to none (two members). The following judgments were generated:

Complexity of the music was medium; the tonality was sufficiently unified to be cohesive; the sense of tonality in the music was unified; the melody was felt to proceed toward its conclusion; musical details attracted attention
most of the time; the tempo was slow; the timbre was of medium brightness and showed variety of colour; the rhythm was moderately simple; a pulse was perceivable at a subtle level, with slight irregularity; pitches were mostly "in tune" by the standards of Western popular genres; scalar intervals mostly resembled those of Western melodic conventions; the degree of melodic embellishment was moderately high; attention was frequently drawn to the vibrato (for one of the panel this was continuous throughout the performance28); variation in the vibrato was moderate to high. Members of the panel who lacked practical experience as performers or teachers of vibrato experienced the vibrato in "Shirabe" as more varied than those who had more practical experience with this technique.

In summary, the complexity could be described as moderate. The features which could be said to provide some novelty were timbre, metricality, melodic embellishment and vibrato. Whilst there was a degree of unfamiliarity exerted by these musical attributes, the objective complexity of the musical stimulus was not judged to be high.

28 This attentional response was reflected in the receptive mode experienced by subjects, resulting in the Attention subscale, "Receptive" (see Chapter Six).
CHAPTER FIVE

Design of the Study

This study was to explore the effects of visual and verbal contextual information on high school music students' affective responses to music. An experiment was designed to test the relative benefits of four different modes of presentation. This chapter addresses the design of the study. It will examine the nature of the variables used, and the roles they play in the research. It also describes the sample for the study.

1. Method of the Study

Four groups of classes, as varied and equivalent as possible in their makeup, experienced the same piece of music presented in one of the four presentation scenarios. A researcher-designed questionnaire was completed by subjects immediately after their experience of the musical performance to measure their affective response in terms of Enjoyment, or liking for the music; and Interest, the degree to which subjects wished to hear more of the music; as well as their familiarity with the music, and their attentional behaviour.

1.1 Reasons for Selection of this Method

By its range of items relating to enjoyment and attention styles, the questionnaire method was considered advantageous in enabling some possible interpretations on how these phenomena function. While it may be "impossible to isolate variables from the context in which they [are] embedded", examination of the results from multiple perspectives is enabled, thus providing a "contextual and holistic view" (Bresler, 1996: 6).

29 As suggested by Wallace (1971), the reason for the exploratory nature of this study, rather than testing of a specific hypothesis, is related to an early state of growth in a paradigm incorporating this combination of variables.
The use of questionnaire was preferred in this study to the CRDI (Continuous Response Digital Interface), as the enquiry concerned the overall positive-negative, or like-dislike response to the complete musical item, rather than a measure of emotional response relating to the sequence of events in the music (Kuhn, 1980; Brittin & Sheldon, 1995). It was also desirable to avoid the risk of elevated or disrupted attention, a possible criticism of this device (Adams, 1994; Brittin & Sheldon, 1995). The very close association between scale items, both individually and as a set, and the close association in experience and time between response and the presentation of the attitudinal object in question, contribute an assurance of some measure of validity to the study (Payne, 1974; Shaw & Wright, 1967).

A reason why results of this research may need to be carefully placed in perspective, is its reliance on verbal reports about mental processes. "Self-reports are accurate only to the extent that the listener is able to assess his or her own experience" (Madsen, Brittin & Capperella-Sheldon, 1993). Nisbett and Wilson (1977) suggested that such reports "may have little value except ... as verbal explanations per se" (p. 251). They proposed the possibility that subjects making retrospective evaluations may lack access to memories about their mental processes in response to a stimulus, and generate theories which seem plausible explanations for their experience.

Concerning the reliability of "retrospective accounts" in the context of writers discussing their thinking process, Smagorinsky (1994) saw a possible problem in the "limitations of short-term memory" (p. 119). He concluded that in spite of the memory gaps, we may at least gain some information which need not be invalidated. Nevertheless, Smagorinsky was in agreement with the cautious treatment of recalled details about experience due to the tendency for distortion by reconstruction from generalisation of remembered aspects, or for reliance on assumed prototype answers. In line with recommendations from Smagorinsky, important data for this study is collected immediately after the experience; subjects were given the instruction "keep the music in your mind while you answer"; memory cues were provided within the statements to assist with recollection of details; the purpose of the research was made clear to subjects, and statements were designed in language to be understood by the sample through the completion of pilots.
1.2 Control of the Study

This instrument measures various responses to perception of a musical stimulus. Subjects have pre-existing attitudes from other prior learning which may affect their perception of the new stimulus (Cutietta, 1992). Due to the unfamiliarity with *shakuhachi* music, its more structural features would be less susceptible to any previous evaluation by subjects. Attitudes, however, pertaining to such elements of the stimulus as its unfamiliarity, ethnic character, idiomatic features, instrumental timbre, musical tempo or mood were of concern.

Difficulty was envisaged in obtaining background information from subjects concerning their listening experience, musical preferences and attitudes to music of different cultures. It was thought that a pretest containing such questions would create an awareness which would have a detrimental impact on the experiment, referred to as the Hawthorne effect (Borg & Gall, 1983). Additional drawbacks to a pretest were the reluctance of schools to admit a researcher to classrooms even for one session, the renowned difficulty of retaining the same sample, and the administrative problems involved in matching response papers while maintaining the anonymity of subjects. To avoid bias in the main test, the pretest would have had to be temporally distanced from the treatment and conducted by someone other than the researcher. The sample size being purposely large in expectation of a small proportion of the variance to be explained by the treatment, the practicalities of maintaining the sample, matching anonymous test forms, requiring assistance from and overseeing so many teachers over such a wide area were forbidding.

The nature of the musical stimulus, being of an unfamiliar genre, fortunately meant that it was not likely to be associated precisely with any established preferences, other than in the broader sense of its musical attributes in terms of tempo, instrumental timbre, rhythm and dynamic. It was therefore considered unnecessary to conduct an elaborate preference survey. Any established preferences, or socio-cultural influences impinging on attitudes to ethnicity, affecting response to the stimulus were considered to be adequately controlled by obtaining responses from such a large and well-distributed sample. Differences due to treatment were expected to produce a smaller effect, hence requiring that effects associated with pre-existing preferences be partialled out.

Variables whose role was to be controls in the experiment were listener characteristics of demographic detail including subjects' gender and school year, and their school's locality, type and gender intake; and subjects' level and type of
musical experience. These variables serve an important role in a study whose sample uses intact classroom groups. Where any significant differences on the criterion are found in these variables, such systemic bias may be reduced by adjustment of the means in an analysis of variance to give a fairer comparison between the treatment groups (Stevens, 1986). Due to the stratification of experimental groups into such categories as area, school year and school type, and the anticipation of a small effect quantity on the dependent variable, it was imperative that this experiment utilised as large a sample as possible (Borg & Gall, 1983).

1.3 Expected Small Measures of Explained Variance

As previously noted (LeBlanc, 1983), the largest difference in degree of musical enjoyment has been found to be attributable to pre-existing preferences and attitudes towards the musical characteristics of the stimulus. This study was not designed to measure such influences on subjects' response to the stimulus. When measuring the differences in degree of enjoyment that are related purely to the presentation scenario, small measures of variance are to be expected, and a large sample required (Legree, & Gillis, 1991; Reeves, 1993). A small variance however may be far from trivial in its effective outcome. Stevens (1986) noted that "the more homogeneous the population the smaller the correlation will tend to be, and therefore the smaller the percent of variance accounted for can potentially be" (p. 135-6). Given the large sample used in this study and a degree of homogeneity due to age and musical experience, there is adequate power to detect these small effects, and to regard them as significant.

2. Variables of the Study

2.1 Criterion Variables

Enjoyment

The criterion variable of the study, described as Enjoyment, is the positivity rating of subjects, in response to the musical stimulus presented. The response was ascertained by subjects rating the music and its attributes on Likert-type affective scales. A secondary criterion was subjects' ratings in response of behavioural intent, Interest, towards further experience of the stimulus.
Interest

As for familiarity, this variable was measured by one item on the LRHQ. Again, no other questions that would provide a valid measure of the construct could be identified. Its position as the final item of response was designed to reflect its natural position as a residual response following cognitive and affective considerations.

2.2 Treatment Variables

This study focuses on the possible influence of presentation style on affective response to unfamiliar music. The principal independent variables are the four presentation conditions. The two aspects of classroom presentation technique were: the provision or non-provision of introductory information; and the use of video-recording, as opposed to the solely audio-recorded medium.

The Four Presentation Conditions

Subjects in two treatments heard an audio-recording, either with or without introductory verbal Information; and in the other two conditions, a video-tape was played, with or without the introductory verbal Information.

The four presentation scenarios selected were therefore:

- Audio No Information
- Audio With Information
- Video No Information
- Video With Information

Half of the sample listened to an audio recording of the stimulus music, and the other half viewed a video of the same performance. The contextual Information, provided in the form of an introductory announcement, was heard by half of the class groups hearing the audio performance and by half of the classes viewing the video performance:

2.3 Mediating Variables

The principal relationship to be examined by the study, was that of presentation scenario to positive response, Enjoyment, of the stimulus music. Associated responses, also participant in that relationship, are individual listener differences
in Attention style, and in Familiarity with the stimulus. Since these variables were also potentially influenced by the treatment, they were examined as mediating influences on the criterion variable.

**Familiarity**

This variable was measured by one item on the LRHQ. As indicated earlier, the use of a single item to measure a construct is generally undesirable owing to reliability considerations. In the case of familiarity, however, there were no other questions that would provide a valid measure of the construct, and, as such, this was left as a single item within the overall scale. Its position as the first item of response was suggested by the finding of Zajonc (1980) that familiarity is the first response to register when exposed to a stimulus. Familiarity is known to mediate affective response (Bradley, 1971; Duverksen, 1972; Hargreaves, 1984; Moreland & Zajonc, 1979; Payne, 1980; Radocy, 1982).

**Attention Style**

This variable was measured in eleven items on the LRHQ. The position of these items was secondary to items of affective response due to the necessity of keeping the latter as immediate upon the experience as possible. Being less subjective in their nature, it was thought that these items would be less likely to lose accuracy by the slight delay in the request for their recall. Attention style is known to mediate affective response (Bullock, 1973; Geringer & Madsen, 1995-6; LeBlanc, 1982; Long et al., 1989; Prince, 1972; Zalanowski, 1986 & 1990).

### 2.4 Listener Characteristic Variables

The Demographic and Music Experience variables constituted a partial control for differences in response which are largely attributable to preference.

#### Demographic Details

Details concerning the locality, gender intake and type of schools were recorded by the researcher. Subjects indicated their gender and school year on the questionnaire form.
Music Experience

Subjects reported their details on their musical background in response to twelve items which concluded the LRHQ.

3. Case Studies

3.1 Sample for Case Studies

One Year 10 Music student from a selective school, North, with previous background of listening to classical and jazz and extensive practical experience, with tuition.

One Year 9 Music student from a selective school, West, with a previous background of listening to rock, pop, rhythm and blues and soul, but no tuition and little practical experience.

The subjects were both music students, selected for having the intelligence to understand the task, and for their contrasting levels of musical experience.

3.2 Procedure

Having noted the use of protocol analysis by Deegan (1995) and by Richardson (1996) with children listening to music, it was decided to attempt to capture aspects of the dynamic processes of listening by use of verbal protocol in case studies (Ericsson & Simon, 1984; Murray, 1983; Nathenson & Henderson, 1980). The purpose of these tests was to assist the researcher in understanding reactions and responses of subjects participating in the Main Test (Bradburn & Sudman, 1980).

Case studies were completed by the two individuals, using "think aloud" protocol. The subjects were requested to provide a running commentary about what they were aware of thinking and feeling as they listened to the stimulus music. They verbalised thoughts whilst they listened to the stimulus music in three of the four presentation modes: firstly, music alone; secondly, music with information; and finally, video (with information). They also completed the matching formats of the questionnaire.
Whilst this technique proved quite fruitful with regard to the questionnaire, the subjects had difficulty in verbalising whilst listening to the music. Both subjects became rather introspective while listening, and said very little. The subjects understood the task but were not practised in it. Madsen (1990) referred to the difficulties with this method, particularly the problem of forced changes in attention during an experience for the sake of reporting what is happening. As pointed out by Anderson (1986), subjects need training in protocol procedure, and in a future study this could be a useful strategy.

3.3 Outcome of Case Studies

Due to the previously mentioned degree of diffidence in the case subjects, not a lot of information was gleaned, but it was clear that the task was comprehensible. The subjects found the questionnaire reasonable, and were not deflected by questions which were closely related, but informed the researcher that they found them to be different and responded accordingly.

4. Pilot Study

4.1 Sample for Pilot Study

Music classes in years 9 and 11 at two state schools. A total of 41 students in four classes participated in tests across all four conditions.

Table 1. The Sample for the Pilot Study

<table>
<thead>
<tr>
<th>Condition</th>
<th>Yr</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio-No Information</td>
<td>9</td>
<td>5</td>
<td>19</td>
</tr>
<tr>
<td>Audio-With Information</td>
<td>11</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Video-No Information</td>
<td>11</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Video-With information</td>
<td>9</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

4.2 Procedure of the Pilot Study

In view of the small scale of the test and its relation to current curriculum, individual consent forms were not required, but consent was obtained from the
Human Ethics Committee, and from school principals and class music teachers involved in the project.

The four participant groups each completed the test in one of the four presentation modes, the sample being spread as shown in Table 1. These students fully completed tests providing results which could be examined for consistency in response to stable test items and comparison of responses to differing test conditions.

4.3 Outcome of the Pilot Study

Fulfilment of the questionnaire showed that it was understood. There was variety in levels of response to questions of affective response and attention style, throughout the sample. Subjects indicated that they had found the research experience of value, as it had made them think about things they had not previously considered.

5. The Main Study

5.1 Sample for the Main Study

The sample of 438 secondary music students in Years 9, 10 and 11 was taken from secondary school Music classes in Years 9, 10 and 11. These students have elected to study Music and one of the topics on their syllabus is Traditional Music of a Culture. The music for presentation, being of a traditional Japanese genre, relates to this syllabus topic. The design is thus quasi-experimental, with matching of classes across conditions. Care was taken to distribute classes evenly, with respect to gender, school type, class-year and area, amongst the treatment groups. The size and distribution of the sample were important to allow for differences with respect to uncontrolled variables, in particular that of musical preferences.

5.1.1 School Year of Subjects

The sample consisted of a total of 36 secondary school Music classes, 12 classes each from Years 9, 10 and 11.
Table 2. Year Levels of Subjects in the Sample

<table>
<thead>
<tr>
<th>Condition</th>
<th>Year 9</th>
<th>Year 10</th>
<th>Year 11</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>61</td>
<td>25</td>
<td>18</td>
<td>104</td>
</tr>
<tr>
<td>2</td>
<td>46</td>
<td>31</td>
<td>31</td>
<td>108</td>
</tr>
<tr>
<td>3</td>
<td>45</td>
<td>52</td>
<td>18</td>
<td>115</td>
</tr>
<tr>
<td>4</td>
<td>70</td>
<td>19</td>
<td>22</td>
<td>111</td>
</tr>
<tr>
<td>ALL</td>
<td>222</td>
<td>127</td>
<td>89</td>
<td>438</td>
</tr>
</tbody>
</table>

5.1.2 School Types of the Sample

The sample was drawn from Private schools (Boys, Girls and Coeducational), and State schools (Coeducational) which included Comprehensive and Selective schools (see Table 3). There were very few gender-specific State schools, but in respect to the other categories here mentioned, a balanced sample was achieved across the sampled region of Sydney.

Table 3. Types of Schools Attended by Subjects of the Sample

<table>
<thead>
<tr>
<th>Area School type</th>
<th>Audio No Information</th>
<th>Audio With Information</th>
<th>Video No Information</th>
<th>Video With Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>YEAR</td>
<td>9 10 11</td>
<td>9 10 11</td>
<td>9 10 11</td>
<td>9 10 11</td>
</tr>
<tr>
<td>North</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>comprehensive</td>
<td>20</td>
<td>7 5 23</td>
<td>8 23 14</td>
<td></td>
</tr>
<tr>
<td>selective</td>
<td></td>
<td>3 16 9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>private</td>
<td>9 7 11</td>
<td>6 15</td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>NorthWest</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>comprehensive</td>
<td>23</td>
<td>8 22 25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>selective</td>
<td></td>
<td>7 5 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>private</td>
<td>18</td>
<td>8 19 15</td>
<td>18 9 10 10</td>
<td></td>
</tr>
<tr>
<td>West</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>comprehensive</td>
<td>18</td>
<td>8 19 15</td>
<td>18 9 10 10</td>
<td></td>
</tr>
<tr>
<td>selective</td>
<td></td>
<td>16</td>
<td>12 4 6</td>
<td>5 2</td>
</tr>
<tr>
<td>private</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>61 25 18 46 31 31 45 52</td>
<td>18 65 24 22</td>
<td>104 108 115 111</td>
<td></td>
</tr>
</tbody>
</table>
5.1.3 The Areas of the Sample

The schools were located over a wide area (see Table 4) of Sydney from its northern beaches (north-east) in an arc sweeping southward and to the west. By this means subjects were included from different socioeconomic backgrounds and from a variety of language groups. For this study, the latter is particularly important because a strong presence of cultural variety in the local environment may increase the likelihood that subjects have been affected by being exposed to live music which expresses cultural variety. In identifying the three Areas denoting this variable, details concerning the socioeconomic status and language background of students in the Sydney Metropolis were obtained from NSW Department of School Education. The data, being from the Mid-year census 1995, were the most accurate available for the time of the field study which was completed during the months of October to December, 1996.

Table 4. Areas in which the Schools of the Subjects in each year level were located

<table>
<thead>
<tr>
<th>AREA of Sydney</th>
<th>Yr. 9</th>
<th>Yr. 10</th>
<th>Yr. 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>92</td>
<td>55</td>
<td>45</td>
</tr>
<tr>
<td>North-West</td>
<td>55</td>
<td>27</td>
<td>12</td>
</tr>
<tr>
<td>West</td>
<td>70</td>
<td>54</td>
<td>33</td>
</tr>
<tr>
<td>Total</td>
<td>217</td>
<td>136</td>
<td>90</td>
</tr>
</tbody>
</table>

Socioeconomics of the Three Areas

As shown in Appendix H, more residents of the Northern area are qualified, and earn higher incomes than residents of the West and NorthWest. The greatest contrast is seen between North and West. This information contributes to the general demography of the sample, and its relevance for this study is reflected in data on the musical experience of subjects, their listening habits, and, to a degree, their musical preferences.

Language Background Groups of the Three Areas

In Appendix I it can be seen that in the North and NorthWest, a higher proportion (about 14% more) of the residents were born in Australia, UK or Ireland than in
the West. The population of the West includes significant numbers (around 31%) of residents born in countries located particularly throughout Asia, Europe and the Middle East respectively.

Table 5. Language background groups in the schools attended by subjects

<table>
<thead>
<tr>
<th>School</th>
<th>area</th>
<th>NESB %</th>
<th>NESB No.</th>
<th>Arabic &amp; Turkish</th>
<th>Chinese</th>
<th>Italian</th>
<th>Croatian</th>
<th>Vietnamese</th>
</tr>
</thead>
<tbody>
<tr>
<td>ChestHills</td>
<td>W</td>
<td>74.2</td>
<td>692</td>
<td>115</td>
<td>130</td>
<td>50</td>
<td>32</td>
<td>235</td>
</tr>
<tr>
<td>Merrylns</td>
<td>W</td>
<td>37.7</td>
<td>331</td>
<td>144</td>
<td>14</td>
<td>46</td>
<td>19</td>
<td>13</td>
</tr>
<tr>
<td>HurlstAg</td>
<td>W</td>
<td>9.0</td>
<td>83</td>
<td>1</td>
<td>19</td>
<td>4</td>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>ArthPhlp</td>
<td>W</td>
<td>73.2</td>
<td>605</td>
<td>166</td>
<td>66</td>
<td>40</td>
<td>10</td>
<td>21</td>
</tr>
<tr>
<td>CanleyVale</td>
<td>W</td>
<td>89.5</td>
<td>1030</td>
<td>35</td>
<td>372</td>
<td>44</td>
<td>63</td>
<td>416</td>
</tr>
<tr>
<td>Granville</td>
<td>W</td>
<td>92.0</td>
<td>541</td>
<td>398</td>
<td>17</td>
<td>6</td>
<td>1</td>
<td>22</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td>62.6</td>
<td>547</td>
<td>143</td>
<td>103</td>
<td>32</td>
<td>21</td>
<td>121</td>
</tr>
<tr>
<td>JamesRse</td>
<td>NW</td>
<td>31</td>
<td>243</td>
<td>6</td>
<td>185</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>ForestHh</td>
<td>NW</td>
<td>31.4</td>
<td>258</td>
<td>24</td>
<td>51</td>
<td>34</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Carlingfd</td>
<td>NW</td>
<td>45.8</td>
<td>445</td>
<td>18</td>
<td>258</td>
<td>26</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td>36.1</td>
<td>315</td>
<td>16</td>
<td>165</td>
<td>21</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Mosman</td>
<td>N</td>
<td>24.6</td>
<td>159</td>
<td>5</td>
<td>53</td>
<td>16</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>Freshwtr</td>
<td>N</td>
<td>29.4</td>
<td>123</td>
<td>0</td>
<td>7</td>
<td>48</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>ChatswdH</td>
<td>N</td>
<td>29.9</td>
<td>213</td>
<td>18</td>
<td>126</td>
<td>1</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>ManlyHgh</td>
<td>N</td>
<td>29.1</td>
<td>199</td>
<td>6</td>
<td>73</td>
<td>18</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Pittwatr</td>
<td>N</td>
<td>5</td>
<td>36</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td>23.6</td>
<td>146</td>
<td>6</td>
<td>52</td>
<td>17</td>
<td>9</td>
<td>1</td>
</tr>
</tbody>
</table>

Whilst Table 5 includes statistics which are only available for schools within NSW Dept of School Education, it gives a fairly clear representation of the language background makeup of the three areas identified in this study. It may be seen that the proportion of NESB students is much higher in certain Western suburbs than in the North or the North West. This difference is conspicuous with regard to the Vietnamese, and Arabic/Turkish populations. The above information is useful when considering the results, as it was obvious to the researcher that many NESB subjects had difficulty in understanding questions. This is a factor which is recognised by the researcher to contribute a degree of error to all results.

In relation to the above categories, a fairly good balance is achieved across the four testing conditions for the Main Test.
5.2 Administering The Study

Permission to complete the field research in schools was obtained from the Human Ethics Committee of University of Sydney. A total of nineteen secondary schools were visited at least once, and 36 classes were presented with a performance of shakuhachi music.

Each scenario was presented to twelve intact classes, at a variety of schools, with an average of 109 subjects per Condition group. Assignment of class groups to presentation conditions was counterbalanced across Year levels, school types and genders. Audio presentations from the corresponding video soundtrack were amplified and presented through external stereo speakers. Visual signals were presented via large colour monitors in the classrooms.

Several schools requested their own preference of either the audio or the video recording. Otherwise, the decision of which of the four conditions to use for any class group was based on a constant balancing between the four condition samples, in an attempt to keep an equal spread of class year, area, school type and gender.

The school’s own classroom audio or video equipment was used, to keep the situation as natural as possible. This was to reduce the incidence of "demand characteristics" which are likely to occur when subjects construe research conditions in a way which alters their performance (Borg & Gall, 1983). Volume settings were adjusted by the researcher, to suit the room. Whilst there could not be a strict standardisation of technical quality by this means, it was the only practical means by which classrooms could be instantaneously prepared for the experiment, a necessity in achieving a large sample. In support of this method, it has been shown that loudness levels are not significantly correlated with preference in world music styles (Fung, 1996), and also that "effects of noise or lack of focus on reactions of subjects to a film proved to be noninfluential in their affective reactions to a film" (Nisbett & Wilson, 1977: 232).

To minimise the effect of "social desirability" on the responses, classes were advised that this was not a test and that their answers would be kept anonymous (Anderson, 1981). It was explained that this was a research project aiming to learn more about teaching music appreciation, and that the researcher was seeking their assistance which would benefit music students in the future. It has been suggested that description of the intent and projected use of the research "should help to promote rapport, insure seriousness of intent, and
arouse examinee motivation" (Payne, 1974: 352). Classes were also requested to answer the questions "in a way that you feel is true for yourself. There are no right or wrong answers. It is your honest response that will make this project useful." It has been recommended that one step in reducing error produced due to the artificiality of the experimental situation is to "enlist subjects' support for honest responses" (Borg & Gall, 1983: 220), and another is to "inform respondents of the purpose for which the information is being gathered" (Anderson, 1981: 68).

Each group was shown a chart displaying the rating scale numbers 0 through to 7, representing the response scale. The researcher pointed out that, for statements felt to be strongly true for themselves, subjects should circle the number "7". For a statements felt to be strongly false for themselves, they should circle "0". For statements about which they were not sure, or felt ambivalent, they were instructed to circle a "3" or a "4". Subjects were advised to ask themselves the question "Is this true for me?" when reading each statement. Instructions were also printed at the start of the questionnaire.

Classes were instructed that if anyone wished to ask a question they could raise their hand at any time. For groups who were not given preliminary information, the following announcement was made before the music commenced: "You are about to hear some music which may be new to you. Now you can just sit back and listen." The announcement given to the other classes, following the information was: "Now you can just sit back and listen."

When the music was finished, an instruction was given: "Keep the music in your mind so you can answer easily and quickly." This instruction was included to assist subjects to respond directly to the stimulus due to difficulties with the temporal separation (Bullock, 1973; Payne, 1974).

5.3 Preparation and Reduction of the Data

To facilitate comparison between items, the scores for negative statements (items 4, 6, 8 and 10) were reversed by substituting their difference with the total as follows: 7 became 0; 6 became 1; 5 became 2; 4 became 3; 3 became 4; 2 became 5; 1 became 6; 0 became 7.

Subjects' scores were compiled and any students who entered the sessions late were eliminated from the final data set. For students who had missed only single items throughout the scale (less than one item per section), missing values were
substituted with the mean according to their gender and treatment group (this procedure was used as the most conservative and unbiased missing value substitution; see Tabachnick & Fiddell, 1996). Ratings on the collective items for Enjoyment and Attention style were subjected to principal component factor analysis to reduce the number of variables. By Analyses of Variance (ANOVA), with the Enjoyment factor as the dependent, and treatment as the independent variable, each of the Demographic variables, and the Musical Experience variable were individually tested as covariates for significance to Enjoyment. Variables which were not significant were thus identified to be: School Year, School Type, School Region, School Gender and Musical Experience. These variables were discarded, thus further reducing the data.

The effects of any significant variables were then to be further examined by descriptive statistics or further ANOVAs, according to their role in the study. Stimulus-Response variables of attention style and familiarity were examined as mediators (Baron & Kenny, 1986) of the criterion through path analysis. Since gender was significant, path analyses were also conducted for both gender samples.

5.4 Overview of Prospective Data Analysis

Presentation of the results will be in the following sequence. First, the factor analysis which was carried out in order to reduce the number of variables; next data analysis using univariate and multivariate analyses of variance and covariance which was performed to identify any significant relationships between variables; and finally the path analyses which was conducted to establish direct and indirect links between the criterion variable and mediating factors. In view of the finding (Zalanowski, 1990) that a zero effect of a music presentational technique may result from its differing effects for sections of the sample, the path analysis will be projected on to each gender sample.
CHAPTER SIX

RESULTS

The results for the study were analysed in three stages. In Stage I, a conceptual and empirical analysis of items from the researcher designed "Listener Response to Honkyoku" Questionnaire (LRHQ) was performed to determine whether scores for the eleven Attention Style, and seven Enjoyment rating items on this questionnaire could be summarised by a conceptually meaningful set of subscales. In Stage II, the relationship between scores on the Attention Style and Affective Response subscales of LRHQ results were examined through a series of analyses of variance (ANOVAs). In Stage III, correlations for the whole sample and for each gender between LRHQ scores and experimental condition were performed and subjected to path analyses to determine whether students' cognitive and affective responses in listening were related to the Information or Audiovisual mode in which the music was presented.

1. Factor Structure of "Attention Style" in the "Listener Response to Honkyoku" Questionnaire

1.1 The Eleven "Attention Style" Items

Initially, to determine whether scores for the eleven Attention Style LRHQ items could be summarised by a smaller set of component scores, item responses within this category were intercorrelated and subjected to a principal components analysis (PCA). Means and standard deviations for scores on the LRHQ items are presented in Table 6.
Table 6. Means (Ms) and Standard Deviations (SDs) for Scores on the Eleven Attention Style LRHQ Items

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Analysis N</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORNAMENT</td>
<td>4.65</td>
<td>2.26</td>
<td>438</td>
</tr>
<tr>
<td>RHYTHM</td>
<td>3.40</td>
<td>2.09</td>
<td>438</td>
</tr>
<tr>
<td>GLISSANDO</td>
<td>4.77</td>
<td>1.95</td>
<td>438</td>
</tr>
<tr>
<td>TIMBRE</td>
<td>4.44</td>
<td>2.15</td>
<td>438</td>
</tr>
<tr>
<td>MELODY</td>
<td>4.39</td>
<td>2.24</td>
<td>438</td>
</tr>
<tr>
<td>MEL-FOCUS</td>
<td>4.09</td>
<td>2.23</td>
<td>438</td>
</tr>
<tr>
<td>HOLISTIC</td>
<td>4.42</td>
<td>2.29</td>
<td>438</td>
</tr>
<tr>
<td>MOOD</td>
<td>4.29</td>
<td>2.33</td>
<td>438</td>
</tr>
<tr>
<td>IMAGINE</td>
<td>4.05</td>
<td>2.46</td>
<td>438</td>
</tr>
<tr>
<td>MESMER</td>
<td>3.64</td>
<td>2.57</td>
<td>438</td>
</tr>
<tr>
<td>VIBRATO</td>
<td>4.48</td>
<td>2.25</td>
<td>438</td>
</tr>
</tbody>
</table>

Intercorrelations between the eleven Attention Style LRHQ Items are presented in Table 7.

Table 7. Intercorrelations between the Eleven Attention Style LRHQ Items

<table>
<thead>
<tr>
<th>Correlation</th>
<th>ORNAMENT</th>
<th>RHYTHM</th>
<th>GLISSANDO</th>
<th>TIMBRE</th>
<th>MELODY</th>
<th>MELODY</th>
<th>MEL-FOCUS</th>
<th>HOLISTIC</th>
<th>MOOD</th>
<th>IMAGINE</th>
<th>MESMER</th>
<th>VIBRATO</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORNAMENT</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td>0.02</td>
<td>1.00</td>
<td>0.07</td>
<td>-0.05</td>
<td>0.13</td>
<td>0.12</td>
<td>0.07</td>
<td>0.13</td>
</tr>
<tr>
<td>RHYTHM</td>
<td>0.21</td>
<td>1.00</td>
<td></td>
<td></td>
<td>-0.03</td>
<td>0.02</td>
<td>0.20</td>
<td>-0.04</td>
<td>0.12</td>
<td>0.20</td>
<td>0.06</td>
<td>0.11</td>
</tr>
<tr>
<td>GLISSANDO</td>
<td>0.24</td>
<td>0.24</td>
<td>1.00</td>
<td></td>
<td>0.30</td>
<td>1.00</td>
<td>0.23</td>
<td>-0.04</td>
<td>0.20</td>
<td>0.22</td>
<td>0.06</td>
<td>0.28</td>
</tr>
<tr>
<td>TIMBRE</td>
<td>0.29</td>
<td>0.19</td>
<td>0.30</td>
<td>0.40</td>
<td>1.00</td>
<td></td>
<td>0.20</td>
<td>0.04</td>
<td>0.31</td>
<td>0.22</td>
<td>0.17</td>
<td>0.35</td>
</tr>
<tr>
<td>MELODY</td>
<td>0.01</td>
<td>0.09</td>
<td>-0.03</td>
<td>0.20</td>
<td>0.02</td>
<td>1.00</td>
<td>0.20</td>
<td>0.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>-0.04</td>
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<td>0.21</td>
<td>0.35</td>
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<td>MESMER</td>
<td>VIBRATO</td>
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<td></td>
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</tr>
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<td></td>
<td></td>
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<td>1.00</td>
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</tr>
<tr>
<td>MESMER</td>
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<td>0.08</td>
<td>1.00</td>
<td></td>
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<tr>
<td>VIBRATO</td>
<td>0.32</td>
<td>-0.06</td>
<td>0.31</td>
<td>0.24</td>
<td>0.18</td>
<td>1.00</td>
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</tr>
</tbody>
</table>

Based on Cattell's scree test, four components were retained for interpretation, which together accounted for 57.98% of the total variance in the eleven LRHQ scores. Given that the final components were expected to correlate significantly, an oblique procedure (direct oblimin) was used to rotate these components to approximate simple structure. Rotated component loadings for the eleven Attention Style LRHQ items are presented in Table 8. As recommended by Stevens (1992), loadings of greater than 0.45 were retained for interpretation. Based on this criterion, all eleven Attention Style LRHQ items loaded uniquely on one of the four components.
Table 8. Rotated Factor Solution for Scores on the Eleven Attention Style LRHQ Items

<table>
<thead>
<tr>
<th></th>
<th>Component 1</th>
<th>Component 2</th>
<th>Component 3</th>
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</thead>
<tbody>
<tr>
<td>ORNAMENT</td>
<td>0.69</td>
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</tr>
<tr>
<td>RHYTHM</td>
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<td>0.10</td>
<td>0.00</td>
<td>0.24</td>
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<td>GLISSANDO</td>
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<td>0.00</td>
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<tr>
<td>TIMBRE</td>
<td>0.46</td>
<td>0.00</td>
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<tr>
<td>MELODY</td>
<td>0.00</td>
<td>0.93</td>
<td>0.00</td>
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</tr>
<tr>
<td>MEL-FOCUS</td>
<td>0.00</td>
<td>0.85</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>HOLISTIC</td>
<td>-0.24</td>
<td>0.00</td>
<td>0.69</td>
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</tr>
<tr>
<td>MOOD</td>
<td>0.00</td>
<td>0.00</td>
<td>0.67</td>
<td>-0.37</td>
</tr>
<tr>
<td>IMAGINE</td>
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<td>0.00</td>
<td>0.62</td>
<td>-0.10</td>
</tr>
<tr>
<td>MESMER</td>
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<td>0.00</td>
<td>-0.76</td>
</tr>
<tr>
<td>VIBRATO</td>
<td>0.18</td>
<td>0.29</td>
<td>0.17</td>
<td>-0.49</td>
</tr>
</tbody>
</table>

1.2 The Four "Attention Style" Factors

The "Surface" Factor

Component 1, the Surface factor, was defined by four items representing Attention to the unusual idiomatic features of the musical genre: ornamental notes, rhythm, glissando and timbre. Use of this Attention style represents engagement with detailed aspects of the music and may be described as a sequential, surface-analytical approach. As Attention passes from one detail to the next in time, much is learned about the idiosyncrasies, complexities of the surface layers and microstructures of the work. From this level of Attention, a deeper understanding of the structure as a whole is not necessarily achieved.

The "Structure" Factor

Component 2, the Structure factor, was defined by two items representing intensity of Attention to the melodic line of the music. As a concept in the Western European musical tradition, melody has been commonly emphasised,
and is studied by high school students. The term generically applies to the pattern or shape formed by the pitches and durations of a horizontally unified progression. Attending to a melody line within the manner of the Western European custom invokes a structural-analys of the stimulus in which the melodic principles of this tradition serve as a point of comparison.

The "Holistic" Factor

Component 3, the Holistic factor, was defined by three items: Attention to the music as a whole, being absorbed in the mood of the music, and experiencing mental stimulation. Use of this Attention style is interpreted to represent engagement in a "subjectively meaningful experience" (Csikszentmihalyi & Schiefele, 1992: 187). The terms in which some art theorists have described aesthetic perception reveal connections between these three seemingly disparate items. Confirming the desirability of Attention to the music as a whole, the music listener has been described as "an active unifying agent" (Miller, 1994: 218). According to Dewey (1934) an aesthetic experience is typified by a unity which is "constituted by a single quality that pervades the entire experience in spite of the variation of its constituent parts" (p. 37). Pike (1972) referred to an attentional style whose features closely resembled those of this factor. Listeners perceiving the movement and expressive qualities of musical events became "vicariously involved in their qualititative movement in terms of spontaneous and transient affective states, or more enduring mood categories", experienced enjoyment in "a perceptual-emotional Gestalt" (p. 265). With regard to being absorbed in the mood, Kivy (1990) theorised that "what we are meant to do with ... pure instrumental music, is to perceive abstract, nonrepresentational, frequently expressive patterns, forms, and perceptual qualities, and enjoy them qua abstract and expressive patterns, forms, and qualities" (p. 4). Ingarden (1966) stated that "the difference between a mere acoustic event and a musical event as a specific aesthetic object is when music heard in a particular performance has the ability to evoke an attitude or mood in which aesthetic experience evolves" (p. 54). Elliott (1995) regarded "deep absorption" (p. 126) as part of a musical experience, as well as the inspiration of thoughts: "musical works are ... multi-layered thought generators" (p. 203). In support of the mental stimulation aspect of this factor, it was earlier theorised that "the impact of art should ... strike sparks within the individual, and one cannot expect to control precisely what is ignited as a result" (Reynolds, 1975: 57). Goodman (1968) described the aesthetic experience as "dynamic rather than static ... restless, searching,
testing ... less attitude than action: creation and re-creation" (p. 242). Imaginative activity has been considered an activity which accompanies musical enjoyment (Hedden, 1973; Lewis & Schmidt, 1991). The experiencing of ideas as a component of this Attentional style is also supported by Lifton (1961) who considered that "the greater aesthetic response is seen as one which produces a greater range and intensity of ideas and emotions in the perceiver" (p. 158).

The "Receptive" Factor

Component 4 was defined by two items: a quality of undistractibility which was associated with attending to the vibrato. This unexpected combination was labelled Receptive. Reynolds, likened the overall effect of shakuhachi music on Western listeners, to the "preponderance of imperfective modes" in Japanese grammar, which could incline Western listeners "away from completed, easily circumscribed, and encoded experience into a sea of undulating, undirected contingencies" (Reynolds, 1975: 146). With Attention focused on the vibrato, the listener would feel the ebb and flow of the extended breaths of the performer, thus slowing the metabolic rate and allowing the slide into a trance-like experience. Some insight on this factor may be found in Langer's statement that "all the arts exercise a certain hypnotism, but none so promptly and patently as music" (Langer, 1953: 167). Although Langer was concerned that this type of absorption may be more enjoyable than musically enlightening, the behaviour could also be said to fit that author's description of the basis of music appreciation as "the perception of feeling through a purely apparent flow of life existing only in time" (p. 148). It also corresponds with a description of music appreciation as "sustained perceiving in an abstract, noninterpretive mode" (Kivy, 1990: 5).

Crickmore's (1968) description of music appreciation as a "complex unitary act" or "gestalt", formed "in response to the flow of the music" and not completed "until the moment at which the music ceases" (p. 240) could be applied to either the Holistic or the Receptive Attention style. But a distinction is made in referring to two separate listening styles which seem to parallel the two Attention styles, Holistic or the Receptive. The Holistic type of behaviour may be that referred to by Crickmore as "aesthetic perception" which is accompanied by thoughtful or discursive processes, whilst Receptive would be that described as "passive or receptive listening, effortless awareness, an intuitive act involving no discursive or reflexive process" (p. 239).
1.3 The Seven "Enjoyment" Items

Initially, to determine whether scores for the seven Enjoyment LRHQ items could be summarised by a smaller set of component scores, item responses within this category were intercorrelated and subjected to a principal components analysis (PCA). Means and standard deviations for scores on the LRHQ items are presented in Table 9.

Table 9. Means (Ms) and Standard Deviations (SDs) for Scores on the Seven Enjoyment LRHQ Items

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Analysis N</th>
</tr>
</thead>
<tbody>
<tr>
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<td>2.19</td>
<td>438</td>
</tr>
<tr>
<td>TEMPO</td>
<td>3.86</td>
<td>2.34</td>
<td>438</td>
</tr>
<tr>
<td>MOOD</td>
<td>4.54</td>
<td>2.17</td>
<td>438</td>
</tr>
<tr>
<td>SOUND</td>
<td>4.63</td>
<td>2.11</td>
<td>438</td>
</tr>
<tr>
<td>RELAX</td>
<td>5.20</td>
<td>1.96</td>
<td>438</td>
</tr>
<tr>
<td>STRONG</td>
<td>3.82</td>
<td>2.29</td>
<td>438</td>
</tr>
<tr>
<td>FEELING</td>
<td>5.98</td>
<td>1.47</td>
<td>438</td>
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</table>

Intercorrelations between the seven Attention Style LRHQ items are presented in Table 10.

Table 10. Intercorrelations between the Seven Attention Style LRHQ Items

<table>
<thead>
<tr>
<th>Correlation</th>
<th>ATMOSPHERE</th>
<th>TEMPO</th>
<th>MOOD</th>
<th>SOUND</th>
<th>RELAX</th>
<th>STRONG</th>
<th>FEELING</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATMOSPHERE</td>
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<td></td>
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<td></td>
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</tr>
<tr>
<td>TEMPO</td>
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<td>1.00</td>
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</tr>
<tr>
<td>MOOD</td>
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<td>1.00</td>
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<tr>
<td>SOUND</td>
<td>0.57</td>
<td>0.57</td>
<td>0.61</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RELAX</td>
<td>0.53</td>
<td>0.45</td>
<td>0.53</td>
<td>0.55</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STRONG</td>
<td>0.51</td>
<td>0.55</td>
<td>0.48</td>
<td>0.49</td>
<td>0.37</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>FEELING</td>
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<td>0.28</td>
<td>0.23</td>
<td>0.19</td>
<td>0.22</td>
<td>0.16</td>
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</table>

Based on Cattell's scree test, one component was retained for interpretation, which alone accounted for 54.09% of the total variance in the seven LRHQ scores. This solution could not be rotated. Component loadings for the seven Enjoyment LRHQ items are presented in Table 11. As recommended by Stevens (1992), loadings of greater than 0.45 were retained for interpretation. Based
on this criterion, six of the seven Enjoyment LRHQ items loaded on the single component.

Table 11. Oblimin Factor Solution for Scores on the Seven Enjoyment LRHQ Items

<table>
<thead>
<tr>
<th>Component</th>
<th>Value</th>
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<td>MOOD</td>
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</table>

1.4 The "Enjoyment" Factor

As shown in Table 11, the single Component was defined by six items representing a liking for aspects of the dynamics of the music and its idioms, and one item rating a feeling of relaxation while listening. These items (atmosphere, tempo, mood, tone colour, relaxed, sustained notes) are primarily classified as dynamic or expressive aspects of music, or vehicles for the dynamics of music. The timbre of the shakuhachi in the stimulus music was a strong flute tone, with occasional subtle use of furi, a more breathy quality, idiomatic to the instrument in its traditional style. The subtle variations in timbre and use of vibrato would be included in the "sound of the instrument" which was being rated by this item. It would therefore be classified as both idiomatic and a contributing factor to the dynamics of the music. Dynamically the sound of the shakuhachi in the performance could be described as both strong and gentle, while its subtle timbral changes and wide range of volumes contributed to the variety and contrast of the piece, enriching the textural quality of a single melodic line. The sustained notes are also an idiomatic feature of the genre which contribute to the calm dynamic of the music. The experiencing of a relaxed feeling has been reported as a characteristic of musical enjoyment (Crickmore, 1968; Pike, 1972; Lewis & Schmidt, 1991). The piece may readily be described as suggestive of such a feeling, but for a listener in an unrelaxed preparatory state, the low dynamic of the music could feasibly be irritating. According to the finding of Wheeler (1985) enjoyment of
a musical item was important in determining whether it could alter the mood
of the listener.

2. Effects of Gender and the Information and
Audiovisual Presentation Modes on Attention Factors

To determine whether provision of Information and Audiovisual presentation
mode affected students' attention styles, a multivariate analysis of variance
(MANOVA) was performed. Given that the effects were expected to differ
across males and females, sex was also included as an independent variable,
creating a 2 (sex) by 2 (Audiovisual) by 2 (Information) factorial design. The
four dependent variables were scores on the Surface, Structure, Holistic and
Receptive subscales of the attention style questionnaire. The Wilks' lambda (λ)
was used as the multivariate criterion in all tests of multivariate significance.

Preliminary screening procedures indicated significant correlations between
scores on the four attention style subscales as a set (Bartlett's χ^2(6) =
109.67, p < 0.0001). Stepdown analyses were therefore used in addition to
univariate ANOVAs in the interpretation of significant MANOVA effects. This
procedure provides an assessment of the extent to which effects obtained on
individual dependent measures are unique (i.e., partialling out effects
associated with overlapping variance in the subscale scores (Stevens, 1996).
The ordering of the variables for the stepdown procedure was based on the
proportions of variance accounted within the factor analysis (Surface,
Structure, Holistic, and Receptive).

All univariate and stepdown Fs were tested for significance at a Bonferroni-
adjusted level (0.05/4 = 0.0125) to maintain setwise alpha below 0.05 for the
set of dependent measures. Significant univariate effects are accompanied
with an effect size estimate based on the partial η^2 statistic, to indicate the
proportion of variance associated with each effect.30

30 As indicated by Tabachnick and Fidell (1989), however, the partial 2 statistic
considers each effect only in terms of the variance attributable to that effect plus error.
As such, the partial 2 statistics for all significant effects in a design do not strictly sum
to the proportion of systematic variance in the dependent variable, and often sum to a
number greater than 1.00.
Further screening procedures for conformity to univariate and multivariate ANOVA assumptions produced satisfactory results. Mahalanobis distances (calculated separately for each of the eight cells of the design) suggested no significant multivariate outliers at the 0.001 level, and determinants for all within-cell correlation matrices suggested no threat of multicollinearity between the four dependent measures. Assumptions for univariate and multivariate normality were judged to be tenable, although some degree of negative skew was evident for all four subscales. However, as noted by Stevens (1996), the F statistic is robust to violations of normality produced by skewness as long as cell sizes are approximately equal (i.e., provided that the ratio between the smallest and largest cell numbers is less than one to one-and-a-half). As this criterion was met in the present case, the modest levels of skewness present across the four subscales would have a negligible effect on the analysis outcomes. All tests for univariate and multivariate homogeneity were non-significant ($p > 0.10$).

Means and standard deviations for male and female scores on the Surface, Structure, Holistic, and Receptive subscales by Information and Audiovisual condition groups are shown in Table 12. The MANOVA indicated no significant multivariate main effect for gender on attention styles ($\lambda = 0.99, F(4,427) = 4.60, p = 0.39$), and no significant three-way interaction between gender, Information, and Audiovisual ($\lambda = 0.99, F(4,427) < 1$). There were also no significant two-way interactions between gender and Information ($\lambda = 0.98, F(4,427) = 1.85, p = 0.12$), gender and Audiovisual ($\lambda = 0.99, F(4,427) = 1.23, p = 0.30$), or Audiovisual and Information ($\lambda = 0.99, F(4,427) = 1.45, p = 0.22$). This indicates that attentional styles did not differ across males and females, either within the full sample or within experimental conditions. It also indicates that the effects of the audiovisual presentation mode did not depend on whether students received or did not receive Information, and vice versa.

Based on Wilks' criterion, the multivariate test for Information was marginally significant ($\lambda = 0.98, F(4,427) = 1.99, p < 0.10$). The univariate ANOVAs indicated a significant effect on only one of the four subscales (Structure), $F(1,430) = 5.87, p = 0.016$, which remained significant at stepdown ($F(1,429) = 5.89, p = 0.016$). As noted by Tabachnick and Fidell (1989), this may reflect the fact that in some cases, univariate ANOVAs can be more powerful than MANOVA procedures. As such, the result was deemed suitable for interpretation. The accompanying effect size was low (partial $\eta^2 = 0.01$), indicating that it did not account for a high proportion of the variance in
Structure scores. From the Means shown in Table 12, this indicated that students who received Information scored slightly lower ($M = 8.02$) on the Structure attention subscale than those who received no Information ($M = 9.03$).

The multivariate test for Audiovisual mode was highly significant ($\lambda = 0.96$, $F(4,427) = 4.60$, $p = 0.001$). The univariate ANOVAs indicated a significant effect on Surface ($F(1,430) = 10.69$, $p = 0.001$, partial $\eta^2 = 0.02$), but not on any of the other subscales (all $Fs(1,430) < 2.50$, $ps > 0.11$). From the means shown in Table 12, this indicates that students who received the Video presentation scored significantly higher on Surface than those who did not.

The MANOVA conducted to determine whether gender, Information or Audiovisual presentation mode affected students' attention styles, showed that the Video presentation resulted in higher scores for the Surface Attention style, and provision of Information had a significant negative effect on use of the Structure Attention style. No significant gender difference was found.

Although the effects associated with gender were statistically non-significant, an examination of mean Scores on the Attention subscales (Table 12) showed certain variations between the tendencies of males and females. Surface-analysis attention style showed a stronger effect for males than females both from Video presentation mode and from provision of Information. Females provided with Information scored lower on this attention style. Mean scores for Holistic attention style appear greater for the girls than the boys (Table 12) over various presentation conditions, and boys who were provided with Information in the Audio presentation appeared to have gained the highest mean for either gender in any treatment group. The mean scores also appeared to indicate that the effect of Video presentation mode on Holistic attention style was detrimental for boys, although it was generally associated with raised scores for two other Attention styles, Receptive and Surface.
Table 12. Mean Scores (Std. Deviation) on the Attention Subscales by Information and Audiovisual Condition Groups for each Gender.

<table>
<thead>
<tr>
<th></th>
<th>COND</th>
<th>N</th>
<th>SURFACE Scores 0 - 28</th>
<th>STRUCTURE Scores 0 - 14</th>
<th>HOLISTIC Scores 0 - 21</th>
<th>RECEPTIVE Scores 0 - 14</th>
</tr>
</thead>
<tbody>
<tr>
<td>MALES</td>
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<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AV1</td>
<td>INF1</td>
<td>48</td>
<td>14.85 (5.14)</td>
<td>8.59 (4.07)</td>
<td>12.57 (4.40)</td>
<td>7.60 (3.44)</td>
</tr>
<tr>
<td></td>
<td>INF2</td>
<td>76</td>
<td>16.92 (6.38)</td>
<td>7.54 (4.06)</td>
<td>13.32 (5.01)</td>
<td>8.10 (3.96)</td>
</tr>
<tr>
<td>AV2</td>
<td>INF1</td>
<td>51</td>
<td>17.94 (5.86)</td>
<td>8.88 (4.22)</td>
<td>11.26 (5.27)</td>
<td>7.45 (3.97)</td>
</tr>
<tr>
<td></td>
<td>INF2</td>
<td>43</td>
<td>18.59 (4.77)</td>
<td>8.37 (4.08)</td>
<td>11.84 (4.50)</td>
<td>8.44 (3.74)</td>
</tr>
<tr>
<td>INF</td>
<td>Total</td>
<td>99</td>
<td>16.44 (5.71)</td>
<td>8.74 (4.13)</td>
<td>11.89 (4.89)</td>
<td>7.52 (3.70)</td>
</tr>
<tr>
<td>INF</td>
<td>Total</td>
<td>119</td>
<td>17.53 (5.89)</td>
<td>7.84 (4.07)</td>
<td>12.78 (4.87)</td>
<td>8.23 (3.87)</td>
</tr>
<tr>
<td>AV1</td>
<td>Total</td>
<td>124</td>
<td>16.12 (6.00)</td>
<td>7.95 (4.08)</td>
<td>13.03 (4.78)</td>
<td>7.91 (3.76)</td>
</tr>
<tr>
<td>AV2</td>
<td>Total</td>
<td>94</td>
<td>18.24 (5.37)</td>
<td>8.65 (4.14)</td>
<td>11.52 (4.92)</td>
<td>7.90 (3.87)</td>
</tr>
<tr>
<td>ALL</td>
<td></td>
<td>218</td>
<td>17.03 (5.82)</td>
<td>8.25 (4.11)</td>
<td>12.38 (4.89)</td>
<td>7.91 (3.80)</td>
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<table>
<thead>
<tr>
<th></th>
<th>COND</th>
<th>N</th>
<th>SURFACE Scores 0 - 28</th>
<th>STRUCTURE Scores 0 - 14</th>
<th>HOLISTIC Scores 0 - 21</th>
<th>RECEPTIVE Scores 0 - 14</th>
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</tr>
<tr>
<td>AV1</td>
<td>INF1</td>
<td>48</td>
<td>14.85 (5.14)</td>
<td>8.59 (4.07)</td>
<td>12.57 (4.40)</td>
<td>7.60 (3.44)</td>
</tr>
<tr>
<td></td>
<td>INF2</td>
<td>76</td>
<td>16.92 (6.38)</td>
<td>7.54 (4.06)</td>
<td>13.32 (5.01)</td>
<td>8.10 (3.96)</td>
</tr>
<tr>
<td>AV2</td>
<td>INF1</td>
<td>51</td>
<td>17.94 (5.86)</td>
<td>8.88 (4.22)</td>
<td>11.26 (5.27)</td>
<td>7.45 (3.97)</td>
</tr>
<tr>
<td></td>
<td>INF2</td>
<td>43</td>
<td>18.59 (4.77)</td>
<td>8.37 (4.08)</td>
<td>11.84 (4.50)</td>
<td>8.44 (3.74)</td>
</tr>
<tr>
<td>INF</td>
<td>Total</td>
<td>99</td>
<td>16.44 (5.71)</td>
<td>8.74 (4.13)</td>
<td>11.89 (4.89)</td>
<td>7.52 (3.70)</td>
</tr>
<tr>
<td>INF</td>
<td>Total</td>
<td>119</td>
<td>17.53 (5.89)</td>
<td>7.84 (4.07)</td>
<td>12.78 (4.87)</td>
<td>8.23 (3.87)</td>
</tr>
<tr>
<td>AV1</td>
<td>Total</td>
<td>124</td>
<td>16.12 (6.00)</td>
<td>7.95 (4.08)</td>
<td>13.03 (4.78)</td>
<td>7.91 (3.76)</td>
</tr>
<tr>
<td>AV2</td>
<td>Total</td>
<td>94</td>
<td>18.24 (5.37)</td>
<td>8.65 (4.14)</td>
<td>11.52 (4.92)</td>
<td>7.90 (3.87)</td>
</tr>
<tr>
<td>ALL</td>
<td></td>
<td>218</td>
<td>17.03 (5.82)</td>
<td>8.25 (4.11)</td>
<td>12.38 (4.89)</td>
<td>7.91 (3.80)</td>
</tr>
</tbody>
</table>

3. Effects of Gender and the Information and Audiovisual Presentation Modes on Enjoyment and Interest

To explore the effects of these three factors (gender, Information, and Audiovisual) on students' affective responses to the piece, a 2 (sex) by 2 (Audiovisual) by 2 (Information) MANOVA was also performed on the
Enjoyment and Interest scores. As there was a significant correlation between scores on the two subscales ($r(438) = 0.77, p < 0.0001$), stepdown analyses were again used in addition to univariate ANOVAs in the interpretation of significant MANOVA effects. For stepdown, scores on the Enjoyment subscale were entered prior to those on the Interest subscale in accordance with theoretical order of causation. Again, all univariate and stepdown $Fs$ were tested for significance at a Bonferroni-adjusted level ($0.05/2 = 0.025$) to maintain setwise below 0.05 for the set of dependent measures.

All screening procedures for conformity to univariate and multivariate ANOVA assumptions produced satisfactory results. Mahalanobis distances (calculated separately for each of the eight cells of the design) suggested no significant multivariate outliers at the 0.001 level, and determinants for all within-cell correlation matrices suggested no threat of multicollinearity between the four dependent measures. Assumptions for univariate and multivariate normality were judged to be tenable, although again, some degree of negative skew was evident across cells for both subscales. As indicated above, however, this would not have any substantial impact on the analysis outcomes. Again, all tests for univariate and multivariate homogeneity were non-significant ($ps > 0.10$).

Means and standard deviations for male and female scores on the Enjoyment and Interest subscales by Information and Audiovisual condition groups are shown in Table 13. The MANOVA indicated no significant three-way interaction between gender, Information, and Audiovisual ($\lambda = 1.00, F(2,429) < 1$), and no significant two-way interactions between gender and Information ($\lambda = 1.00, F(2,429) < 1$), gender and Audiovisual ($\lambda = 1.00, F(2,429) < 1$), or Audiovisual and Information ($\lambda = 1.00, F(2,429) < 1$). In this case, the multivariate test for Audiovisual was also not significant ($\lambda = 0.99, F(2,429) = 1.60, p = 0.20$). Again, this indicates that the effects of the Audiovisual presentation mode did not depend on whether students received or did not receive Information, and vice versa.

Based on Wilks' criterion, the multivariate test for gender was significant ($\lambda = 0.98, F(2,429) = 5.44, p = 0.005$). Although the univariate ANOVAs indicated significant effects on both Enjoyment and Interest ($F(1,430) = 9.96, p = 0.002$, partial $\eta^2 = 0.02$; $F(1,430) = 9.24, p = 0.003$, partial $\eta^2 = 0.02$, respectively), the effect on Interest was not significant at stepdown ($F(1,429) < 1$), indicating that this effect was already accounted for through the overlapping
variance in scores for the two subscales. From the means shown in Table 13, the ratings on both subscales were higher for females than for males.

The multivariate test for Information was also significant ($\lambda = 0.99$, $F(2,426) = 3.25$, $p = 0.04$). The univariate ANOVAs indicated a marginally significant effect on Enjoyment ($F(1,430) = 4.03$, $p = 0.045$, partial $\eta^2 = 0.009$) and a highly significant effect on Interest ($F(1,430) = 6.51$, $p = 0.01$, partial $\eta^2 = 0.01$). The effect on Interest was again, however, not significant at stepdown ($F(1,429) = 2.45$, $p = 0.12$), indicating that a large proportion of the latter effect was already accounted for through the overlapping variance across the two affective subscales. From the means shown in Table 13, the effects on both subscales indicated that scores on Enjoyment and Interest were significantly higher for students who received Information than for those who did not.

Again, although the interactions involving gender were all non-significant, from the means shown in Table 13, there appeared to be an effect of Information on Enjoyment for boys in both Audio and Video presentation modes which was not apparent for girls. The effect of Information on Interest similarly appears to exist for boys. The differences for girls' Enjoyment levels, by condition group, were negligible.

Table 13. Mean Scores (Std. Deviation) on the Enjoyment and Interest Scales by Information and Audiovisual Condition Groups for each Gender

<table>
<thead>
<tr>
<th>MALES</th>
<th>COND</th>
<th>N</th>
<th>ENJOYMENT Scores 0 - 42</th>
<th>INTEREST Scores 0 - 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>AV1</td>
<td>INF1</td>
<td>48</td>
<td>23.31 (10.94)</td>
<td>2.58 (2.61)</td>
</tr>
<tr>
<td></td>
<td>INF2</td>
<td>76</td>
<td>27.12 (9.96)</td>
<td>3.46 (2.33)</td>
</tr>
<tr>
<td>AV2</td>
<td>INF1</td>
<td>51</td>
<td>24.12 (10.27)</td>
<td>2.98 (2.69)</td>
</tr>
<tr>
<td></td>
<td>INF2</td>
<td>43</td>
<td>26.98 (9.97)</td>
<td>3.88 (2.57)</td>
</tr>
<tr>
<td>INF1</td>
<td>Total</td>
<td>99</td>
<td>23.73 (10.55)</td>
<td>2.79 (2.64)</td>
</tr>
<tr>
<td>INF2</td>
<td>Total</td>
<td>119</td>
<td>27.07 (9.92)</td>
<td>3.61 (2.42)</td>
</tr>
<tr>
<td>AV1</td>
<td>Total</td>
<td>124</td>
<td>25.64 (10.47)</td>
<td>3.12 (2.47)</td>
</tr>
<tr>
<td>AV2</td>
<td>Total</td>
<td>94</td>
<td>25.43 (10.18)</td>
<td>3.39 (2.66)</td>
</tr>
<tr>
<td>ALL</td>
<td></td>
<td>218</td>
<td>25.55 (10.32)</td>
<td>3.24 (2.55)</td>
</tr>
</tbody>
</table>
4. Effects of Information and Audiovisual Presentation Mode on Familiarity

To determine whether provision of Information, or Audiovisual presentation mode affected students' perceived Familiarity with the piece, a univariate analysis of variance (ANOVA) was performed on Familiarity scores. Further, to determine whether the experimental conditions affected males and females differentially, gender was also included as an independent variable, creating a 2 (sex) by 2 (Audiovisual) by 2 (Information) factorial design. Preliminary screening procedures for conformity to ANOVA assumptions produced satisfactory results. Visual examinations of plots for each of the eight cells of the design indicated no substantial deviations from normality, although there was some evidence of negative skew for a small number of cells. This, in turn, produced a marginal violation of the homogeneity assumption (Bartlett-Box $F(7,160342) = 3.02, p = 0.004$). However, as noted by Stevens (1995), the $F$ statistic is robust to violations of normality produced by skewness as long as cell sizes are approximately equal (i.e., provided that the ratio between the smallest and largest cell numbers is less than one to one-and-a-half). As this criterion was met in the present case, the modest levels of skewness present across the two subscales would have a negligible effect on the analysis outcomes. An examination of standard scores indicated no significant univariate outliers at the 0.001 level.

Means and standard deviations for scores on the Familiarity scale by Information and Audiovisual condition groups are shown in Table 14. The
ANOVA indicated no significant three-way interaction between gender, Information, and Audiovisual ($F(1,430) < 1$), and no significant two-way interactions between gender and Information ($F(1,430) < 1$), gender and Audiovisual ($F(1,430) < 1$), or Audiovisual and Information ($F(1,430) = 1.20, p = 0.27$). There were also no significant main effects for either gender ($F(1,430) = 2.57, p = 0.11$) or Information ($F(1,430) < 1$). There was, however, a highly significant effect for Audiovisual ($F(1,430) = 14.54, p < 0.0001$, partial $\eta^2 = 0.03$). From the means presented in Table 14, this indicates that students who received the Video presentation reported a significantly higher sense of Familiarity than those who received Audio only.

Table 14. Mean Scores (Std. Deviation) on the Familiarity Scale by Information and Audiovisual Condition Groups for the Whole Sample and for each Gender

<table>
<thead>
<tr>
<th>Cond</th>
<th>Familiarity</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>INF1</td>
<td>4.53 (2.52)</td>
<td></td>
</tr>
<tr>
<td>INF2</td>
<td>4.42 (2.64)</td>
<td></td>
</tr>
<tr>
<td>INF1</td>
<td>5.19 (2.46)</td>
<td></td>
</tr>
<tr>
<td>INF2</td>
<td>5.66 (1.94)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4.88 (2.51)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5.05 (2.39)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4.47 (2.58)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5.42 (2.23)</td>
<td></td>
</tr>
<tr>
<td>ALL</td>
<td>4.96 (2.45)</td>
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</table>

<table>
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<tr>
<th>Cond</th>
<th>Familiarity</th>
<th>Std. Dev.</th>
</tr>
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<tbody>
<tr>
<td>INF1</td>
<td>4.35 (2.53)</td>
<td></td>
</tr>
<tr>
<td>INF2</td>
<td>4.42 (2.66)</td>
<td></td>
</tr>
<tr>
<td>INF1</td>
<td>4.90 (2.67)</td>
<td></td>
</tr>
<tr>
<td>INF2</td>
<td>5.23 (2.34)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4.64 (2.60)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4.71 (2.57)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4.39 (2.60)</td>
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</tr>
<tr>
<td>Total</td>
<td>5.05 (2.52)</td>
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</tr>
<tr>
<td>ALL</td>
<td>4.68 (2.55)</td>
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</table>

<table>
<thead>
<tr>
<th>Cond</th>
<th>Familiarity</th>
<th>Std. Dev.</th>
</tr>
</thead>
</table>

<table>
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<th>Cond</th>
<th>Familiarity</th>
<th>Std. Dev.</th>
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</thead>
</table>


<table>
<thead>
<tr>
<th></th>
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<th>56</th>
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<tbody>
<tr>
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<td>INF1</td>
<td>32</td>
<td>4.41 (2.63)</td>
</tr>
<tr>
<td></td>
<td>INF2</td>
<td>64</td>
<td>5.42 (2.28)</td>
</tr>
<tr>
<td>AV2</td>
<td>INF1</td>
<td>68</td>
<td>5.93 (1.61)</td>
</tr>
<tr>
<td></td>
<td>INF2</td>
<td>120</td>
<td>5.08 (2.42)</td>
</tr>
<tr>
<td>INF1 Total</td>
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<td>5.44 (2.10)</td>
<td></td>
</tr>
<tr>
<td>INF2 Total</td>
<td>88</td>
<td>4.58 (2.55)</td>
<td></td>
</tr>
<tr>
<td>AV1 Total</td>
<td>132</td>
<td>5.68 (1.97)</td>
<td></td>
</tr>
<tr>
<td>ALL</td>
<td>220</td>
<td>5.24 (2.28)</td>
<td></td>
</tr>
</tbody>
</table>

The ANOVA conducted to determine whether gender, information or audiovisual presentation mode affected students' reported levels of Familiarity showed a significant difference according to audiovisual condition, but there was no significant finding concerning gender. Examination of mean scores for Familiarity (Table 14) showed the increase in levels for females in the Video conditions to be higher than for boys.

Results of the three above ANOVAs showed that the provision of information had a marginal significance in the higher Enjoyment scores of subjects, and a significant negative effect on use of the Structure Attention style; the Video presentation resulted in higher scores for the Surface Attention style, and a highly significant effect on reported levels of Familiarity. The only finding for gender was a highly significant superiority in levels of Enjoyment for girls in all conditions.

Although the interactions involving gender were statistically non-significant, an examination of mean scores suggested a number of modest gender differences. The positive effect of Information on Enjoyment appeared to occur only in males, and its effect on Interest was stronger for males; Information raised levels of Surface-analysis attention style for males but lowered them for females. The effect of Video mode on Surface Attention was stronger for males than females; its effect on Familiarity was much stronger for females than for males, and its effect on Holistic attention style was detrimental for boys. Girls had high levels of Holistic attention style which were consistent over all conditions. Boys who were provided with Information in the Audio presentation mode, however, gained the highest means on Enjoyment for their gender, and on Holistic Attention style for either gender.

Due to the foreseen expectation (see Chapter Five) that results may be small in their effects and that gender differences would be present, it was suspected
that the MANOVAs may not be sufficiently sensitive to some differences in the mediatory processes occurring within sectors of the sample. Mean scores appeared to indicate conflicting effects of the condition variables on the mediator variables for males and females. As a result, path analyses were conducted separately for males and females to determine whether the pattern of relationships amongst the key variables was similar for both genders.

5. Path Analysis

The final analyses for this research study consisted of a path model testing for the direct and indirect links between (a) the presentation conditions (provision or non-provision of an informative introduction, and use of audio- or video-recording of the stimulus performance), (b) familiarity response (i.e., subjective rating of whether that type of music had been heard before), (c) attention styles, (d) students' enjoyment in listening to the music, and (e) students' interest in further listening to this type of music.

Results of ANOVAs in this study, showed a significant relationship between Enjoyment/Interest and provision of Information for both genders, and a highly significant relationship between Audiovisual mode and Familiarity. Path analysis was conducted to determine the extent to which the effects on Enjoyment and Interest were directly attributable to the influence of the presentation conditions, or were mediated by Familiarity and Attention style.

As indicated, three path analyses were conducted. The first was performed on the sample as a whole. Gender differences apparent in the mean scores were deemed sufficient to warrant separate path analyses, in view of the finding that a zero effect of a music presentational technique may result from its differing effects for sections of the sample (Zalanowski, 1990), and due to the alignment of the gender tendencies with previous results of similar research.

The higher Enjoyment ratings for males with information, and the high scores for females on the Holistic attention style resonated with the findings (see Chapter Three) that males may be better adapted for the cognitive processing of unfamiliar music, and females for a holistic approach with less access to cognitive processing (Gates & Bradshaw, 1977; Sims & Sims, 1995). The raised levels of Surface-analysis attention style, and lowering of Holistic attention style for males in the Video presentation mode appeared related to the finding (see Chapter Three) that males may tend to be more visually
attentive, relying more on visual processing while females may be more auditorially attentive (Rolandelli et al., 1991). The path analysis for the whole sample would also have implications applicable to the teaching of coeducational classes.

The variables within the path analysis and their relative positions in the path model reflect the theoretical relationships hypothesised in Chapters 2 and 3. In these chapters, it was argued that listening enjoyment is related to variables such as the manner in which the musical item is presented with regard to information (Jensen, 1970; Zalanowski, 1986 and 1990; Halpern, 1992; Flowers, 1988; Gillis, 1995) and audiovisual mode (Adams, 1994; Geringer et al., 1996 and 1997). The presentation conditions occupy first position on the path model. In the path analyses, the two treatment variables (Information and Audiovisual Mode) were entered separately. Dummy coding was then used to represent the two levels of each variable.

Familiarity was the second predictor variable entered in the path analysis. A moderate degree of familiarity with the specific work and/or its musical genre has been shown to have a positive influence on musical enjoyment (Bradley, 1971; Duerksen, 1972; Hargreaves, 1984; Smith & Cuddy, 1986). The recognition of familiarity, whether subjective or objective, is a primary reaction to a stimulus (Zajonc, 1980), occurring very early in the perception process. This variable is therefore enacted prior to the continuation of attention in listening. As Familiarity was indexed solely by ratings on one item, no composite was formed for this variable.

The third set of variables entered in the analysis was the attention style subscales. Although research has not actually confirmed the attention style of the listener as causal to musical enjoyment, the relationship between the two variables has frequently assumed this order in construction of research models (Madsen & Geringer, 1990; Geringer & Madsen 1995-6; Madsen, 1997). It is both intuitive and practical to treat attention as the precursor of enjoyment in educational research on music listening for the following reasons: a) Musical enjoyment feels as if it is a result of the way the music was heard, and not the other way round; b) Musical enjoyment has frequently shown itself to be difficult to achieve in the context of music education; c) Students' attention styles are seen as potentially more amenable to suggestion from an instructor than are their affective reactions to a stimulus.
For the attention styles, composite variables were formed by combining scores for items which clustered in the initial Principal Components analysis. The first factor was Surface (attention to ornamental notes, rhythms, glissando and timbre); the second factor was Structure (attention to and focus on melody) the third factor was Holistic (attention to the music as a whole, absorption in the mood, and mental stimulation) and the fourth factor was Receptive (indistractibility, attention to the vibrato).

For Enjoyment levels, a single composite variable was formed by combining scores for the six items which clustered in the initial Principal Component analysis. This component, Enjoyment, represented liking for the atmosphere, tempo, mood and tone quality of the music; feeling relaxed while listening, and liking the use of sustained notes.

As indicated in Chapter 2, previous research has suggested that interest is typically aroused in association with feelings of enjoyment and involvement that are connected with a topic or object (Schiefele, 1992) providing a theoretical basis for placing Enjoyment prior to Interest in the path analysis.

Preliminary screening analyses for conformity to path analysis assumptions were performed separately for each sample used. These analyses indicated no notable violations in terms of sample size, multicollinearity, normality, linearity, additivity, and homoscedasticity. Thus, all assumptions associated with the use of path analysis techniques were satisfied within each of the data subsets.

In the reporting of each path analysis, both the path coefficients and the corresponding standard errors are given for each effect. A critical $t$-value of 1.96 ($\alpha = 0.05$ for $df > 120$) was used to identify statistically significant effects. However, as indicated by Pedhazur (1997), $t$-values within path analyses can be unreliable, and as such, the primary criterion that should be used for assessing significance is the absolute magnitude of the coefficient. Thus, in the present case, although $t$-values were taken into account, interpretations of significance relied primarily on the size of the path coefficients.

5.1 Path Analysis for the Whole Sample

The correlation matrix for the entire sample is shown in Table 15. These indices represent the canonical correlations between variables. The path analysis outcomes and corresponding standard errors (in parentheses) are shown in
Table 16. The path diagram for this sample, showing standardised coefficients for the model parameters is shown in Figure 1.

Table 15. Correlation Matrix for the Whole Sample between Information (INF), Audiovisual Mode (AV), Familiarity (FAMIL), Surface-Structure Attention (SURFACE), Structure-Structure Attention (STRUCTURE), Holistic Attention (HOLISTIC), Passive-Receptive Attention (RECEPTIVE), Enjoyment (ENJOY) and Interest (INTEREST) Scores

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<th>STRUCTURE</th>
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Table 16. Path Relationships and Standard Errors (in Parentheses) for the Whole Sample between Information (INF), Audiovisual Mode (AV), Familiarity (FAMIL), Surface-Structure Attention (SURFACE), Structure-Structure Attention (STRUCTURE), Holistic Attention (HOLISTIC), Passive-Receptive Attention (RECEPTIVE), Enjoyment (ENJOY) and Interest (INTEREST) Scores

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Figure 1. Path Diagram for the Whole Sample Tested Relationships between Information (INF), Audiovisual Mode (AV), Familiarity (FAMIL), Surface-Structure Attention (SURFACE), Structure-Structure Attention (STRUCTURE), Holistic Attention (HOLISTIC), Passive-Receptive Attention (RECEPTIVE), Enjoyment (ENJOY) and Interest (INTEREST) Scores

The overall goodness of fit (GFI) index for the model was 0.92, indicating a very good model-data fit. Based on a critical t-value of 1.96 ($\alpha = 0.05$ for $df > 120$), there was a very high direct effect for Enjoyment on Interest ($p = 0.77$, $t = 23.85$), indicating that high Enjoyment scores were associated with high resultant Interest levels. Significant direct effects on Enjoyment were of Familiarity ($p = 0.14$, $t = 3.79$) and of three Attention styles: medium effects of Surface attention ($p = 0.16$, $t = 4.45$), high effects of Receptive attention ($p = 0.19$, $t = 5.26$), and very high effects of Holistic attention ($p = 0.48$, $t = 13.49$).

Indirect effects of the experimental presentation conditions on the affective response variables were not significant, although the total of direct and indirect effects for Information on Enjoyment reached a marginal significance ($p = 0.09$, $t = 1.99$). For indirect effects of Familiarity on the affective response variables, Familiarity had significant indirect effects on Enjoyment and resultant Interest ($p = 0.16$, $t = 5.58$; $p = 0.23$, $t = 6.52$, respectively).

Direct effects for Familiarity on three of the Attention style variables were significant. The direct effect on Surface ($p = 0.12$, $t = 2.41$) were low, but there was a high effect for Holistic ($p = 0.21$, $t = 4.35$), and Receptive ($p = 0.19$, $t = 4.00$). Although the direct effect for Familiarity on Enjoyment was
also significant, its indirect effect, mediated by the attention variables, accounted for approximately 80% of the total effect (total effect = direct effect + total indirect effect). A decomposition of this mediated effect indicated that approximately 65% of this effect was attributable to the FAMILIARITY → HOLISTIC → ENJOYMENT compound path. Similarly, the total indirect effect of Familiarity on resultant Interest was primarily attributable to the FAMILIARITY → ENJOYMENT → INTEREST and FAMILIARITY → HOLISTIC → ENJOYMENT → INTEREST compound paths (accounting for approximately 48 and 34% of the total indirect effect, respectively). Thus, Familiarity had a significant indirect effect on Enjoyment by affecting attention styles (with subjects adopting a more Holistic style leading in turn to higher Enjoyment scores).

Familiarity indirectly influenced resultant Interest through its effect on the Holistic attention subscale, which in turn affected resultant Interest through its effect on Enjoyment levels. Indirect effects of three Attention style subscales on Interest were also significant. These included a very high effect of Holistic attention ($p = .37$, $t = 10.57$) and medium effects of Receptive attention ($p = .14$, $t = 5.14$) and Surface attention ($p = .12$, $t = 4.47$).

For effects of the experimental presentation conditions on the Familiarity response variable, Video presentation had a highly significant direct effect on Familiarity response ($p = 0.19$, $t = 4.06$), indicating that overall, subjects experienced a stronger sense of Familiarity with the music when it was presented in a Video recording. For effects of the presentation conditions on Attention style variables, provision of Information had a significant effect on one attention style subscale (Structure: $p = -0.13$, $t = -2.71$) indicating that provision of Information was associated with lower levels of that attention style. Video presentation mode also had a significant direct effect on two attention style subscales (Surface: $p = 0.12$, $t = 2.44$; Holistic: $p = -0.10$, $t = -2.07$), indicating that Video presentation mode was associated with higher scores on the Surface subscale, and lower scores on the Holistic subscale, or that Audio presentation mode was associated with higher scores on the Holistic subscale. The direct negative effect of Audiovisual on Holistic was, however, counterbalanced by the modest positive indirect effect ($p = 0.04$, $t = 2.97$) mediated by Familiarity on this Attention style. This resulted in a nonsignificant total effect.
5.1.1 Summary of Path Result for Whole Sample

The direct or indirect effects of Information and Audiovisual were not significant for Enjoyment or resultant Interest levels, although the total effects of Information on Enjoyment reached marginal significance. The Audiovisual presentation mode had a strong effect for Familiarity, and a significant effect on the Surface Attention style. Information had a negative effect on use of the Structure Attention style. There were no significant direct or indirect effects of Information or Audiovisual on the Receptive Attention style.

There were strong indirect effects on Enjoyment and resultant Interest for Familiarity which was, as mentioned above, strongly affected by Audiovisual presentation mode. Other significant effects on Enjoyment, were high direct effects from Holistic and Receptive and medium effect from Surface Attention styles. The strongest effect noted was that of the Holistic Attention subscale on Enjoyment and resultant Interest. Provision of Information had a significant negative effect on use of the Structure Attention style which was unbenefficial to Enjoyment, and may have increased engagement in the other three Attention styles which were beneficial to Enjoyment, thus indirectly influencing an increase in Enjoyment levels which was found in the ANOVA to be significant.

Due the relationship between previous research findings with differences noted in the means for males and females with regard to the effects of provision of contextual information and the audiovisual modes on attentional patterns, it was decided to take the investigation one step further. Using the separate correlation matrices for the male and female samples, the identical path model was used to test for the direct and indirect effects of Presentation Conditions on Enjoyment and Interest, direct relationships between these variables, and indirect links through the Familiarity and attention style variables, to determine the extent to which the effects of the presentation conditions on Enjoyment were mediated by Familiarity and attention style.

Preliminary screening analyses for conformity to path analysis assumptions were performed separately for the gender samples. These analyses indicated no notable violations in terms of sample size, multicollinearity, normality, linearity, additivity, and homoscedasticity. Thus, all assumptions associated with the use of path analysis techniques were satisfied within each of the data subsets.
5.2 Path Analysis for the Male Sample

The correlation matrix for the male sample appears in Table 17. Table 18 summarises the outcomes obtained for the male sample, and corresponding standard errors (in parentheses). The corresponding path diagram, showing standardised coefficients for the model parameters is shown in Figure 2.

Table 17. Correlation Matrix for Males between Information (INF), Audiovisual Mode (AV), Familiarity (FAMIL), Surface-Structure Attention (SURFACE), Structure-Structure Attention (STRUCTURE), Holistic Attention (HOLISTIC), Passive-Receptive Attention (RECEPTIVE), Enjoyment (ENJOY) and Interest (INTEREST) Scores

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<th>STRUCTURE</th>
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Table 18. Path Relationships and Standard Errors (in Parentheses) for Males, Tested between Information (INF), Audiovisual Mode (AV), Familiarity (FAMIL), Surface-Structure Attention (SURFACE), Structure-Structure Attention (STRUCTURE), Holistic Attention (HOLISTIC), Passive-Receptive Attention (RECEPTIVE), Enjoyment (ENJOY) and Interest (INTEREST) Scores

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Figure 2. Path Diagram for Males Tested Relationships between Information (INF), Audiovisual Mode (AV), Familiarity (FAMIL), Surface-Structure Attention (SURFACE), Structure-Structure Attention (STRUCTURE), Holistic Attention (HOLISTIC), Passive-Receptive Attention (RECEPTIVE), Enjoyment (ENJOY) and Interest (INTEREST) Scores

The overall goodness of fit (GFI) index for the model was 0.91, indicating a very good model-data fit. Based on a critical t-value of 1.96 (α = 0.05 for df > 120), there was a very high direct effect for Enjoyment on Interest (p = .73, t = 21.05), indicating that high Enjoyment scores were associated with high resultant Interest levels. On Enjoyment there was a marginally significant direct effect of Information (p = .09, t = 2.54), a moderate effect of Familiarity (p = .15, t = 4.04), a large effect of Surface attention (p = .19, t = 5.20), a moderate effect of Receptive attention (p = .16, t = 4.42), and a very large effect of Holistic attention (p = .46, t = 12.72).

The total indirect effect of Audiovisual presentation mode on the affective response variables was not significant. Although the indirect effect of Information on Enjoyment was marginal from a statistical viewpoint (t = 2.46), the path coefficient for this effect was negligible (p = .07), and interpretation of this indirect effect is not emphasised in the discussion. The total effect of Information on Enjoyment was significant, however (p = 0.16, t = 3.59).

Indirect effects of Familiarity on affective response were significant for Enjoyment and highly significant for resultant Interest (p = .11, t = 4.27; p = .19, t = 5.76, respectively). Direct effects for Familiarity on three of the Attention style variables were significant. These were low effects for Surface
(\(p = .12, t = 2.64\)), Receptive (\(p = .14, t = 2.91\)) and Holistic (\(p = .14, t = 2.95\)). Although a direct effect for Familiarity on Enjoyment was also significant, the indirect effect accounted for approximately 55% of the total effect for Familiarity on this variable (total effect = direct effect + total indirect effect). A decomposition of the indirect effect of Familiarity on Enjoyment indicated that this effect was primarily attributable to the FAMILIARITY \(\rightarrow\) HOLISTIC \(\rightarrow\) ENJOYMENT compound path. Similarly, the total indirect effect of Familiarity on resultant Interest was primarily attributable to the FAMILIARITY \(\rightarrow\) ENJOYMENT \(\rightarrow\) INTEREST and FAMILIARITY \(\rightarrow\) HOLISTIC \(\rightarrow\) ENJOYMENT \(\rightarrow\) INTEREST compound paths. Thus, Familiarity had a significant indirect effect on Enjoyment by affecting attention styles (with subjects adopting more Holistic style leading in turn to higher Enjoyment scores). Familiarity also indirectly influenced resultant Interest through its effects on the Holistic attention subscale, which in turn affected resultant Interest through its effects on Enjoyment levels.

Indirect effects of three Attention style variables on Interest were also significant. These included a very high effect of Holistic attention (\(p = .33, t = 10.89\)) and somewhat more modest, but still significant, effects of Receptive attention (\(p = .12, t = 4.32\)) and Surface attention (\(p = .14, t = 5.05\)).

For effects of the experimental conditions on the Familiarity response, Video presentation had a significant direct effect on Familiarity (\(p = 0.14, t = 2.84\)), indicating that overall, subjects experienced a stronger sense of Familiarity with the music when it was presented in a Video recording. For effects of the presentation conditions on Attention style variables, provision of Information had a significant effect on two attention style subscales (Surface: \(p = 0.12, t = 2.48\); Structure: \(p = -0.10, t = -2.09\)) indicating that provision of Information was associated with higher levels of Surface-analytic and lower levels of Structure analytic attention styles. Video presentation mode also had highly significant direct effects on two attention style subscales: a positive effect for Surface (\(p = 0.18, t = 3.85\)), and a negative effect for Holistic (\(p = -0.16, t = -3.30\)). These results indicated that Video presentation mode was associated with higher scores on the Surface subscale, but lower scores on the Holistic subscale which was thus associated with higher scores in the Audio presentation mode.

When indirect effects were taken into account, there was a marginally significant total effect of Information on the Receptive Attention style (\(p =
0.09, \( t = 1.91 \), and the total effect of Information on Enjoyment was of moderate significance \( (p = 0.16, t = 3.59) \). As mentioned above there were mild indirect effects on Enjoyment and resultant Interest for Familiarity which was in turn mildly affected by Audiovisual presentation mode. The strongest effect noted was that of the Holistic Attention subscale on the affective response variables, Enjoyment and Interest.

### 5.2.1 Summary of Path Result for Male Sample

When indirect effects were taken into account, Information, had a clearly significant effect, but Audiovisual was not significant for Enjoyment or resultant Interest levels. The Audiovisual presentation mode had a significant effect for Familiarity, and its effects on the Attention subscales included a strong significant effect on the Surface Attention style, and a negative effect on the Holistic Attention style. Information had a significant effect on the Surface Attention style and a negative effect on the Structure Attention style. There were no significant direct or indirect effects of Information or Audiovisual on the Receptive Attention style.

Marginally significant indirect effects strengthened the significance for Enjoyment and resultant Interest of Familiarity which was, as mentioned above, affected by Audiovisual presentation mode. Other significant effects on Enjoyment and resultant Interest were high direct effects from Holistic and Surface Attention styles and a mild effect from the Receptive style. The strongest effect noted was that of the Holistic Attention subscale on Enjoyment and resultant Interest. Provision of Information had a significant negative effect on use of the Structure Attention style which was unbeneificial to Enjoyment, and may have increased engagement in the other three Attention styles which were beneficial to Enjoyment, thus indirectly influencing an increase in Enjoyment levels which was found in the ANOVA to be significant.

### 5.3 Path Analysis for the Female Sample

Using the correlation matrix for the female sample, the identical path model was used to test for the direct and indirect effects of Presentation Conditions on Enjoyment and Interest, direct relationships between these variables, and indirect links through the Familiarity and attention style variables, to determine the extent to which the effects of the presentation conditions on Enjoyment were mediated by Familiarity and attention style. The correlation matrix for
the female sample appears in Table 19. The outcomes of the path analysis with standard errors (in parentheses), and the corresponding path diagram for this sample, showing standardised coefficients for the model parameters, are shown in Table 20 and Figure 3, respectively.

Table 19. Correlation Matrix for Females between Information (INF), Audiovisual Mode (AV), Familiarity (FAMIL), Surface-Structure Attention (SURFACE), Structure-Structure Attention (STRUCTURE), Holistic Attention (HOLISTIC), Passive-Receptive Attention (RECEPTIVE), Enjoyment (ENJOY) and Interest (INTEREST) Scores

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Table 20. Path Relationships and Standard Errors (in parentheses) for Females Tested between Information (INF), Audiovisual Mode (AV), Familiarity (FAMIL), Surface-Structure Attention (SURFACE), Structure-Structure Attention (STRUCTURE), Holistic Attention (HOLISTIC), Passive-Receptive Attention (RECEPTIVE), Enjoyment (ENJOY) and Interest (INTEREST) Scores

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The overall goodness of fit (GFI) index for the model was 0.93, indicating a very good model-data fit. Based on a critical $t$-value of 1.96 ($= 0.05$ for $df > 120$), there was a very high direct effect for Enjoyment on Interest ($p = .81$, $t = 27.63$), indicating that high Enjoyment scores were associated with high resultant Interest levels. There was a significant direct effect on Enjoyment which was negative from Audiovisual ($p = -0.11$, $t = -3.00$). Other significant direct effects on Enjoyment were of Familiarity ($p = .12$, $t = 3.10$) and of three Attention styles: a low effect of Surface attention ($p = .12$, $t = 3.49$), a high effect of Receptive attention ($p = .23$, $t = 6.63$), and a very high effect of Holistic attention ($p = .51$, $t = 14.27$).

Indirect effects of the presentation conditions on the affective response variables were not significant. Familiarity had highly significant indirect effects on Enjoyment and resultant Interest ($p = .21$, $t = 6.96$; $p = .27$, $t = 7.14$, respectively). Direct effects for Familiarity on three of the Attention style variables were significant. These were a low effect for Surface ($p = .11$, $t = 2.33$), and high effects for Receptive ($p = .23$, $t = 4.75$) and Holistic ($p = .29$, $t = 6.04$). While a direct effect for Familiarity on Enjoyment was also significant, this indirect effect accounted for approximately 66% of the total effect for Familiarity on this variable (total effect = direct effect + total indirect effect). A decomposition of the indirect effect of Familiarity on Enjoyment indicated
that this effect was largely attributable to the FAMILIARITY → HOLISTIC → ENJOYMENT compound path. Similarly, the total indirect effect of Familiarity on resultant Interest was primarily attributable to the FAMILIARITY → ENJOYMENT → INTEREST and FAMILIARITY → HOLISTIC → ENJOYMENT → INTEREST compound paths. Thus, Familiarity had a significant indirect effect on Enjoyment by affecting attention styles (with subjects adopting more Holistic style leading in turn to higher Enjoyment scores). Familiarity also indirectly influenced resultant Interest through its effects on the Holistic attention subscale, which in turn affected resultant Interest through its effects on Enjoyment levels.

Indirect effects of two Attention style variables on Interest were significant. These were a very high effect of Holistic attention (p = .41, t = 12.68) and a high effect of Receptive attention (p = .19, t = 6.45). There was also a significant effect of Surface attention (p = .10, t = 3.47).

For effects of the presentation conditions on the Familiarity response variable, Video presentation had a significant direct effect, which was high (p = 0.23, t = 4.96), indicating that overall, subjects experienced a stronger sense of Familiarity with the music when it was presented in a Video recording. For effects of presentation conditions on Attention styles, provision of Information had a significant negative effect on two attention style subscales (Surface: p = -0.13, t = -2.72; Structure: p = -0.14, t = -2.98) indicating that provision of Information was associated with lower levels of both Surface-analytic and Structure-analytic attention styles. When direct and indirect effects were taken into account, Audiovisual presentation mode had a significant effect on the Surface Attention style (p = 0.10, t = 2.06), but no significant effects on other Attention style subscales.

When indirect effects were taken into account, there was no significant effect from Audiovisual on Enjoyment, and there were no significant direct or indirect effects of presentation condition on the Receptive Attention style, or on the affective response variables. As mentioned above there were strong indirect effects on Enjoyment and resultant Interest for Familiarity which was in turn strongly affected by Audiovisual presentation mode. The strongest effect noted was that of the Holistic Attention subscale on Enjoyment and Interest.
5.3.1 Summary of Path Result for the Female Sample

The direct or indirect effects of Information and Audiovisual were not significant for Enjoyment or resultant Interest levels. The significant direct effect of Audiovisual on Enjoyment which was negative had been mitigated by positivity of indirect effects. The Audiovisual presentation mode had a very strong effect for Familiarity, and its only other effect was on the Surface Attention style. Information had a negative effect on both the Surface Attention style and the Structure Attention style. There were no significant direct or indirect effects of Information or Audiovisual on either the Receptive Attention style or the Holistic Attention style.

There were highly significant indirect effects on Enjoyment and resultant Interest for Familiarity which was, as mentioned above, strongly affected by Audiovisual presentation mode. Significant direct effects of Attention styles on Enjoyment, were a very high direct effect from Holistic, a high direct effect from Receptive, and a low direct effect from Surface. The strongest effect noted was that of the Holistic Attention subscale on Enjoyment and resultant Interest. Provision of Information had a significant negative effect on use of the Surface Attention style, and the Structure Attention style. These Attention styles were the least beneficial to Enjoyment for females, and this effect of Information may thus have increased their engagement in the other two Attention styles which were beneficial to Enjoyment, thus indirectly influencing an increase in Enjoyment levels which was found in the ANOVA to be significant.

Summary of Results

Results of the ANOVA showed the provision of Information to have a marginal significance in the higher Enjoyment scores of subjects, and a significant negative effect on the Structure Attention style. Examination of mean Scores showed that Information raised levels of Surface-analysis attention style for males but lowered them for females. The positive effect of Information on Enjoyment appeared to arise only in males, and the effect on Interest was stronger for males.

The ANOVAs showed Video presentation to result in higher scores on the Surface Attention style, and a highly significant effect on Familiarity. Mean Scores showed the latter effect to be much stronger for females than for
males, and the former effect to be stronger for males than females, and that the effect of Video presentation mode on Holistic attention style was detrimental for boys.

Females were found to have enjoyed the music significantly more than boys in the ANOVA, and the means showed that girls had high levels of Holistic attention style which were consistent over all conditions. Boys who were provided with Information in the Audio presentation mode, however, gained the highest means on Enjoyment for their gender, and on Holistic Attention style for either gender in any condition.

Results of the path analysis for the whole sample concurred with of the ANOVAs with regard to effects of Audiovisual on Enjoyment and resultant Interest levels, Familiarity and the Surface Attention style. Path results also concurred with the previous analyses regarding effects of Information on Enjoyment and resultant Interest levels, and the Structure Attention style; and regarding the lack of significant direct or indirect effects of Information or Audiovisual on the Receptive Attention style.

A number of additional results were contributed by the path analyses. There were significant high direct effects on Enjoyment and resultant interest from Holistic, Receptive and Surface Attention styles. There were strong indirect effects on Enjoyment and resultant Interest for Familiarity which was, as mentioned above, strongly affected by Audiovisual presentation mode. Indirect effects of Familiarity as mediated through three of the Attention variables amounted to a high significance which led to a very high total effect from Familiarity on Enjoyment and Interest. There was a significant negative direct effect of Video presentation mode on the Holistic Attention style. The significance of this effect was counteracted by a positive indirect effect mediated by Familiarity, resulting in nonsignificance. The strongest effect noted was that of the Holistic Attention subscale on Enjoyment and resultant Interest.

In relation to the result of path analysis for the combined sample, certain differences were found in the path result for the male sample. The total of direct and indirect effects for Information, which had been marginal, reached in males a level of medium significance for Enjoyment and resultant Interest levels, and Information had a greater effect on the Surface Attention style. The Video presentation mode also had for males a much stronger effect on the Surface Attention style which in turn resulted in higher levels of Enjoyment and Interest.
than for the combined sample. The effect of Video presentation mode on Familiarity for males was much milder, and the indirect effects of Familiarity as mediated through the Attention variables were only marginally significant for males. The Video mode caused in males a stronger negative effect on the Holistic Attention style, an effect which remained significant when the indirect effect of Familiarity was taken into account. The significant direct effects on Enjoyment and resultant Interest which in the combined sample were high for Receptive and medium for Surface Attention styles, were reversed for the male sample who showed a high effect for Surface, and a medium effect for Receptive Attention.

Differences from the path of the combined sample were also identified in the path result for the female sample. The direct or indirect effects of Information lacked significance for females' Enjoyment or resultant interest levels. A significant negative effect from the Video presentation mode on females' Enjoyment was mitigated by the positivity of an indirect effect mediated by Familiarity. The Video presentation mode had a very strong effect on Familiarity for females, and the indirect effects of Familiarity as mediated through the Holistic and Receptive Attention styles were highly significant for females, strengthening its significance for Enjoyment and resultant Interest. The effect of Audiovisual mode on the Surface Attention style was lower for females than for the whole sample. Information also showed a significant negative effect on the Surface Attention style for females, although there had been no effect for the combined sample. The significant negative effect from the Video presentation mode on the Holistic Attention style which had occurred within the whole sample did not appear in the female path result. Differences in the significant direct effects of Attention styles on Enjoyment, were a higher direct effect from Receptive, and a lower direct effect from Surface.

The path analysis for the male sample showed a significant effect for Information on Enjoyment and resultant Interest levels. The influence of Audiovisual presentation mode on Familiarity was mild, and while the indirect effects of Familiarity on Enjoyment and resultant Interest were only marginally significant, the total effects were high. The Video presentation mode had for males a significant negative effect on the Holistic Attention style and a strong effect on the Surface Attention style. Information also had a significant positive effect on the Surface Attention style which in turn had a high effect on
Enjoyment and Interest. There was a mild direct effect of Familiarity for Receptive Attention which had a medium effect on Enjoyment and Interest.

In path analysis the female sample also showed a distinct pattern. Information was not significant for Enjoyment or resultant Interest levels but had a significant negative effect on use of the Surface Attention style. A negative effect of the Video presentation mode on Enjoyment was overruled by positive indirect effects mediated by Familiarity. The Video presentation mode had a very strong effect on Familiarity whose indirect effects mediated through Holistic and Receptive Attention styles on Enjoyment and resultant Interest were highly significant. The Receptive Attention style, strongly affected by Familiarity, had a high direct effect on Enjoyment and Interest, but the effect of Surface Attention style, which was only mildly affected by Audiovisual presentation mode, was low.
CHAPTER SEVEN

DISCUSSION

This quantitative study in the optimal conditions for enjoyment and resultant interest of highschool students listening to unfamiliar music, aimed primarily to ascertain whether an identifiable relationship exists between the provision of verbal and/or visual information and the affective response of students. A secondary aim was to closely observe from an affective perspective, the mediatory roles of attention styles and familiarity in the relationship between the method of presenting a musical stimulus, and affective response to the stimulus.

The data for this study were analysed through a series of statistical procedures. Following the initial reduction of data by Principal Component Factor Analysis, several ANOVAs were conducted to expose any main effects on affective response which might be due to provision of contextual information, audiovisual presentation mode, or subjects' gender. The final step consisted of path analyses of the correlation matrices for the sample as a whole, and in two sections split by gender. The raw information thus exposed, layer by layer, requires assimilation in the light of knowledge accumulated in previous theory and research in order to reveal its meaning and possible relevance for music educators. Such a discussion will follow after an initial summary of the apparently complex sets of relationships.

Relationships are outlined firstly between variables of presentation, gender and mediation directly with the response variables; and secondly between variables of presentation and response, with reference to influences of gender as well as the indirect influences sequentially accumulated through the mediator variables on to the response variables.
1. Overview of Results

By factor analysis of subjects' responses regarding both the focus and the style of their attention to the stimulus music, four distinct attentional styles were identified. The two analytical attention styles were distinguished in their focus on musical features which were either the idiomatic details of the music's surface layers, or the structural shape of the music's composition. The first holistic attentional style, which demonstrated a powerful effect on the enjoyment response, was distinguished by involvement in the mood of the music and in imaginative activity while analytical activities were subjugated. The second was a receptive state distinguished by a mesmeric involvement with the flow of a surface feature of the music, the vibrato.

Results of ANOVAs showed that the provision of Information had a marginal significance in the higher Enjoyment scores of subjects, and a significant negative effect on the Structure Attention style; that Video presentation resulted in a highly significant effect on Familiarity, and higher scores on the Surface Attention style; and that the stimulus music was significantly more enjoyable for females than for males.

The significant difference for gender on Enjoyment, was a predictable stimulus effect, due to the natural preference of girls for the characteristics of the musical dynamics exhibited by the stimulus music. As observed in previous research (Hargreaves et al., 1995; May, 1985) slowness in tempo, and a gentle ambience are enjoyed more readily by girls than by boys, who prefer fast music with a strong beat. Although gender did not appear in the ANOVAs to have a significant effect upon mediating variables, examination of the means indicated a necessity for conducting path analyses for each gender as well as for the whole sample.

Results of the path analysis for the whole sample contributed additional information. There was a significant negative direct effect of Video presentation mode (or a positive effect of Audio) on the Holistic Attention style which was counteracted by a positive indirect effect from the mediator, Familiarity. Familiarity also had a significant direct effect on the Surface Attention style, and high effects on the Holistic and Receptive Attention styles. The total effects of Familiarity on Enjoyment and Interest reached a level of high significance. Enjoyment and resultant Interest showed significant positive effects from Surface Attention style and high effects from Holistic and Receptive, but not from the Structure Attention style. The strongest effect
noted was that of Enjoyment on Interest, followed by a very high effect of the Holistic Attention subscale on Enjoyment and resultant Interest.

It is useful when examining the details of effects to be aware of the proportions of influence on an overall scale. There was a significant gender effect of the stimulus music on affective response. While the overall mean scores for each gender on the mediator variables, Attention subscales and Familiarity, did not reach significant difference, the means for genders in different presentation conditions showed interesting differences which were reflected objectively in path analyses.

Separate path analyses for males and females identified gender differences in the patterns of influence among variables. Provision of Information showed a significant beneficial effect on Enjoyment and resultant Interest levels for males but not for females. Information also had a significant positive effect for males on Surface Attention style, an approach which led to their high levels of Enjoyment and Interest. For females, there was a significant negative effect for Information on use of the Surface Attention style, a style which for them led to Enjoyment levels of low significance.

The Video presentation mode had for females a very strong effect, and for males a mild effect, of strengthening Familiarity whose total effect on Enjoyment and indirect effect on resultant Interest was highly significant for both genders. The significant positive effect of Audio presentation mode on Enjoyment for females was somewhat negated by positive indirect effects of Video, largely due to the mediation of Familiarity. Audio presentation mode had for males a significant positive effect on the Holistic Attention style, and Video a high positive effect on the Surface Attention style, effects which were for females non-significant and of low significance, respectively. The Receptive Attention style, which was affected by Familiarity strongly for females and mildly for males, had a high direct effect on Enjoyment and Interest for females, but only medium effects for males.

2. Introduction to Discussion of Results

The principal variables under investigation in this study were the provision of contextual information and the audiovisual presentation mode, as they impact on students' enjoyment of, and ensuing interest in unfamiliar music. Since there
was no interaction between the presentation conditions of Information and Audiovisual, the following discussion will trace the patterns of each separately, observing their effects on the mediator variables (Attention subscales and Familiarity) and response variable (Enjoyment). In each of the two sections thus constructed, the patterns for each gender and for the mixed sample will be observed and compared, as an understanding of all significant differences is likely to be of practical use to educators. Discussion of Interest will follow separately due to its separation in the analyses.

A secondary subject of investigation in this study was the nature and influences of the mediating variables. Discussion of Familiarity and each of the Attention styles will follow, with particular emphasis on Surface and Holistic, and some important deductions regarding their functions in music listening education.

3. The Effects of Provision of Contextual Information on Listening Process and the Enjoyment Response:

Research has shown that it is possible in programming prelistening instructions for any single exposure to a selection of music to specify a focal direction for the occasion as being principally towards enjoyment or towards understanding of the music (Zalanowski, 1986). In this study the prelistening Information which was provided to half of the sample did not specify either of these focal directions but incorporated elements of both. The Informational content included cognitive material regarding discriminable features of the musical style, but not its melodic structure, and historic background details pertaining to some aspects which could be regarded as holding situational interest value and a potential source of affective connotations for some individuals.

This example of an unfamiliar music presented to high school students was met with general enjoyment, particularly by female listeners. In the light of previous research, a gender difference may have been foreseeable due to the musical dynamics of the selected item, but the positive influence of contextual information on Enjoyment and resultant Interest levels for males was interesting. The benefit of an Informational presentation style for the male portion of the sample, who were less inclined to favour the musical item, appears to be a potentially powerful agent. More detail will be revealed about effects of Information as the discussion unfolds.
The first observation about the influence of information in order of the operant variables is its lack of effect on Familiarity. The measure of Familiarity was related to subjective memory of similarity of stimulus to previous listening experience. The content of the verbal information provided did not contribute to subjects' reported level of this feeling. The information included elements which would link musical features of the stimulus with subjects' knowledge of musical syntax as well as an extramusical link of storyline referring to wandering monks and meditational purpose. It is interesting that neither a cognitive nor affective link in verbal information had power to increase the feeling of Familiarity which was so greatly enhanced by the Video mode of presentation.

Possibly the most readily understood influence of information, and one which was gender neutral, was its negative effect on the Structure Attention style. Subjects who received no information scored slightly higher on attending to the music as a melody, thus using a somewhat more analytical approach, than those who received information. Without information to suggest otherwise, the musical stimulus would readily be recognised as consisting of a melodic line, and of all Western musical concepts melody is the most common. This type of attention is rather readily applied to melody by Western listeners (Madsen & Geringer, 1990) and involves an analytical procedure (Myers, 1956) possibly at a preconscious level (Reimer, 1992).

In terms of musical satisfaction, the Western bias of Structure-analytic attention would have been an inappropriate approach to the honkyoku stimulus, this was the only attention style for which resultant enjoyment was shown to be non-significant. It might seem logical to suggest that by deflecting Structure-analytic attention, Information possibly benefited Enjoyment levels in the redirection of attention to more conducive approaches toward the stimulus. The source effect in this case being low, however, shows no such consequence in the results.

The fact that Information appears to have influenced listeners to avoid the Structure-analytic attention style, may be construed to imply that a less satisfying result was predicted from that approach by subjects who had knowledge that the music was in a Japanese tradition. It might equally be surmised that other information, such as the music's meditational purpose or intriguing performance techniques, may have been influential in attracting subjects to use other attentional styles. It is possible that suggestions regarding the meditational function of the music might encourage the Holistic
or Receptive attention styles, and that the indicated relevance of musical
dimensions other than melodic shape, such as timbre, vibrato, glissando, and
ornamental devices, might direct listeners towards the Surface attention style.

There was no significant effect for Information on the Holistic attention style.
This result is quite surprising in the light of research on interest in reading and
on music listening which had shown that affective or human interest links, cued
in preparatory information, assist students to engage more holistically with
material. Even male subjects, who benefited in several ways from Information,
failed to reveal even marginally significant increase in Holistic engagement
through this device. Familiarity had a far stronger effect (significant for males,
and highly significant for females) on this attention style.

The Receptive attention style did show a low but significant effect of
Information, but for male subjects only. The description of a musical
appreciation which is formed "in response to the flow of the music" and not
completed "until the moment at which the music ceases" (Crickmore, 1968:
240) could well be applied to the Receptive attention style. This particular type
of attention, which was defined by a quality of undistractibility while listening
particularly to the vibrato effect, has not been previously reported in music
education research, but has been described by theorists (Kivy, 1990; Langer,
1953; Reynolds, 1975) (see Chapter Six) as a mode of musical enjoyment
which is unencumbered by conscious analytical or discursive processes.
According to Reynolds (1975), the Receptive attention style could be a fairly
natural response to the honkyoku genre. The effect of Information for males, in
increasing their engagement in this somewhat trance-like state, may have been
due to the suggestion of a meditative intent in the music, or simply a
consequence of following the suggestion that attention to the vibrato would
provide an interesting experience.

The curious aspect of this effect of Information on Receptive attention is its
gender specificity. Although females rated highly in their use of Receptive
attention style, the only observed significant influence affecting their
engagement in this style was from Familiarity. The influence of the feeling of
Familiarity on males' use of Receptive Attention was also stronger than that of
Information. On both of the holistic types of attention style, Receptive and
Holistic, therefore, it may be seen that Familiarity was of greater importance
than Information: a significant effect from Familiarity for males, and a highly
significant effect for females.
The gender difference exhibited in the influence of Information on levels for Surface-analytic attention was significant, and possibly more readily interpretable. The relationship between this attentional style and details presented in the Information is seen as being one of logic, due to the verbal suggestion that certain idiomatic features of the music are worthy of interest. Musical features addressed by the Information were ornamental notes, rhythm, glissando and timbre. An observational approach to these musical features may be described as a sequential analysis of non-structural characteristics of the music. Literature reviewed for this study had suggested that such analytical processing may be more natural to males while a more holistic approach is more natural to females (McClary, 1991; Sims & Sims, 1995). The positive significance of Information on Surface-analytical attentional style for males, and negative significance for females, supports previous findings. Ford (1985) reported that in an Analytical approach, the tendency for males, emphasis is placed on the relation of what is being learned to previous knowledge by means of logical links. By the provision of such links in the concrete elements of the Information, males would have been encouraged to take a Surface-analytic approach. Similarly, it might be suggested that females were, by their opposite tendency, possibly deflected by this analytical suggestion.

Through its effects on the Surface-analytic and Receptive attention styles, and also as a direct effect, Information had a strong influence on Enjoyment and resultant Interest for males. There was no significant effect for Information on the Enjoyment or Interest of females. The influence of Information on males' Enjoyment may be related to the analytic tendency of their cognitive style (Sims & Sims, 1995), but it is curious that Information also was associated with their increased use of the Receptive attention style. Perhaps the cognitive suggestion, as a conductor of an emotional experience (Ortony et al., 1988), has more strength for males than for females, and the reason for the dependence of males and females on different environmental cues for their response in this attentional style may be due to difference in cognitive styles. Since a slight rise was also reflected in Holistic attention for males provided with Information, there may be some support for this line of thought.

The overall pattern of Information for female Attention styles showed that its only significant effects were negative - on the two Analytic Attention styles, Surface and Structure, while for males there were two Attention styles, Surface and Receptive, which were positively affected by the provision of
Information. It appears that males may be more amenable than females to the positive implications of verbal information with regard to these particular attentional styles. Although content of the Information which suggested the meditational use of the music might have been predicted to influence females towards holistic attentional styles, the only apparent effects were of significant negativity in relation to the analytical styles. The natural aptitude of females, however, is to use a holistic approach which involves intuitive behaviour and emphasises personal meaning as a motivator (Sims & Sims, 1995). Thus for females, Information which derives from a source which may be experienced as impersonal is possibly devalued.

4. The Effects of Audiovisual Presentation Mode on Listening Process and the Enjoyment Response:

While the issue of mental visual imagery as a behavioural practice during music listening has been peripheral to music education research, it has nevertheless been a matter of interest. Engagement in visual imagery while listening was viewed by Fisher (1949) as a positive element, and by Crickmore (1968) as a negative symptom in music appreciation. Prince (1972) deemed it a mode of attention, and Zalanowski (1986) found it to promote high levels of enjoyment in music, as did Long et al. (1989) in relation to reading. Tobias (1994) deemed its occurrence to be an attribute of intrinsic interest, and a sign of personal and emotional associations with material. The hypothesis of Long et al. (1989) in their research on reading, that chunks of information are assimilated into images and carried on to assist in synthesis, may possibly be transferrable to the function of visual imagery while listening to music. Could visual imagery from an external source, delivered as a sequentially synchronised accompaniment to music, provide a substitute access to the beneficial processes of personal associations and assimilation which had been attributed to the practice of mental visual imagery by individuals? And would visual imagery from an external source differ in its effect for individuals, as Zalanowski (1990) had found subjects with differing cerebral arousal asymmetries to differ in levels of visual imagery and corresponding levels of attention and enjoyment of music?

It had been suggested that enjoyment by Western listeners of music from other cultures might be facilitated by viewing in situ video clips to provide some basic awareness of the specific social context (Cook, 1990).
Performance videos that focus attention as well as providing additional visual information assist in familiarisation for novice listeners by creating a context, and in reducing complexity by reducing the quantity of "unknowns" (Geringer et al., 1996 and 1997). It has also been theorised that reduction of our cultural conception of music to a single dimension with the advent of audio recordings contributed to an unspoken desire to restore the visual dimension which has led to the popularity of multimedia productions (Nattiez, 1990).

The most important effect of Audiovisual mode was the substantial assistance for males from the Audio mode, in gaining access to Holistic attention which rewarded them with very high levels of Enjoyment and ensuing Interest. Video mode, in sharp contrast, had a highly significant influence on their engagement in Surface-analytic attention, a more natural style for them, which also provided significant, but lower, levels of Enjoyment and Interest. While the sequential nature of Video mode, and the concrete nature of observable events understandably fosters an analytical style, the effect of Audio on holistic attention is not so readily understood. It is possible that the intensity of experience directed through a single sense input assists in deflecting an analytical tendency. The effect is more easily explained in terms of the negative effect on their holistic approach from the Video mode which may naturally encourage their analytical tendency. In view of the lack of a significant direct effect on Enjoyment levels from Audiovisual modes, it appears that the latter interpretation may be more feasible.

The only significant direct effect of Audiovisual mode on musical Enjoyment, was a positive effect from the Audio presentation (or a negative effect from Video) for females. This seemed surprising as the finding of Rolandelli et al., (1991) that females attend more to the auditory modality might have been interpreted to suggest that the accompanying visual modality would not have caused them excessive distraction. From that perspective, a smaller positive effect from the Video mode than that for males might have been predicted, rather than a significant negative effect due to the visual stimulus. That effect, seen as a positive influence from Audio, may also be interpreted as a greater enjoyment for females in the absorption of the single sensory mode of sound, which could well be the subject of some further research. For this study, the negative effect of Video on females was ameliorated by its positive indirect effect for them through mediating variables, largely that of Familiarity, with the result that the total effect of Audiovisual mode on Enjoyment and resultant Interest was nonsignificant, for either gender. The effects of Audiovisual
presentation mode on the mediatory variables are certainly deserving of examination, particularly with regard to gender differences.

A non-significant effect, which could be of some importance, was the high engagement in Holistic attention by males in the Audio presentation, particularly for those who received Information. Although females rated highly on this attention style in all conditions, males achieved a score in this single condition which surpassed the high female scores. The finding that males engaged in Holistic attention in the Audio conditions may relate to the previously suggested notion that this mode assisted their absorption in the single sensory mode of sound. This interpretation is in line with Rolandelli et al.'s (1991) finding, regarding the divisive effect of input to two sensory channels for males. Although the additional benefit to males' holistic engagement from provision of Information was not significant, this may present a subtle degree of support for the previous findings that information providing affective links assists a holistic approach. The subtlety of this effect of Information, however, is reflected in its lower than marginal effect on Holistic in the path analysis of the male sample.

The most striking observation about the influence of Audiovisual presentation mode in order of the operant variables was its significant effect in the Video mode upon Familiarity. The Video used in this study, by presenting on film the live performance of a human being playing an instrument amid natural scenery, provided subjects with both concrete and familiar elements. The significant effect of Video on Familiarity, and the significance, in turn, of Familiarity for three Attention styles, as well as Enjoyment and Interest, supported the view of Lepper and Chabay (1985) that provision of a concrete and familiar visual representation may provide links with existing schemata. Lepper and Chabay proposed that by this means the visual information affects the intensity and focus of students' attention, levels of arousal and involvement, and their degree of deep processing. It may thus be seen, that although this presentational mode did not directly influence affective response, its indirect influence is an important reality.

Two of the three variables identified as serving to link a perceiver with a stimulus (Ortorny et al., 1988), appear to be invoked particularly by the Video mode. The first is a "sense of reality", which was exemplified in the quasi-participatory identification of self with experiences absorbed through watching a movie, which increases the intensity of emotional response. The second is psychological "proximity" of the object, the feeling of closeness it holds for the
individual in dimensions which could be temporal, spatial, experiential or emotional. It is feasible that "proximity" could be influenced by close-ups in a video context, and that the Video medium provided a context of both reality and intimacy. A degree of empathy could also have been induced through the natural scenery of the visual background (Roszak, 1995). In the light of the self-identification associated with the first of these variables, it may also be suggested that proximity is likely to reach higher levels when communicated through film than through the verbal medium. The image, perceived and interpreted directly by the individual rather than through the words of a previous perceiver, may be experienced as more personal and intimate.

If this was the explanation for the effect of Video presentation on Familiarity levels, then why was the effect so much stronger for the female subjects? Given the finding of Rolandelli et al. (1991) that females attended more to the auditory modality and were less dependent on the visual modality than males, while males being more visually attentive, relied more on visual processing, the suggestion was that looking was of greater value to males than females. The greater level of Familiarity achieved by females as an effect of Video mode, in that light seemed peculiar.

A possible explanation for this seeming anomaly may be recognised in the finding of Davidson's (1993) study investigating response to expressivity with recordings presented in audio, visual-only, and audiovisual recorded modes. The result which showed the usefulness of visual information in the perceiver's understanding of the performer's expressive intentions, is likely to be particularly relevant for females due to their propensity for the perception of emotion in music (Malele et al., 1981; Brody & Hall, 1993; Citron, 1993; Kamenetsky et al., 1997; McClary, 1991), and the emphasis they placed on personal meaning in their intuitive approach (Sims & Sims, 1995).

Other findings which may relate to this gender difference are the speciality for females with communication skills contrasting with that for males in abstract analytical areas (Kim & Michael, 1995; Rittschof et al., 1998), which result in males tending to learn through exploring their physical environment, and females tending to learn through communication with other people (McGuinness, 1975). In Kirk's (1992) view the innate perceptual differences which exist between males and females may in turn explain certain differences in the types of information they are likely to pick up from the environment. This would explain a propensity for males to attend to features of the musical
performance, in a more objective approach, and for females to focus more on the emotion expressed by the musician, in a more subjective approach.

The information regarding the personal meaning of the *honkyoku* performance as demonstrated in the expressions and demeanour of the performer, which was transmitted through the video recording, was of particular value to females in establishing a link of proximity. Such a link may be described as a cognitive conductor of emotional experience (Ortony et al., 1988), and may be regarded as an important affective component of subjective Familiarity, a feeling of closeness and intimacy. Proximity was enhanced for all by the Video presentation mode, but particularly so for females, due to the emphasis in their cognitive style on personal meaning.

The Video presentation mode had significant influence on the Surface Attention style. For males the direct effect was highly significant, and for females the total of direct and indirect effects reached significance. An intuitive explanation of the positive effect on this attention style from Video presentation is the natural interest which would be immediately invoked by the obvious physical motions which are used to create such idioms as glissando, vibrato, and ornamental notes. To carry this understanding further, it is worth noting that the Video mode had no effect on Receptive attention style, and a negative effect on Holistic attention. The Video mode appeared, therefore, to encourage a sequential or Analytical engagement with the intriguing details of the idioms as the performance moved through time. This effect was very strong for males for whom the Analytical style has been indicated to be connative (Sims & Sims, 1995). For females the effect was much milder, and only reached significance in combination with the small indirect effect contributed by Familiarity towards this attention style. In other words, the additional impact of external visual imagery was not as powerful for females as it was for males in engaging this attention style. As Rolandelli et al., had pointed out, their auditory attention is less likely to be disrupted by visual stimuli, and therefore the Video mode would not have such a great influence on their attentional approach to the music. Indirectly, however, the Video mode was affecting them through Familiarity, and there was a small indirect effect from that additional intimacy they felt which raised the contribution of Video mode to a significant influence on their engagement in Surface Attention style.

It seems logical, that since analytical attention styles are more native to males, any potential influence towards engaging in that behaviour has their innate support, thus the influence of Video on their Surface Attention style
appears to have greater strength. Since females are more prone to be
influenced by personal feelings and intuition, these are likely to show greater
effects on their behaviour, drawing them towards associated attentional
styles. Thus, as previously noted, the Surface-analytic Attention style was
relatively mildly used by females. Information diverted them from its use, and
Video mode mildly attracted them towards it. Familiarity also had a mildly
significant effect on their use of this attention style. Their Enjoyment as a
result of this style was similarly mildly significant, and resultant Interest was
marginal. Males' use of Surface-analytic Attention style, on the other hand,
was positively influenced by information, highly significantly affected by the
Video mode, and also more significantly influenced by Familiarity. The
Enjoyment they reported from this Attention style was highly significant, and
resultant Interest was strong. Second only to the very potent effect of the
Video mode on Familiarity for females, was its effect on males for the Surface-
analytic Attention style.

Audiovisual presentation mode had no significant direct effects on Structure-
analytic or Receptive Attention styles, on Holistic attention for females, or on
Enjoyment for males. It might be suggested, therefore, that no matter which
recording mode is presented, subjects are engaging in particular attentional
styles to whatever degree, largely according to the influence of some other,
possibly gender-defined, variables, the strongest of which we are aware being
that of cognitive style. The exceptions to that tendency were, for females, the
positive effect of Video mode on Surface Attention, and for males, the strong
effect of Video on that Attention style, and a strong effect of Audio (or
negative effect of Video) on their Holistic Attention style.

Other influences found from the Video mode were its strong effects on
Familiarity for females, and a significant low direct negative effect on
Enjoyment for females, which was counteracted by the indirect positive effect
through Familiarity. The nonexistent effect of either Information or Audiovisual
on Holistic attention for females, along with the high levels to which they
engaged in it may indicate that this is due to a natural propensity within the
female cognitive style. The extremely high level of Enjoyment reported by both
genders in association with this attention style suggests that the reward
would be sufficient that on any previous occasion when such enjoyment had
been experienced, the individual may possibly retain at least some
preconscious memory of the possibility of this type of experience, and possibly
some traces in the memory as to how to access it.
The Holistic Attention style, which appears to represent a mode of aesthetic perception at some level, had an extremely strong association with musical Enjoyment and Interest. The fact that certain attention styles might have an even greater impact on Enjoyment than the known effect of Familiarity level had not been indicated by previous research. The question had possibly not arisen. Zalanowski (1986) had found that affective modes such as the mood and associative modes, assisted access to holistic musical experience (see Chapter One), and others had also found that instruction which invokes the use of affective modes by students, benefits their musical enjoyment (Asmus & Harrison, 1990; Halpern, 1992; Jensen, 1970; Zalanowski, 1986), but no gender differences had been observed. It should be surmised that the effects noted in this study as differences due to cognitive style pertaining to gender tendencies were more specifically applied by Zalanowski (1986 and 1990) who tested subjects for their natural style.

Another aspect of the female indifference to Audiovisual mode with regard to Holistic Attention is possibly clarified by an interpretation of the clearly negative influence of the Video mode on Holistic Attention for males. If this is interpreted to mean that the Audio mode is most beneficial for engagement in Holistic Attention, which it clearly was for males, this effect may be counteracted for females by their ability to attend to the auditory mode even when it is accompanied by visual stimuli. Rolandelli et al., (1991) had indicated that males tend to be somewhat distracted from the auditory mode when it is accompanied by visual stimuli. This tendency in males is also supported by their high Enjoyment of Surface Attention style in the Video mode. The highest level of Enjoyment, however, for males as for females was in the Holistic Attention style, which males best achieved in the Audio mode, with slight benefit also from Information. The latter benefit, which did not quite reach significance, was enough to ensure that with Information in the Audio mode, they achieved the highest score on Holistic Attention for either gender in any presentation condition. The results indicated that males definitely engaged less in Holistic Attention when music was presented in the Video mode. In view of the findings of Rolandelli et al., (1991) this may possibly be generalisable to other music listening situations. Previous studies in music education which have compared audiovisual presentation modes (Geringer et al., 1996 and 1997) did not seek to identify gender distinctions.
5. Effects of Enjoyment, Familiarity and the Attention Styles on Interest

The strongest effect noted was a very high direct effect for Enjoyment on Interest, indicating that high Enjoyment scores were associated with high resultant Interest levels. There was also a very strong effect of Holistic attention, and a strong effect of Familiarity. This concurs with previous research which suggested that Interest is typically aroused in association with feelings of enjoyment and involvement in connection with a topic or object (Schiefele, 1992). Although Gender was found to be significant for Enjoyment with higher response for females than for males the effect on Interest was not significant at stepdown, indicating that a large proportion of its influence was already accounted for through the overlapping variance across the two affective subscales.

Significant indirect effects of Attention styles on Interest included a very high effect of Holistic Attention, and medium effects of Receptive Attention, and Surface Attention, although the latter was marginal for females. Situational interest, once triggered may contribute to the development of long-lasting personal interest over time (Hidi, 1990). Mitchell's (1993) model illustrated how Analytical attention creates "catch" situational interest, whilst Holistic attention styles achieve a situational interest that has more potential to "hold", initiating a new individual interest. The finding of Iran-Nejad (1987) that the end result of Analytic interest activity is an effect of further interest, was also confirmed. The resultant interest of students is useful to educators as motivational in continued study of the material (Alexander et al., 1994).

The importance placed on the establishment of an active interest during an initial experience (Alexander et al., 1994; Hidi & Baird, 1986) lends value to whatever may be revealed by these results with regard to what subject matter is essential to enable such affective/cognition to take place during a first listening. Since the majority of research on situational interest has been conducted with a focus on processing of text, where informational significance has been seen as the core predictor of interest (Hidi & Baird, 1986) any other influences found here are worthy of note. According to these results, the effects of Familiarity, and the Holistic and Receptive Attention styles on Interest are not due to the influence of verbal information, although the
possible influence of visual information through its direct effect on Familiarity, and through that variable indirectly affecting the Holistic and Receptive Attention styles, cannot be ruled out.

Mitchell proposed that active involvement through the attention being absorbed was an alternative to making the content of learning meaningful for students as a means of empowerment (Mitchell, 1993). These two facets of empowerment were both incorporated in the Holistic Attention style which led to strong effects on Enjoyment and Interest. Although the absorption factor may be seen as an element of the Surface-Analytic attention style as well as of the Holistic attention style, its power through the latter style was considerably greater. This result demonstrates the fact that it is not merely features of the material presented, but also the manner in which it is presented that can have an influential effect on situational interest (Alexander & Jetton, 1996), and that the manner of presentation can also have an effect on resultant interest.

6. Effects of Familiarity on Attention Styles, and Response Variables

In view of the current international acceptance by music educators of the desirability of exposing students to a global orientation in musicology, the contributions of research to a knowledge base which supports teachers in this task are imminently relevant. The body of research relating to the teaching of non-Western music is, however, small in comparison with that relating to the teaching of Western classical music. The most obvious way to characterise the cause of experiential difference between listening to music in which one is encultured or to any variety of music in which one is not encultured is the corresponding difference in the degree of familiarity between the individual listener and the particular music. Such differences are induced not only by the actual music previously heard by the individual, but also by the subjective associations formed by the individual and attached to that music as an item, or possibly to its entire genre. Familiarity as an experiential phenomenon is thus important for both its subjective and its objective qualities which are both shown to influence the preference response.

Familiarity had a significant direct effect on Enjoyment. Previous research indicated that this would be the case (Bradley, 1971; Duerksen, 1972; Hargreaves, 1984; Moreland & Zajonc, 1979; Payne, 1980; Radocy, 1982).
Familiarity also had a significant indirect effect on Enjoyment and resultant Interest by affecting Attention styles. Subjects experiencing higher levels of Familiarity adopted a more Holistic style leading in turn to higher Enjoyment scores. Familiarity also indirectly influenced resultant Interest through its effects on the Holistic Attention subscale, and in turn through its effects on Enjoyment levels. These effects of Familiarity have not previously been measured by research, or discussed in theory.

Familiarity also had a low direct effect on the Surface attention style. As mentioned above, it is suggested that although this type of attention is interpreted to be surface-analytical, it may also be to an extent, empathetically induced. Such empathy as evoked by Familiarity, however, did not show an association with Structure attention style. It might be deduced that a feeling of empathy for the music would not encourage the listener to engage in the unsympathetic task of attempting to listen to the stimulus music by the manner in which one would typically relate to a Western melody.

Although presentation in either Audio or Video mode, with or without Information, had no significant direct effect on the Receptive Attention style, there were high direct effects from Familiarity, this effect being almost as great as it was for Holistic, or more so for males. This again implies engagement in an affective, subjective connection with the stimulus. The high direct effects for Holistic and Receptive from Familiarity suggest an association between the empathy of familiarity felt toward the music and a propensity to engage in a subjective, holistic manner with the music. It might be suggested that the additional "proximity" induced by close-ups in the video mode provided the context of both reality and intimacy (Ortony et al., 1988) that would have enhanced meaningfulness of the experience (Dewey, 1934; Lepper, 1988). There is a possible association with the visual perception of the accompanying movement, augmenting familiarity by the addition of a sense of kinaesthetic identification (Baily, 1985).

7. Observations Concerning Attentional styles

The Surface-analytic attention style had significant direct effects on Enjoyment which were high for males and low for females, and indirect effects on Interest which were significant for males and marginal for females. Although previous findings concerning surface-level discriminations (Deci & Ryan, 1985; Nolen, 1988) indicated their association with an ego-orientation, being carried out in
response to awareness of instructional goals perceived as valued by the teacher, in the context of listening to this particular stimulus music, the process was self-determined in the sense that listeners with Information were merely equipped with the challenge of clues as to what might be found of interest. Engagement in the Surface attention style can therefore be seen as a task-oriented activity, very much associated with intrinsic motivation, which was rewarded with Enjoyment and a motivation to hear more of the music. Since the Surface Attention style is likely to be the most appropriate mode for study purposes with regard to a stimulus of this nature, this mode of attention appears to be very important for music listening education, as the mode to engage for the purpose of analytical study of a musical style or genre.

The lower Enjoyment and Interest levels associated with Structural attention are not surprising. A melodic focus is most frequently reported amongst the musically trained (Madsen & Geringer, 1990). Attention to melody, for listeners encultured in the Western European art music tradition, involves an analytical comparison of the melodic structure with known principles of melodic construction (Myers, 1956), a process which may be conscious or occurring at a preconscious level (Reimer, 1992). The honkyoku melody of the musical stimulus, however, diverges sufficiently from Western rules concerning pitch intervals and rhythms, as to render it a less than perfect model in the comparison process which occurs in the Structure attention style. It is the only attention style which did not relate significantly with Enjoyment or Interest.

Holistic Attention style, which coincides with the description by some theorists of aesthetic perception, had an extremely strong association with musical Enjoyment and Interest. The fact that certain attention styles might have an even greater impact on Enjoyment than the known effect of Familiarity level had not been indicated by previous research. The question had possibly not arisen. The gender differences in levels of Holistic attention in relation to presentation conditions may be related to theory suggesting that holistic processing may occur more readily for females (McClary, 1991; Sims & Sims, 1995)

Familiarity, which invokes an empathy with the music, showed its strongest direct effect (apart from its direct effect on Interest) to be on Holistic attention style. It may therefore be inferred that this type of subjective, affective connection with the stimulus contributed to the likelihood that a listener would engage in Holistic attention. Although this mode of attention
greatly enhanced the Enjoyment levels of the subjects who shared the listening experience in this way, it cannot be claimed that this was the "peak" experience as depicted by Maslow (1959) or a fully aesthetic gestalt in the sense intended by Crickmore (1968) or Reimer (1992). Subjects who attended in this manner, however, did report very high levels of associated Enjoyment and resultant Interest, indicating that this Holistic type of experience may well be considered to belong to the same species of musical experience as that which is advocated by many as an ideal. It may also be surmised that by the practised alternation of holistic engagement and analytical listening, as recommended by Reimer (1970), the level of aesthetic appreciation would potentially rise to a peak enabled by a versatility of style encompassing the ability to synthesise holistic and analytical modes (Pask, 1976), with the complementary support of arrival at a level of optimal complexity of stimulus for the listener (Goodman, 1968; Hargreaves, 1984).

Although presentation in either Audio or Video mode, with or without Information, had no significant direct effect on the Receptive Attention style, there were high direct effects from Familiarity. This again implies engagement in an affective, subjective connection with the stimulus. This holistic style of passive-receptive listening was the second highest contributor to musical Enjoyment for females, while for males the Surface Attention style was the second highest contributor. Although it has been suggested that this Attention style is not cognitively oriented (Langer, 1953), its strong association with Enjoyment and Interest levels lends it a definite motivational value, particularly for females.

8. Summary

The problem approached by this study was a detrimental effect in music listening education, caused by excessive subjective complexity due to objective unfamiliarity of musical stimuli. The unbenevolence effect on listeners' affective response, adversely affected ensuing learning. Previous research had indicated the existence of additional "moderator" variables, seen as links, by which the listener could connect with the stimulus. A cognitive moderator was the degree of conformity of a musical stimulus to encultured Rule-familiarity. Since research also suggested that a consciously analytical approach is not the principal route to musical enjoyment, the question was raised as to whether further links in musical communication might reside within the affective domain.
Initial evaluation of a stimulus, occurring in an instantaneous holistic reaction, was found to be based on affect, and influenced by listeners' pre-established preferenda (links of positive or negative valence). There appeared to be a resemblance between preferenda and subjective familiarity (i.e., familiarity that derives from psychological variables such as associations, attitudes, and motivation levels). Both appeared to arise through individuals' recall of previous experience which held an affective association linked with some similarity with the new stimulus. When similarity connects with a remembered stimulus to which an evaluative judgment was attached, preferences may be transferred to the new stimulus by association.

The question arose as to how preferenda might be formed or influenced. Research findings, in text reading and music listening, revealed that cueing learners with prior suggestions of linkage between learning materials and affective associations, enhanced their enjoyment. These findings suggested the possibility that by accessing a subjective link with material, the detrimental effects of excessive complexity on affective response were ameliorated. The cause of the excessive complexity had been cognitive, a lack of objective familiarity. Since objective and subjective familiarity have been observed to lie on a continuum, perhaps a contribution to subjective familiarity may somehow compensate for a lack of objective familiarity. By invoking associations known to have positive valence for students, therefore, were these researchers manipulating subjective familiarity? Did these links constitute a form of subjective familiarity? Although verbal information provided to subjects in this study did not appear to affect subjective familiarity, presentation in Video mode had a marked effect on such Familiarity levels.

In view of the obvious impact of Video presentation on Familiarity, and that of Familiarity on the two holistic type attentional styles, it seems surprising that Video is not associated with a beneficial effect for Enjoyment and Interest. The clearest indication of the function served by Video presentation is its strong direct effect on males' engagement in Surface Analytic attention, equivalent to the potency of the effect of that attention on their Enjoyment of the music. Thus, while Video had a potent effect on subjective Familiarity for females, and the latter strongly affected their use of holistic attention styles, for males the significant effect of Video mode on Familiarity was exceeded by its influence on their engagement in Surface Analytic attention.

The pattern revealed in Familiarity scores of the path analyses shows a distinct association with Enjoyment scores for males and females, particularly
in relation to their use of the Surface Analytical and Receptive Attentional styles. For females, the effects of Familiarity on these attention styles were exactly equal to the effects of those attention styles on their Enjoyment. For males, the effect of Familiarity on Receptive attention was similar to the level of Enjoyment resulting from that attention, but its effect on Surface Analytic attention was lower than the resultant Enjoyment level. For males, this attentional style was a particularly potent activator of Enjoyment and Interest, possibly less dependent on the function of subjective familiarity.

Similarly, Holistic Attention, by producing a level of Enjoyment which was a doubling for females, and a tripling for males of the respective effects of Familiarity on that attention style, indicated it has a large degree of power, independent of the Familiarity effect. It may thus be suggested that while males and females might be distinguished as opposites in their respective Enjoyment as a result of analytic (Surface) and holistic (Receptive) attention styles, the Holistic style emerges distinctly as a potent conductor of Enjoyment and Interest for both genders.

While Familiarity in females was strongly influenced by Video mode, and exerted a strong positive influence on their engagement in Holistic attention, the Video mode itself had a slightly negative effect on their Holistic engagement. As for male subjects, Video mode was a significant positive influence on use of the Surface-Analytic attention style. It was the Audio mode which positively influenced use of Holistic attention, only slightly for females, but to a degree of medium significance for males. For females, the non-significant benefit of Video to their use of Holistic attention, mediated by Familiarity, was negated by the equal benefit of Audio mode to that attention style. For males, however, the strong impact of Audio on their access to Holistic attention was barely mitigated by the negligible effect of Video, mediated by Familiarity, on this important attention style. Yet the direct effect of Audio mode on the female Enjoyment response reached significance, which it did not achieve for males. These details, weaving patterns of intricate complexity, may perhaps be better understood from an overall perspective to result from the differences in the native attentional styles of the genders. It may be the emergence of a pattern for subjective Familiarity which clarifies some aspects of the gender differences.

Familiarity is associated with Enjoyment for males and females, particularly in relation to the Surface Analytical and Receptive Attentional styles. For both genders, the effects of Familiarity on the attention style equalled the effect of
the attention style on their Enjoyment, except that for males, the effect of Familiarity on Surface Analytic attention was lower than the Enjoyment level resulting from this attention. The significance of Video mode for females' Familiarity is high, as is the effect of Familiarity on their engagement in the holistic attentional styles, yet the effect of Familiarity on their Enjoyment is of low significance, while that on ensuing Interest is high. In males, the significance of Video mode for Familiarity is low, as is the effect of Familiarity on their engagement in the holistic attentional styles, yet the effect of Familiarity on their Enjoyment is of medium significance, while that on ensuing Interest is marginal. It appears that females may be more susceptible than males to the empathetic feeling of familiarity, which for them is strongly enhanced by video; and strongly influences their engagement in holistic attentional styles, rather than directly causing Enjoyment. At the same time, it may be said that they have a natural propensity, non-reliant on presentational modes but highly associated with subjective Familiarity, for holistic engagement with music which generates very high Enjoyment levels. The impact of Video presentation on males' Familiarity levels is mild, as are the effects of Familiarity levels on their attentional styles, yet the effect of Familiarity itself is of greater significance to their resultant Enjoyment than it was for females. It could possibly be surmised, therefore, that the empathetic Familiarity which is perhaps less readily experienced by males, and less readily used to propel holistic attentional styles, is in itself experienced as enjoyable, although it does not act as a conductor of ensuing Interest. The feeling of Familiarity, more readily accessed by females, is experienced not so much as an enjoyable feeling, but is a very effective as a conductor of highly enjoyable holistic attentional styles, and of ensuing Interest. This seems to suggest that while visual imagery from an external source, accompanying music, may increase access to the beneficial processes of personal associations and assimilation attributed to mental visual imagery, its direct effect is detrimental to a holistic approach, significantly so for males. The sequential passage of visual events activates their natural analytical style. It appears that males presented with music in Audio mode more readily engaged in mental visual imagery, and that engagement in this activity was to a degree promoted by the Information provided. If the benefit of Audio mode over Video mode is, in fact, related to the engagement in mental imagery, it is likely that the additional benefit of Information for males lies in the component which suggests a concrete representation of storyline to which feelings may be attached. The Information, in this study, might trigger an imaginational scene of a beggar monk playing a bamboo flute. On the other hand, if the difference in attentional approaches to
the audio or video modes was more influenced simply by the lack of visual
distraction, the explanation might simply be that listeners in the audio mode
were able to be more fully absorbed in the sound and movement of the music.
In that case, the beneficial component of the Information for males may have
been the suggestion of a meditative mood.

Research in music listening education had found that a holistic approach to
listening resulted in enjoyment for listeners for whom that was a compatible
learning style, but that listeners whose dispositional cognitive style was
analytical, enjoyment could not be attained through that approach. Studies
which did not differentiate listeners by cognitive style had observed that
affective links with material promoted enjoyment. Similarity could be seen in
the findings of research in text reading which investigated ways of capturing
students' interest in material. Here it was found that a holistic engagement,
which was associated with reading for the deeper meaning of text, occurred
when students found the material to be of personal significance. Cueing
students to make affective links with the material, prior to reading, was found
to be effective for initiating a holistic approach. It was also suggested that
when material was abstract, cognitively demanding, ambiguous, or in an ill-
defined domain, an affect-related, holistic approach was necessary for initial
engagement, thus effectively serving the purpose of by-passing cognitive
difficulty.

Although this study was not designed to distinguish cognitive styles in
subjects, its results when viewed against this background, show particular
relevance. A gender difference was revealed, indicating a greater tendency for
female than male subjects to engage in a holistic approach to the stimulus.
Also, path analysis showed the strength of the relationship between holistic
listening style and the experience of enjoyment to be unquestionable, and
apparent for listeners of either gender.

The provision of verbal contextual information for males was a significant aid
to their enjoyment of a musical stimulus dynamically more suited to enjoyment
by females. Path analysis showed that this effect of Information on male
enjoyment was largely due to the interest triggered in the surface features of
the music, resulting in their engagement in analytical attention. The analytical
approach promoted musical enjoyment for males, although such enjoyment
was at a lower level than was promoted by their holistic engagement. While
the effect of Information was highly significant to males' musical Enjoyment, it
was not significant to their use of Holistic attention which was highly influential
in their response of greatest Enjoyment. It may, however, be suggested as follows, to have a subtle contributory effect on use of that attentional style.

Female levels of holistic engagement were equally high in all presentation conditions. The results for males are therefore the most interesting for educators. Since the music was low in features known to be enjoyed by males, the odds could be said to have been low for their enjoyment of this music, and indeed their overall enjoyment was significantly lower than that of females. However, for males engaged in Holistic attention, enjoyment levels were as outstandingly strong as they were for females. The contextual information included content which was demonstrably a more powerful trigger to males for their interest in a surface analytical approach. In one presentation condition, however, which was Audio, With Information, males surpassed females (in all presentation conditions) on levels of holistic attention. The result, therefore, even though non-significant, demonstrated a strength, in its occurrence against the oppositional forces. It was shown that a music of likely dispossessing features for males could be equally well enjoyed if they were holistically engaged, and that this engagement could occur even in a presentation context where information contained the ambiguity of potential cues to either analytic or holistic attentional styles. It seems likely that in the Audio condition, males were more likely to engage in Holistic attention, and that with the benefit of Audio presentation they were again more likely to be triggered by the affective, human interest component of the provided information.

The suggestion of previous literature, that males share a tendency towards use of analytical style is not demonstrated by results of this study to be necessarily a gender difference. The results, however, do appear to indicate that males experience more enjoyment than females as a result of analytical engagement, and that there is a somewhat more restricted access for males to the holistic style. The interesting result, shown in the means for males on holistic attention, was that this attention style was most used by males in the Audio presentation conditions. The significance of this aspect of the presentation scenario for the holistic attention of males was clearly demonstrated in the path analysis. This may well be related to the finding by Rolandelli et al. that males are inclined to be distracted from audio attention when exposed to simultaneous visual information. Provision of contextual information was of slight beneficial influence, approaching marginal significance, on their use of the holistic approach, but the influence of the dual-component
information was much more strongly associated for males with use of an analytical approach. Aside from the high influence of Video mode on males' Surface Attention ratings, the strongest direct influence of any presentation condition on attention styles, was that of Audio on males' engagement in holistic attention. A clear, direct contrast was thus presented in results of the path analysis, between the effects of audiovisual presentation modes for male attentional styles. Video mode triggered Surface Analytical interest, and, to a slightly lower degree, Audio mode triggered Holistic engagement.

The reverse effect of Information for females, a significant negative direct influence on their engagement in Surface-Analytic attention style, may be seen to correspond with the manner in which the same, dual-component information was conducive to Surface-Analytic attention in males. If the intended purpose of a listening activity, therefore, is enjoyment, and it is seen that the ideal attentional mode is Holistic, special care must be applied to assist students whose dispositional cognitive style is Analytic. In the sample for this study this appears to apply somewhat to male subjects. These results indicate that the special care involves use of Audio mode, and provision of contextual Information. This method may be found to have stronger or more consistent effects with Analytical subjects if the Information be tailored to suit the purpose. This may entail exclusion of any details concerning musical features of the stimulus, and emphasis on issues which may arouse affect by their relation to matters of human interest.

These findings are valuable for music educators in the indications of motivational devices specifically suited to promoting these two useful attention styles. It is possible, and a topic for further research, that if the information content had been unidirectional, excluding information on surface features of the musical stimulus, that the result may have been a higher participation rate of males in the holistic approach. Similarly, if verbal contextual information had been restricted to surface analytical triggers, and the video mode was used, a stronger influence may possibly be exerted on use of the analytical approach. It may be surmised that this specification would be equally effective for females, as they rated highly on use of surface analytic attention in the Video modes, particularly when not provided with the information which, by the associative component of its content, may have triggered more holistic engagement.

The strongest effect noted was a very high direct effect for Enjoyment on Interest. Interest was significantly influenced by Familiarity for both genders
and Holistic Attention had a very high effect on Interest, for both genders. Medium effects resulted from other beneficial attention styles, Receptive and Surface Attention, for both genders, but the effect of the latter on females' Interest was only marginal. The only direct effect on Interest levels with regard to presentation conditions, was the significant influence of Information for males. The Audio mode, however, played a significant role in assisting males to access Holistic attention style which resulted in their highest levels of Interest. These resultant Interest levels of students indicated a measure of behavioural intent, in a desire to hear more of the music. Initial enjoyment had thus contributed motivation for ensuing engagement with the musical stimulus.

9. Implications for Music Educators

The fact that Enjoyment is closely related to an Interest in hearing more of the music is useful to music teachers, in affirming the practicality of allowing an initial hearing of music with the principal aim of enjoyment. Some suggestions regarding the best presentation options to achieve this result are also indicated in the results of this study.

The overall finding that provision of background information significantly increased students' enjoyment of the music probably comes as no surprise. However, the finding that this benefit applies to the enjoyment and ensuing interest of males, but is non-significant for females, was unexpected. The fact that the stimulus in this study was predictably more enjoyed by females than by males due to its low dynamism, makes the indications of increased enjoyment by males, through provision of contextual information and use of audio rather than video presentation mode, highly pertinent. Moreover, since enjoyment levels were not significantly differentiated by gender with regard to these presentation techniques, the strategies which were by a larger margin optimal for males will also benefit females, and thus be of use in coeducational classrooms. Therefore, when the intended purpose of a listening activity is enjoyment, and the ideal attentional mode is Holistic, special care must be applied to assist students whose dispositional cognitive style is Analytic. It appears that this involves use of Audio mode, and provision of contextual Information. The information which is suggested as possibly most effective for this purpose, is that which excludes details concerning musical features. The emphasis required in the content of such information, as previously suggested
(Alexander et al., 1996; Halpern, 1992; Hidi, 1990; Jensen, 1970; Schiefele & Krapp, 1996; Zalanowski, 1986), is likely to be upon aspects which, by their relation to matters of human interest and may arouse affect, and it is possible that a component which lends itself to mental imagery could be of additional benefit.

While an audio presentation introduced with contextual information would appear to be the best activity for an initial exposure to unfamiliar music, the great benefit available from use of video mode must also be recognised. Video presentation raises levels of subjective familiarity, thus exerting a powerful influence over continuation of attention in listening, as well as positively affecting musical enjoyment. The fact that video presentation was significantly associated with both Familiarity and Surface-Analytical attention may be a reason to opt for video presentation as the post-initiation activity, when the intention is to increase understanding of the musical performance. Dual-component Information significantly affected both genders in the direction of their respective dispositional styles. This finding appears to provide a degree of support for the finding of Zalanowski that an analytical approach to listening is assisted by the provision of concrete information, and/or a story type of program prior to listening. The alternation of listening activities between enjoyment and study, recommended by Reimer (1970), is thus facilitated by presentation techniques regarding the audiovisual medium and type of informational content provided. Use of such techniques is likely to result in greater learning due to the raising of students' motivation levels.

Reading research has addressed the question of whether differences in reading performance may be the result of selecting schema which relate appropriately or inappropriately with the text (Deegan, 1995). This ability may be paralleled in the activation of Attention styles by individuals during music listening. Provision of contextual information which implied the inapplicability of Western melodic principles to the musical stimulus of this study, significantly reduced the use of the Structure-Analytic attention style for both genders. This finding is useful for music educators when presenting non-Western music to their students. Since the informational content of this study included a combination of trigger types, further conclusions may not be drawn, but results appear to indicate that when presented with mixed cues individuals may be attracted to the trigger most closely aligned to their dispositional cognitive style. In this case, the Information attracted males to Surface-Analytic style while deflecting females away from that approach. Further aspects included in the mixed
content of that Information appear to have promoted in male subjects the use of Surface-Analytic and Receptive attention styles which were beneficial to their enjoyment levels. Since the Information provided in this study did not assist females' engagement in Holistic attention, it is possible that the stylistic tone of the informational presentation was not well adapted to the purpose of arousing personal significance, the type of affective link recommended by previous researchers for the purpose of engaging a Holistic approach.

Presentation in the video mode appeared to be conducive to males and females with regard to engaging in Surface-Analytic attention, and the audio mode promotes the use of Holistic attention by males. It may thus be seen that by manipulation of contextual information and audiovisual mode, music educators can influence attention styles.

Whilst some of the effects are slight and warrant further research, the main implications for music educators are that when presenting unfamiliar music to students the provision of background information and the use of audio presentation are beneficial for the purpose of musical enjoyment and resultant motivation. The findings suggest furthermore that video presentation is beneficial for attention to performance-practice idiomatic features of the music. In genres other than the stimulus music of this study, the understanding that is provided by video presentation may well differ in its quality, nevertheless this finding does appear to suggest that video presentation may better promote descriptive understanding, rather than the holistic listening which results in the greatest musical enjoyment.

10. Recommendations for Future Research

The effect of the Holistic attention style on Enjoyment was strong enough to suggest it warrants further research. Previous research had shown that affective response modes seemed to be holistic in nature, and were associated with higher enjoyment (Halpern, 1992; Jensen, 1970; Pike, 1972; Zalanowski, 1986). Zalanowski (1986) had found subjects with right hemispheric orientation tended to use a holistic approach and thereby to experience enjoyment, but that subjects with left hemispheric orientation did not. Although it had been recognised that affective modes were a potential means of access to holistic musical experience (Crickmore, 1968, Maslow, 1977; Pike1972; Zalanowski,
1986), and that instruction which invokes their use by students, benefits musical enjoyment (Halpern, 1992; Jensen, 1970; Zalanowski, 1986), it is surprising that the possibility of a link between musical enjoyment and a holistic listening style has not received further investigation. Walker (1990) recommended the global exploration of sound as a preliminary activity in the study of music from other cultures. If the current finding were shown to be generalisable, the use of this knowledge could be beneficial for music educators wishing to invoke a positive affective response to the initial hearing of a piece of music.

A further implication could be that, as well as contextual information provided before the first listening, specific verbal directions could possibly assist towards a Holistic engagement with the music. Just as "good readers make decisions about which strategy to use, when to use it, and how to adapt it to a particular text" (Dole et al., 1991: 242), students could also benefit from control over a range of music listening strategies. Further research may reveal ways to instruct students in the use of self-directed attentional strategies.

Information about a piece of music prior to listening provides a context by forming a link between the listener's knowledge or experience and the stimulus. The content of information affects the type of link, thus defining listeners' approach to the music. The benefit of an informational presentation style for the male portion of the sample, who were less inclined to favour the musical item, revealed a certain power which it may be possible to access and strengthen, for the enhancement of their initial enjoyment of other unfamiliar genres. Further research is needed in this area.

Gender difference in the influence of Information on levels for Surface-analytic attention are here significant. The relationship between this attentional style and details presented in the Information is seen as being due to the verbal suggestion that certain idiomatic features of the music are worthy of interest. Further Information which suggested the meditational use of the music may have influenced females to allow the mood of the experience to take over from a focus on such details. The type of instruction most conducive to enjoyment is therefore likely to vary for individual students in accordance with their different learning styles, which may be related to gender differences. The findings of this study suggest a potentially fruitful investigation into the various types of informational content which may provide essential motivational value for different learners, and trigger identifiable attentional styles. The immediate suggestion is to test whether unidirectional information content could more strongly influence attention styles. Thus by excluding information on surface
features and emphasising associational and affective cues, presenting music in audio mode, a higher participation in the holistic approach might be achieved. Similarly, if information were restricted to concrete musical features, and the video mode was used, a stronger influence may possibly be exerted on use of the analytical approach.

The only significant direct effect of the audiovisual mode on Enjoyment, was a positive effect of Audio for females. That effect may also be interpreted as a greater enjoyment for females in the absorption of the single sensory mode of sound. This is a topic for further research.

The Video mode had no effect on Receptive attention style, and a negative effect on Holistic attention, and appeared, therefore, to encourage a sequential or Analytical engagement with the intriguing details of the idioms as the performance moved through time. This video effect on Surface-analytic attention was very strong for males for whom the Analytical style has been indicated to be connative (Sims & Sims, 1995). For females the video effect was much milder, and only reached significance in combination with the small indirect effect contributed by Familiarity towards this attention style. In other words, the females were not as susceptible to the additional impact of external visual imagery as males, in engaging this attention style. On the other hand, it is possible that males presented with music in Audio mode more readily engaged in mental visual imagery, thus accessing Holistic attention. Research is needed to investigate the manner in which such differences function.

Since the majority of research on situational interest has been conducted with a focus on processing of text, where informational significance has been seen as the core predictor of interest (Hidi & Baird, 1986) any other influences found here are worthy of note. According to these results, the effects of Familiarity, and the Holistic and Receptive Attention styles on Interest are not due to the influence of verbal information, although the possible influence of visual information through its direct effect on Familiarity, and through that variable indirectly affecting the Holistic and Receptive Attention styles, cannot be ruled out. The notion that deriving contextual information through a video rather than through provision of verbal information, may align better with self-determination, as a discovery method, is worthy of consideration.

Optimal enjoyment of this unfamiliar musical stimulus by female subjects was little affected by presentation style, but for males the use of Holistic attention which promotes greatest enjoyment reached its highest level when they were
provided with an audio recording preceded by contextual information. Whether
this result is generalisable to the presentation of other unfamiliar musical stimuli
remains to be ascertained by future research. The objective complexity of this
stimulus was shown by analysis to be moderate. The possibility of strengthening
presentational techniques to facilitate student enjoyment and understanding of
more objectively and/or subjectively complex pieces presents a further challenge
to music education research.

Stylistic dimensions of different musical genres used as stimulus material are
likely, as in Berrylee's (1975) study on dimensions of visual perception, to result in
different attentional styles. There is much scope for investigating the effects of
presentation techniques on a variety of musical stimuli. Since the use of
Structure-Analytic attention is quite appropriate within any course of
musicological study, and research has demonstrated some benefit of video
presentation (Adams, 1994; Geringer & Madsen, 1996 and 1997), it would be
useful to investigate appropriate sequences of presentation style and activity to
enhance enjoyment of this procedure.

The nature of the musical stimulus used in this study was quite unique. The genre
being of a very calming dynamic, whose original intent was for purpose of
meditation. The Receptive attentional style which arose in these results may
have been specifically due to the effect of this particular genre (Reynolds, 1975).
It is also possible that the engagement in Holistic attention was promoted by
features specific to this stimulus. Due to the importance of holistic attentional
styles, both for their beneficial effects on enjoyment and interest and the holistic
involvement in an aesthetic gestalt, investigation into their roles and strategic
promotion with a variety of musical stimuli in music listening education is
warranted.

Conclusions

The strongest effects observed in results of this study are those of Enjoyment
on Interest, and of Holistic Attention on Enjoyment. These support previous
theory and research, and expand on previous findings of music listening
research. The findings of gender difference, although small in effect, were
capable of illuminating some of the processes occurring within musical
response, and potential means of influencing these.
Despite the rather larger effects incurred through use of the video presentation mode, particularly due to its strong influence on the familiarity response which benefited enjoyment, it was the conjunction of a significant effect with a very small effect which became crucial in the interpretation of these results. The non-significant benefit of contextual information in conjunction with the significance of audio mode for males constituted their optimal condition, by promoting engagement in the Holistic attention style which was found to be associated with their highest enjoyment levels. Although the Information effect here was small, it has been demonstrated in previous research that gender-related results are likely to be small in magnitude, and yet capable predictors (Kimura, 1999; Richardson, 1997).

The fact that it was verbal contextual information, and not the visual information provided by video which made this difference for male subjects is also intriguing. Unless it is suggested that males are less susceptible than females to the empathetic Familiarity response, it is difficult to understand why verbal information could have assisted males towards both holistic modes without having affected their subjective familiarity response. If there is a tendency toward a rational, objective approach in the male style, it might be proposed that suggestions contained within the contextual information were to some degree interpreted by males as meaning that the music could be enjoyed by the style of listening here termed holistic engagement, and that in response to that information males were able to activate a style which is less dominant in their nature. The fact that this effect took up strength in the audio condition would appear to demonstrate primarily the truth in claims made of the aesthetic appreciation of music by Smith (1992) regarding the importance of ensuring that the work being contemplated must never be overshadowed by its context; and by Kivy (1990) that the aural perception of the abstract and expressive patterns, forms and qualities in music requires a noninterpretive disassociation from concrete images. Such claims have been supported in research (Travers, 1964) which showed that due to the limited capacity for processing information, the drawing of attention to the information transmitted through one sense modality tends to depress the information received through another.

Due to the differing effects of the Audio and Video presentation modes on attentional styles, it appears likely that each audiovisual mode may be shown to be effective for a distinct purpose in music listening classes. Presentation in the Audio mode, with its positive influence on use of the Holistic Attention style
which generated high enjoyment and interest levels poses valuable benefit as the initial audiovisual presentation mode, in combination with provision of contextual information. Benefits from Video presentation were shown in its significance for Surface-Analytical Attention both directly, and indirectly through its highly significant influence on Familiarity levels. It is also surmised that introductory information may be designed specifically to trigger this attentional style, by focusing on concrete features of the music. The Surface-Analytical Attention style with its strong effects on Enjoyment and Interest, would arguably result in greater cognitive understanding - which was not measured in this study. Thus a video presentation with information directed at concrete musical features appears to represent the optimal scenario for a listening activity aimed at musical understanding, possibly the second event in a learning sequence.

The highly significant beneficial influence of the Holistic Attention style on Enjoyment and Interest levels was the strongest effect (after that of Enjoyment on Interest) observed in results of this study. The implications of these differing effects of audiovisual modes on predominant use of an attentional style are likely to hold value for music educators when following the pattern recommended by Reimer (1970) of alternating the emphasis in listening between experiential enjoyment and cognitive learning. Use of such a pattern in an approach to attaining aesthetic appreciation may have been explained in the statement that music "is an object of perception and cognition, which understanding opens up for ... appreciation" (Kivy, 1990: 41).

Optimal enjoyment of this unfamiliar musical stimulus by female subjects was little affected by presentation style, but for males the use of Holistic attention which promotes greatest enjoyment reached its highest level when they were provided with an audio recording preceded by contextual information. Whether this result is generalisable to the presentation of other unfamiliar musical stimuli remains to be ascertained by future research.

Due to the high value which the Western academic world places on the reasoning faculty, there has been a corresponding devaluing of the state of ecstasy, an ideal of Arabic musical response (Racy, 1991). At the moment when we are most absorbed in a holistic mode of musical response, verbalisation is "not only impossible, it seems irrelevant as well" (Becker, 1983: 75). Becker suggested there was no reason why the term aesthetics should not broaden its meaning if the community so desired. In the light of these findings, that suggestion is amplified into a recommendation, that a holistic
response mode be more broadly recognised, particularly in music education, as a crucial aesthetic mode, or at least as a crucial component of aesthetic appreciation. Recognition of this mode as a core component of musical experience locates it as of primary importance in music education.

The core of this result, is the finding that listeners who engaged holistically in unfamiliar music, being absorbed in its mood and in mental imagery, experienced high enjoyment and an ensuing interest to hear more of the music. For music educators facing the task of broadening the spectrum of music that students will enjoy, this affords a useful solution to the problem posed by excessive subjective complexity presented by unfamiliar musical genres. The enjoyment is also a means of triggering an intrinsic motivation, which governs not only the success of the music listening education process, but also the end result, in the long term, of a lifelong valuing of music. By locating the affective aspect of aesthetic education as the first objective in music education, educators equip students to access the essential contribution of music to their lives, the sense of significance that is the human purpose of music.
Appendix A: Popular Genres Survey

Only circle a number for types of music you know:

<table>
<thead>
<tr>
<th></th>
<th>LIKE LEAST</th>
<th>LIKE MOST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian Rock</td>
<td>0 1 2 3</td>
<td>4 5 6 7</td>
</tr>
<tr>
<td>Classical</td>
<td>0 1 2 3</td>
<td>4 5 6 7</td>
</tr>
<tr>
<td>Country &amp; Western</td>
<td>0 1 2 3</td>
<td>4 5 6 7</td>
</tr>
<tr>
<td>Dance</td>
<td>0 1 2 3</td>
<td>4 5 6 7</td>
</tr>
<tr>
<td>Folk</td>
<td>0 1 2 3</td>
<td>4 5 6 7</td>
</tr>
<tr>
<td>Grunge</td>
<td>0 1 2 3</td>
<td>4 5 6 7</td>
</tr>
<tr>
<td>Heavy Metal</td>
<td>0 1 2 3</td>
<td>4 5 6 7</td>
</tr>
<tr>
<td>Industrial</td>
<td>0 1 2 3</td>
<td>4 5 6 7</td>
</tr>
<tr>
<td>Jazz</td>
<td>0 1 2 3</td>
<td>4 5 6 7</td>
</tr>
<tr>
<td>Metal</td>
<td>0 1 2 3</td>
<td>4 5 6 7</td>
</tr>
<tr>
<td>Pop</td>
<td>0 1 2 3</td>
<td>4 5 6 7</td>
</tr>
<tr>
<td>Punk Rock</td>
<td>0 1 2 3</td>
<td>4 5 6 7</td>
</tr>
<tr>
<td>Rap</td>
<td>0 1 2 3</td>
<td>4 5 6 7</td>
</tr>
<tr>
<td>Reggae</td>
<td>0 1 2 3</td>
<td>4 5 6 7</td>
</tr>
<tr>
<td>Rock</td>
<td>0 1 2 3</td>
<td>4 5 6 7</td>
</tr>
<tr>
<td>Rock'n Roll</td>
<td>0 1 2 3</td>
<td>4 5 6 7</td>
</tr>
<tr>
<td>Rhythm &amp; Blues</td>
<td>0 1 2 3</td>
<td>4 5 6 7</td>
</tr>
<tr>
<td>Ska</td>
<td>0 1 2 3</td>
<td>4 5 6 7</td>
</tr>
<tr>
<td>Slow Jam</td>
<td>0 1 2 3</td>
<td>4 5 6 7</td>
</tr>
<tr>
<td>Soul</td>
<td>0 1 2 3</td>
<td>4 5 6 7</td>
</tr>
<tr>
<td>Techno</td>
<td>0 1 2 3</td>
<td>4 5 6 7</td>
</tr>
</tbody>
</table>
Appendix B: Non-Western Genres Survey

Only circle a number for types of music you know:

<table>
<thead>
<tr>
<th></th>
<th>LIKE LEAST</th>
<th>LIKE MOST</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Indies</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Tibet</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>South America</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Russia</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Malaysia</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Greece</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Bali</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Arabia</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Africa</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>
Appendix C: Vocabulary from Pilot Survey

Enjoyment

Responses indicating overall affective response, mood or feeling used the following words or phrases in the frequency indicated:

- like: x 75
- feel, felt, feeling: x 46
- Relaxed: x 20
- Calm: x 7
- peaceful: x 6
- boring: x 3
- sleepy: x 2

**Overall affective response** (x 1 each): If I had the choice I would rather leave the room than hear it; I did not feel very close to this music

**Mood and feeling** (x 1 each): very downcast; generally sad and unhappy; liked the effect it had on me; liked the calmness and soothing feeling; liked the kind of "just there" sound; very dreamy; free from evil, calm like an eagle, and thoughtful like a song

**Movement** (x 1 each): slow and gentle; too long; liked the way the music carried the notes; liked that it was clear and continuing; liked the strong notes; the strong notes that went on and on; the music was fluent and strong; disliked the pauses

**Structural Elements of the music** (x 1 each): not very melodious; out of tune notes; the way some notes ran into each other slowly; strange notes it moved to; I liked its rhythms; not very melodious

**Timbre of Instrument** (x 1 each): nice sound instrument made; liked the sound; liked it because it was a solo instrument; instrument was played beautifully with lots of feeling. It was very enchanting; liked the power of the flute; felt like someone was playing the instrument right next to me; liked resounding effect of instrument; the echoing of the music is the part I disliked; the sound scared me sometimes; disliked the sound of the instrument; liked that it was a solo instrument; disliked it being only one instrument
Although timbre has an essential musical significance, the concept of timbre as a tonal quality is complex, if not ambiguous, being defined acoustically through its harmonic structure and psychologically through the use of connotative vocabulary (Wedin and Goude, 1972).

**Attention**

Responses indicating overall attention style used the following words or phrases in the frequency indicated:

- I listened to the music as a whole \( x \quad 3 \)

**Overall affective response** (x 1 each): took me off to another land; It was very peaceful; I was relaxing with the sound; I didn’t try to listen, I just drifted; I was not very involved or very close to the music; My mind just wandered following the notes

**Focus of Attention** (x 1 each): the breathing and the tune; the flow in the music - how it went up and down; I liked the pauses in that piece; I listened to the melody mostly; the faster notes; the quick notes; the high parts of the song; liked and really payed attention to the long, echoing notes; the echoing and the good feel of the music; the technique (timbre) [sic] changed so dramatically, but so subtly as to tell a story; the instrument ... was very controlled, the notes were clear and in a beautiful tone. I liked the way that it was played, the breath control; bad sound of the flute; I liked its rhythms
Appendix D: Judges Ratings of Statements generated, for LRHQ

Responses of Liking, Enjoyment, Feeling and Mood to the Music, Dynamic, Melody, Rhythm and Timbre of Shirabe

<table>
<thead>
<tr>
<th>Statements Generated</th>
<th>Judges' Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>I did not enjoy this music.</td>
<td>+++++-</td>
</tr>
<tr>
<td>I would like to hear more of this music.</td>
<td>+++++++</td>
</tr>
<tr>
<td>Given choice I would rather leave the room than listen to that music.</td>
<td>+-----</td>
</tr>
<tr>
<td><em>Ammended to &quot;Given choice I would rather not listen to that music.&quot;</em></td>
<td>+++++</td>
</tr>
<tr>
<td>I did not feel very close to the music.</td>
<td>+++++-</td>
</tr>
<tr>
<td><em>Ammended to &quot;I felt very close to the music.&quot;</em></td>
<td>+++++</td>
</tr>
<tr>
<td>I was not thoroughly involved in the music.</td>
<td>+++++-</td>
</tr>
<tr>
<td>I found it boring.</td>
<td>+++++-</td>
</tr>
<tr>
<td>It went on for too long.</td>
<td>+------</td>
</tr>
<tr>
<td>I liked the intimate, &quot;just there&quot;, kind of sound.</td>
<td>+------</td>
</tr>
<tr>
<td>I liked the calmness and soothing feeling of the music</td>
<td>+------</td>
</tr>
<tr>
<td>It made me feel at peace with myself.</td>
<td>+------</td>
</tr>
<tr>
<td><em>Ammended to &quot;I liked the mood of the music.&quot;</em></td>
<td>+++++++</td>
</tr>
<tr>
<td>I relaxed into the music.</td>
<td>+-------</td>
</tr>
<tr>
<td><em>Ammended to &quot;The music made me feel relaxed.&quot;</em></td>
<td>+++++++</td>
</tr>
<tr>
<td>I liked the effect the music had on me.</td>
<td>+-------</td>
</tr>
<tr>
<td>I liked the continuing flow of the music.</td>
<td>+-------</td>
</tr>
<tr>
<td>I liked the faster notes.</td>
<td>+-------</td>
</tr>
<tr>
<td>I liked the strong notes that went on and on.</td>
<td>+++++-</td>
</tr>
<tr>
<td>I disliked the pauses in that piece.</td>
<td>+------</td>
</tr>
<tr>
<td>I found this music too slow.</td>
<td>+++++++</td>
</tr>
<tr>
<td>I liked the pace of the music.</td>
<td>+--------</td>
</tr>
<tr>
<td><em>Ammended to &quot;I liked the speed of the music.&quot;</em></td>
<td>+++++++</td>
</tr>
<tr>
<td>The music seemed to tell a story.</td>
<td>+------</td>
</tr>
<tr>
<td>It took me off to another land.</td>
<td>+------</td>
</tr>
<tr>
<td><em>Ammended to &quot;I liked the atmosphere the music created.&quot;</em></td>
<td>+++++-</td>
</tr>
<tr>
<td>I liked the melody.</td>
<td>+-------</td>
</tr>
<tr>
<td>I found the melody was too repetitive.</td>
<td>+-------</td>
</tr>
<tr>
<td>I disliked some of the strange notes that the melody moved to.</td>
<td>+++++-</td>
</tr>
<tr>
<td>I disliked the way some notes ran into each other slowly.</td>
<td>+++++-</td>
</tr>
<tr>
<td>I disliked some of the strange notes the melody moved to.</td>
<td>+++++-</td>
</tr>
</tbody>
</table>
Some "out-of-tune" notes spoilt my enjoyment.

Ammended to "I thought some notes sounded 'out of tune'."  *

I disliked the lack of rhythm.
I liked the rhythms in the music.
I felt that the music lacked rhythm.
I liked the sound of the instrument.
I liked the vibrato effects on some long notes.

Ammended to "I liked the vibrato (wavy) effects on some long notes."  *

I liked the intimate, "just there", kind of sound
I liked the echoing effect
I liked the clear, beautiful tone of the notes
I liked the power of the flute
I liked the dramatic changes in the sound

Ammended to "I liked the variations in the tone colour."  *

I liked the player's control of the instrument
I liked that it was a solo instrument

The instrument was played with lots of feeling.

Ammended to "The instrument was played with feeling."

The instrument was played without feeling.
Responses of Overall Attentional Style and Focus of Attention

<table>
<thead>
<tr>
<th>25 Statements Generated</th>
<th>Judges' Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>It held my attention</td>
<td>++++</td>
</tr>
<tr>
<td>My mind just wandered following the notes</td>
<td>------</td>
</tr>
<tr>
<td>I just drifted, listening was easy</td>
<td>------</td>
</tr>
<tr>
<td>I found it boring</td>
<td>+++++</td>
</tr>
<tr>
<td>I was absorbed in the mood of the music.</td>
<td>++++++</td>
</tr>
<tr>
<td>I relaxed into the music rather than thinking about it.</td>
<td>------</td>
</tr>
<tr>
<td>I listened to the piece more as a whole than noticing details.</td>
<td>++++++</td>
</tr>
<tr>
<td>I was having a lot of ideas about the music while I listened.</td>
<td>+++++-</td>
</tr>
<tr>
<td>I was distracted by thoughts unrelated to the music.</td>
<td>+++++-</td>
</tr>
<tr>
<td>I was listening to the breathing.</td>
<td>+-----</td>
</tr>
<tr>
<td>I liked the pauses in that piece.</td>
<td>+-----</td>
</tr>
<tr>
<td>I was paying attention to the long notes</td>
<td>+-------</td>
</tr>
<tr>
<td>I was following the melody.</td>
<td>+-------</td>
</tr>
<tr>
<td>I listened to the melody mostly.</td>
<td>+++++-</td>
</tr>
<tr>
<td>Ammended to &quot;I was mainly listening to the melody.&quot;</td>
<td>+++++</td>
</tr>
<tr>
<td>I was not thinking about the melody.</td>
<td>+++++-</td>
</tr>
<tr>
<td>Ammended to &quot;I was not focusing on the melody.&quot;</td>
<td>+++++</td>
</tr>
<tr>
<td>I was listening to the faster notes.</td>
<td>+++++-</td>
</tr>
<tr>
<td>Ammended to &quot;I noticed some very quick notes.&quot;</td>
<td>++++++</td>
</tr>
<tr>
<td>I noticed the way some notes ran into each other slowly.</td>
<td>++++++</td>
</tr>
<tr>
<td>I noticed some &quot;out-of-tune&quot; notes.</td>
<td>+++++-</td>
</tr>
<tr>
<td>Ammended to &quot;I thought some notes sounded 'out of tune'.&quot;</td>
<td>++++++</td>
</tr>
<tr>
<td>I noticed the vibrato (wavy) effects on some long notes.</td>
<td>+++++-</td>
</tr>
<tr>
<td>Ammended to &quot;I focused on the vibrato (wavy) effects of some long notes.&quot;</td>
<td>++++++</td>
</tr>
<tr>
<td>I was listening to the dynamics.</td>
<td>+++++-</td>
</tr>
<tr>
<td>I listened to the sounds of breath on the instrument.</td>
<td>+-----</td>
</tr>
<tr>
<td>I was noticing the player's control of the instrument.</td>
<td>+-----</td>
</tr>
<tr>
<td>I was noticing the subtle, gentle changes in the sound.</td>
<td>+++++-</td>
</tr>
<tr>
<td>I was listening to the variations in the tone colour.</td>
<td>+++++-</td>
</tr>
<tr>
<td>Ammended to &quot;I noticed variations in the tone colour.&quot;</td>
<td>++++++</td>
</tr>
<tr>
<td>I was noticing the rhythms.</td>
<td>+++++-</td>
</tr>
<tr>
<td>Ammended to &quot;I was listening to the rhythms in the music.&quot;</td>
<td>++++++</td>
</tr>
</tbody>
</table>
Appendix E: Listener Response to *Honkyoku* Questionnaire

School: ___ H.S.  Year 9 □ Year 10 □ Year 11 □ Male □ Female □

*Your answers are strictly anonymous. Please try to answer honestly about your thoughts and feelings.*

<table>
<thead>
<tr>
<th>FALSE</th>
<th>TRUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>I think I have heard this type of music before.</td>
<td>0 1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>The music made me feel relaxed.</td>
<td>0 1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>I liked the sound of the instrument.</td>
<td>0 1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>I liked the mood of the music.</td>
<td>0 1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>The instrument was played with feeling.</td>
<td>0 1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>I liked the strong notes that went on and on.</td>
<td>0 1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>I was mainly listening to the melody.</td>
<td>0 1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>I focused on the vibrato (wavy) effects of some long notes.</td>
<td>0 1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>I noticed variations in the tone colour.</td>
<td>0 1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>I was absorbed in the mood of the music</td>
<td>0 1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>I noticed some very quick notes.</td>
<td>0 1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>I was noticing the way some notes ran into each other slowly.</td>
<td>0 1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>I was focusing on the melody.</td>
<td>0 1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>I was listening to the rhythms in the music.</td>
<td>0 1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>I listened to the piece as a whole more than noticing details.</td>
<td>0 1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>I was having a lot of ideas about the music while I listened.</td>
<td>0 1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>
I liked the speed of the music.  

I liked the atmosphere the music created.  

I was distracted by thoughts unrelated to the music.  

I would like to hear more of this music.  

Names of instruments you play or have played, (and/or voice) and number of years:

<table>
<thead>
<tr>
<th>Name of instrument:</th>
<th>Singer</th>
<th>Instrument 1</th>
<th>Instrument 2</th>
<th>Instrument 3</th>
<th>Instrument 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Voice</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years self-taught</td>
<td>(number)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years tuition before 1996</td>
<td>(number)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Highest grade each (if any)</td>
<td>(number)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning now? tick if YES</td>
<td>(tick)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Years music in classroom, secondary  
Years music in classroom, primary  
Years playing in band or other instrumental group  
Years singing in a choir
Appendix F: SHIRABE

Performance Riley Lee
\[ \text{Tempo: } \text{Approximately 60} \]

Transcription L. Berry
Appendix G: Melodic Components of *Shirabe*

Scale Used in *Shirabe*

Melodic Cells in Analysis of Tonal Structure for *Shirabe*

1. A
2. A
3. B
4. C
5. A¹
6. D
7. E
8. A¹
9. D
10. E
11. D¹
12. E¹
13. A¹

Percentage of Duration for each *Kakuon*

26%
21%
16%
13%
### Appendix H: % Persons Qualified In Predominant Professions; % Families Earning Above Average Incomes In Regions Of Metropolitan Sydney

<table>
<thead>
<tr>
<th>Area</th>
<th>Region</th>
<th>% Qualified Business and Administration</th>
<th>% Qualified Society / Culture &amp; Engineering</th>
<th>% Not Qualified</th>
<th>% Income $40,000 to $50,000</th>
<th>% Income over $50,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>North Sydney</td>
<td>13.4</td>
<td>17.8</td>
<td>41.8</td>
<td>10.3</td>
<td>49.3</td>
</tr>
<tr>
<td></td>
<td>Manly</td>
<td>10.9</td>
<td>13.7</td>
<td>49</td>
<td>10.9</td>
<td>41.5</td>
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<tr>
<td>North</td>
<td>Average</td>
<td>12.2</td>
<td>15.7</td>
<td>45.4</td>
<td>10.6</td>
<td>45.4</td>
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<tr>
<td></td>
<td>Warringah</td>
<td>10.3</td>
<td>13.7</td>
<td>52</td>
<td>12.1</td>
<td>38.4</td>
</tr>
<tr>
<td></td>
<td>Willoughby</td>
<td>11.6</td>
<td>15.8</td>
<td>48.4</td>
<td>10.1</td>
<td>44.7</td>
</tr>
<tr>
<td>NorthWest</td>
<td>Average</td>
<td>10.9</td>
<td>14.7</td>
<td>50.2</td>
<td>11.1</td>
<td>41.55</td>
</tr>
<tr>
<td></td>
<td>Canterbury</td>
<td>6.1</td>
<td>7.8</td>
<td>63.7</td>
<td>11.8</td>
<td>19.3</td>
</tr>
<tr>
<td></td>
<td>Bankstown</td>
<td>5.9</td>
<td>9.9</td>
<td>63.8</td>
<td>12.1</td>
<td>23.7</td>
</tr>
<tr>
<td></td>
<td>Liverpool</td>
<td>5</td>
<td>9.2</td>
<td>65.3</td>
<td>12.4</td>
<td>20.5</td>
</tr>
<tr>
<td></td>
<td>Auburn</td>
<td>5</td>
<td>7.9</td>
<td>63.6</td>
<td>11.7</td>
<td>17.7</td>
</tr>
<tr>
<td>West</td>
<td>Average</td>
<td>5.5</td>
<td>8.7</td>
<td>64.1</td>
<td>12</td>
<td>20.3</td>
</tr>
</tbody>
</table>
Appendix I: Language Background Groups in Areas of Schools Attended by Subjects

<table>
<thead>
<tr>
<th>Area</th>
<th>Region</th>
<th>% Born in Australia, UK &amp; Ireland</th>
<th>% Born in Europe &amp; USSR</th>
<th>% Born in Middle East &amp; Africa</th>
<th>% Born in Asia &amp; Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>North Sydney</td>
<td>69.8</td>
<td>5.3</td>
<td>2.2</td>
<td>9.6</td>
</tr>
<tr>
<td></td>
<td>Manly</td>
<td>79.1</td>
<td>4.9</td>
<td>1.6</td>
<td>4.4</td>
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<tr>
<td>North Average</td>
<td>74.5</td>
<td>5.1</td>
<td>1.9</td>
<td>7.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Warringah</td>
<td>82.6</td>
<td>5.6</td>
<td>1.6</td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td>Willoughby</td>
<td>69.4</td>
<td>7.7</td>
<td>3.9</td>
<td>11.8</td>
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<tr>
<td>NorthWest</td>
<td>Average</td>
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<td>6.7</td>
<td>2.8</td>
<td>7.7</td>
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<td>Canterbury</td>
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<td>10.6</td>
<td>14.7</td>
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<td>Bankstown</td>
<td>71.3</td>
<td>9.9</td>
<td>6.9</td>
<td>7.6</td>
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<td>Liverpool</td>
<td>71.1</td>
<td>11.5</td>
<td>4.5</td>
<td>5.6</td>
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<td>8.1</td>
<td>12.1</td>
<td>19.3</td>
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<tr>
<td>West</td>
<td>Average</td>
<td>61.9</td>
<td>10.8</td>
<td>8.5</td>
<td>11.8</td>
</tr>
</tbody>
</table>
DISCOGRAPHY

REFERENCES


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