THE DIMENSIONS OF AESTHETIC REACTIONS TO MUSIC
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The experimental studies of aesthetic reactions to works of art that were carried out in the early part of this century were concerned with the identification of "types of apperception", or "apprehension", and one of the earliest of these typologies was formulated by Binet (1903) in his *Experimental Study of Intelligence*. Bulloch's (1921) review of this research shows that some of Britain's leading psychologists were actively involved in experimental aesthetics, and refers to some of the work that was being carried out on music. Myers and Valentine (1914), for example, studied "individual differences in attitude towards tones" in large samples of subjects, and Myers (1922) extended this research to include real musical materials.

Bulloch identified four types of apperception in his research on the appreciation of single colours and simple colour-combinations, and modified this to take reactions to music into account. The *objective* type takes an impersonal view, concentrating on the properties of the stimulus itself; the *intra-subjective* type concentrates on the personal, idiosyncratic moods that are evoked by the stimulus; the *associative* type bases his reactions on associations or memory images of past experiences that are called up, and the *character* type attributes a mood, emotional character or temperament to the stimulus. Bulloch elaborates upon the correspondence between this scheme and Binet's *type descripteur, type observateur, type d'érudit* and *type imaginatif or émotionel*. The implication seems to be that these types represent relatively stable aspects of an individual's behaviour; whether or not this is the case, the distinctions between them are likely to be helpful in the study of individual reactions to particular works of art.

This early interest in aesthetic reactions to music declined in the 1930s, 1940s and 1950s, and research since then has been sparse and uncoordinated (see brief review by Hargreaves, Messerschmidt and Rubert, 1980). The advent of the new experimental aesthetics (e.g. Berlyne, 1974) brought a small amount of research on music (e.g. Crozier, 1974), and some studies (e.g. Hare, 1977) have applied multidimensional scaling techniques to musical stimuli. It is rather surprising, however, that this area has not received more attention from psychologists when there are at least two major fields of interest in which research findings could be applied. The growth of the media in recent times raises numerous practical questions for music broadcasters and programme planners, and the public's taste for different forms of music, of vital interest to recording companies, is undoubtedly shaped by the decisions that are made. The active and extensive field of music education, secondly, has been characterised by one of its leading British practitioners as badly lacking any rationale or conceptual framework (Swanwick, 1979).

One characteristic of music education in the past has been its conservatism; music teachers who are prepared to work with forms of music other than that in the Western "classical" tradition are still in a small minority, and this is one of the main issues that emerges in a recent *Music Education Review* (Burnett, 1977). The same kind of conservatism characterises much of the psychological research that has been carried out on music. The experiments of Payne (1967) and Gardner (1973a) will serve as examples. Both of these are significant contributions to the literature: they are original, competently executed studies with considerable interest and relevance. Both, however, are severely limited in their choice of musical materials, concerning themselves with fine discriminations between
different varieties of "classical" music; their conclusions are inevitably restricted. Wing (1968), describing the development of his widely-used musical ability test material, wrote that

"Jazz music was not included, as this would be unlikely to yield examples of really good harmony, would be likely to prejudice the authorities against the tests, and would waste the children's time if they were listening to poor music" (p. 37).

Since popular forms of music almost certainly form the staple diet of the majority of young (and not so young) listeners (cf. Burnett, 1977), it seems obvious that any comprehensive study of reactions to music should cover as wide a range of musical types as possible. The present study is a broad-ranging attempt to describe and analyse some of the relationships between the ways in which a group of adults react to 18 very varied pieces of music. It is perhaps surprising that this kind of mapping of aesthetic reactions to music has not been attempted in the past: our study is best regarded as a preliminary exploration. We shall first describe the development of the system of content analysis, and then deal with its application to the experimental data.

Development of the Content Analysis

Musicians and aestheticians have made various distinctions between types of musical response, and the present system draws on some of these. Wright (1975) draws attention to Coker's (1972) distinction between "congeneric" and "extrageneric" musical meaning: musical theorists (e.g. Meyer, 1956) have long debated the extent to which musical meaning is embodied in the structure of the composition itself (congeneric), as distinct from being designative of other non-musical events (extrageneric). Wright goes on to delineate four types of extrageneric meaning: affective, descriptive, value and technical meanings, and this division has obvious parallels with Bullock's (1921) typology of apprehension, which was mentioned earlier. Bullock makes another important distinction: that between "synthetic" apprehension, in which the object is interpreted as a whole, and "analytic" apprehension, in which its component parts are perceived. This, too, has parallels, in the extensive literature on concept formation (see e.g. Kagan and Kogan, 1970).

Our content analysis scheme represents an attempt to operationalise these distinctions in a systematic fashion. A preliminary version was applied to the written reactions of 30 junior school-children to 18 short musical extracts in a pilot study (Ashford, 1979), and subsequently modified to produce the following five categories of response.

1. Categorical. These responses classify the music in terms of a stylistic label such as "pop", "folk" or "classical". Research on concept formation (e.g. Kagan and Kogan, 1970) as well as that on the development of style sensitivity in children (e.g. Gardner, 1973a) suggests that this type of response involves some degree of sophistication, and is unlikely to be produced, for example, by younger children.

2. Objective-Analytic. Although Swanwick (1975) has suggested that there may be problems in distinguishing between "objective" and "subjective" responses to music, it is meaningful and indeed helpful in the present context. Objective responses are those that refer to intrinsic qualities of the music itself (cf. Coker's "congeneric" meanings), and thus objective-analytic responses are those that refer to specific "technical" elements such as instrumentation or tempo, e.g. "played by strings", "fast", "syncopated".

3. Objective-Global. Like (2), these refer to the intrinsic qualities of the music itself, but they differ in that they describe qualities of the music as a whole
rather than specific, technical elements of it (e.g. "American", "religious", "twentieth century"). The distinction between (2) and (3) corresponds to that between analytic and synthetic apprehension, which was discussed earlier.

4. Affective. This category has antecedents in the typologies of Binet and Bulloch, and includes subjective, emotional and evaluative responses to the music (e.g. "cheerful", "weird", "horrible").

5. Associative. These responses are equivalent to Coker's (1972) "extrageneric" meanings, and refer to extra-musical associations evoked by the music (e.g. "birds singing", "the sea", "a log cabin in Canada"). Myers and Valentine (1914) refer to these as non-fused associations; their category of fused associations, which they regard as being higher on the aesthetic scale, seems to involve associations with other musical elements. This involves "some knowledge of or familiarity with the music; and sometimes a memory of a definite musical composition" (p. 100).

Method

Subjects

The subjects were 44 adults (31 females and 13 males), varying widely in age and occupation, who were mostly drawn from adult education classes in a variety of academic subjects. Ten were students on a course in music. All subjects were asked to write a short statement summarising their musical training and performing experience (if any), and were classified accordingly as 0 (no experience whatsoever), 1 (some degree of experience) or 2 (experienced, practising musician). This classification was easy to perform, and unambiguously produced 17, 12 and 15 subjects in categories 0, 1 and 2 respectively. The latter group contained a university lecturer in music, well-known as a conductor and composer, as well as several other well-qualified musicians.

Musical Material

This consisted of 18 extracts lasting approximately one minute each, chosen to represent as wide a range of different musical styles as possible. The pieces from which they were taken, and a rough classification of the styles, are as follows:

Webern String Quartet, Op. 28 (modern "classical"); Schubert—Marche Militaire (brass band); Hank Williams—Your Cheatin’ Heart (country and western); Henry “Red” Allen and Kid Ory—Lazy River (traditional jazz); Stravinsky—Petrouchka (modern “classical”); The Glitter Band—Let’s Get Together Again (pop); Miles Davis—Dr. Jekyll (modern jazz); Joni Mitchell—California (contemporary folk); The Mahavishnu Orchestra—Vital Transformation (jazz—progressive rock); Puccini—Madame Butterfly (opera); Ewan McColl and Peggy Seeger—The Spanish Tragedy (traditional folk); Tony Oxley—Solo for amplified percussion (avant-garde jazz); John McCarthy Singers—Instant Happy (muzak); New Every Morning is the Love (hymn); Beethoven—Piano Concerto No. 2 (“classical”); Johann Strauss—Wine, Women and Song (popular “classical”); Muddy Waters—Clouds in my Heart (blues); Julie Andrews—The Lonely Goatherd (musical shows).

The collected extracts were tape recorded in random order.

Procedure

A form of repertory grid technique (see e.g. Fransella and Bannister, 1977) was used to elicit personal construct-type responses from the subjects. The first three extracts were played, and subjects were asked to think of a way in which any two of those were alike in some important way that distinguishes them from the third extract. They were asked to record the bipolar construct formed in this
way on a specially-designed response sheet. This procedure was repeated with extracts 2, 3 and 4, 3, 4 and 5 and so on up to 16, 17 and 18. Subjects were encouraged to make written notes on each extract as it was being played, as an aid to memory. A maximum of 16 constructs could thus be produced by each subject. (Subjects finally rated each extract on a five-point scale for each construct in a second playing of the tape, but these data were ultimately felt to be spuriously detailed for any meaningful analysis to be undertaken.)

Results

All constructs were classified according to the content analysis system, and the number falling into each category was recorded for each subject. Since only seven constructs in the whole sample were Associative (Category 5—the school-children in the pilot sample produced a significantly higher proportion of these), they were omitted from the analysis. Only five constructs were unclassifiable, and these were also omitted. The mean number of Categorical constructs produced per subject was 1·61 (S.D. 1·40), and the corresponding figures for Objective-Analytic, Objective-Global and Affective constructs were 4·09 (2·89), 2·61 (1·42) and 4·18 (2·90) respectively. Product-moment correlation coefficients were computed between the number of constructs produced in each category, and the subjects' musical experience group code (0, 1 or 2); the intercorrelation matrix appears in Table I. This matrix, with the latter measure removed, was subjected to principal components factor analysis, and a Varimax rotation was performed. Two factors were extracted by adopting Kaiser's criterion (Harman, 1960); the two factor matrices appear in Table II.

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<td>Intercorrelations between number of constructs produced in each category, and musical experience ratings (N = 44)</td>
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*p < 0·001.
†p < 0·05.

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<td>Principal components and Varimax factor matrices (N = 44)</td>
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Discussion

Affective and Objective-Analytic constructs were produced most frequently (33-47 per cent. and 32-75 per cent. of the total respectively); Objective-Global and Categorical constructs formed 20-90 per cent. and 12-88 per cent. of the total respectively. We cannot read too much into these proportions without a comparison sample, though we might speculate that the high proportion of Affective constructs is likely to originate from the musically naive subjects, and the high proportion of Objective-Analytic constructs from the musically experienced.

This speculation is borne out by the intercorrelations in Table I. The striking feature is that the Affective category is inversely related to the other three: all three coefficients are negative, and that with Objective-Analytic (−0·60) reaches significance at the 0·001 level. There are no significant relationships amongst the other three categories; all coefficients are small and positive. We can gain some insight into the negative relationship between affective reactions and the rest by looking at the intercorrelations of the "musical experience" measure. This has a negative correlation (−0·29) with the Affective category which just reaches significance at the 0·05 level, whereas its correlations with the other three categories are positive and non-significant. As a further test of this relationship, the correlation between the musical experience measure and the percentage of Affective constructs produced by each individual was computed; this was −0·33, p<0·05. These intercorrelations tell us, in summary, that subjects who produce Affective constructs are unlikely to produce a large number of the other three types, especially Objective-Analytic ones; these subjects, moreover, are likely to be amongst the less musically experienced.

The results of the factor analysis in Table II throw further light on these relationships. The first factor in both the principal components and Varimax matrices demonstrates the inverse relationship between the Affective category, which has high negative loadings, and the rest. The Objective-Analytic category, in particular, has high positive loadings, and the bipolarity of these two categories is shown most clearly on the Varimax factor. The second factor in each matrix seems mainly to demonstrate the association between the Categorical and Objective-Global categories; perhaps this is not surprising in that the former could be regarded as a special case of the latter. It seems likely, in the light of recent research on the development of style sensitivity in children (e.g. Gardner, 1973b), that the production of categorical responses by children of different ages is likely to be of more interest than their use by adults.

Our results seem to point towards a distinction between what might in the broadest terms be called "objective", or "technical" reactions, which tend to come from musically experienced subjects, and "subjective", personal reactions, more likely to be produced by the musically more naive. One subject, a male head teacher with an L.R.A.M., produced 16 Objective-Analytic constructs and none in any other category. Another, a female probation officer with (perhaps surprisingly) some elementary piano tuition, produced 13 Affective constructs and one in each of the two "Objective" categories. These are preliminary results in a relatively unexplored field, and our conclusions are almost certainly oversimplified. Nevertheless, the system of content analysis seems to hold promise for further investigations, and its application to a wider range of musical materials and subject groups will help to put the present results into perspective.

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References


