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Interpersonal Influences on Children's Emotional Responses to New Age Music

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Abstract

This study investigated the effects of interpersonal context and age on children's emotional responses to new age music. One hundred and twenty participants aged 9-10 and 13-14 years listened to four excerpts either alone, or in groups of three. Immediately after listening, they rated the emotions aroused by the excerpts on eight five point-scales based on a circumplex model which conceives of four quadrants of emotional response: positive/negative affect, and high/low arousal. The results showed that participants gave significantly higher ratings on four of the eight scales when listening in groups rather than when listening alone, and that the younger children gave significantly higher ratings on positive emotional states (relaxed, excited, energetic) and liking, whereas the older children gave significantly higher ratings on negative emotions (irritated, bored). These findings suggest the influence of both social and developmental factors upon children's emotional responses to music; namely group effects, and younger children's higher tolerance for unfamiliar styles.

Background

Music fulfils different *physical, cognitive, emotional and social* functions for the individual, and recent reviews by Hargreaves and North (1997, 1999a) suggest that the last of these has been badly neglected by empirical researchers. The evidence suggests that the social functions of music take three main forms, namely in the management of *interpersonal relationships, mood, and self-identity*. We use music to define the social groups to which we belong, to regulate our moods which are mediated by the immediate social environment in which listening takes place and in the establishment of self-identity. Our musical preferences can reveal which social groups we do and do not belong to, and this is an important part of developing one's sense of identity.

This is particularly clear in the case of teenagers' music preferences, which are so central to their lives as to form a "badge of identity" for many. In a previous interview study, we found that the majority of a sample of 120 British and Portuguese 9-10 and 13-14 year-olds preferred listening to pop/rock music alone, and in the privacy of their bedrooms (Boal-Palheiros & Hargreaves, 2001). This study extends one specific aspect of this finding; namely the effects of the *interpersonal context* of listening, since listening to music alone or with others might have different emotional functions.

Listening *alone* helps adolescents to develop their personal identity and cultivate a private self (Larson, 1995), and to regulate their mood and emotional lives (Arnett, 1995; Hargreaves & North, 1999a), although some young people report lower levels of affect when listening alone than with immediate companions (Csikszentmihalyi & Kubey, 1981). Listening *with others* is also significant in the development of social

identity and interpersonal relationships (Crozier, 1997; Zillman & Gan, 1997). Listening in small groups might be particularly important in early adolescence because of the increasing importance of peer-group relationships (McGurk, 1992). In other words, music listening can have social functions, which are *personal* as well as *group-oriented*.

In this study, we investigate the relative influence of these two social functions by looking specifically at the effects of the interpersonal context (i.e., listening alone or in small groups) on young people's emotional responses to music. If the personal functions predominate, we predict that children should express more polarised levels of emotional response when listening alone than when in small groups. If the group functions predominate, however, the opposite should be true. In addressing this question we need to take account of the many well-known social psychological phenomena which come into play in small group situations, notably *conformity* effects, in which individual responses tend to conform to a presumed group mean (e.g., Finnäs, 1989), and group *polarization* effects, in which group decisions tend to be more extreme than the mean level of the decisions of the individuals in the group (Brown, 1986).

In order to gain some insight into these influences, we compared participants at two different age levels, namely 9-10 years and 13-14 years. Because of the well documented importance of peer group effects in early adolescence, we predicted that the older participants would express more polarised levels of emotional response when listening in small groups than when listening alone, and that this effect would be less pronounced in the younger participants. There may also be interactions with the *valence* of different emotional responses: positive and negative responses may be differentially affected in individual as compared with group listening situations, and participants at different age levels may also be differentially affected in this respect.

We can summarise these research questions as follows:

1. Are children's emotional responses to new age music more polarised when they listen alone or in groups?
2. How are these differences influenced by age, specifically pre-adolescents as compared with teenagers?
3. Do these effects vary for positive as compared with negative emotions?

Method

Design

The two independent variables each had two conditions: *interpersonal context* (listening alone and in groups) and *age* ("younger" 9-10 year-olds and "older" 13-14 year-olds). Half of the participants in each age group were randomly assigned to one of the two listening conditions. The groups consisted of "small peer groups of three children", because three is a common group size in children's everyday social interactions (Lansford & Parker, 1999), and is also an easily manageable size.

Participants

These were 120 British volunteers attending primary and secondary schools in London, U.K. The sample comprised four groups of 30 children: "younger" and "older", either alone or in small groups. There were equal numbers of boys and girls in each of the four sub-samples, and the small groups included all female, all male, and mixed groups.

Measures of emotional response

The rating scales were derived from Russell's (1979, 1980) circumplex model of emotion, which is based on two orthogonal dimensions of affect (like-dislike) and arousal (high-low). This gives rise to four hypothetical quadrants, each of which are represented by two adjectives adapted from a previous study (North & Hargreaves, 1997), and which are shown in Figure 1.

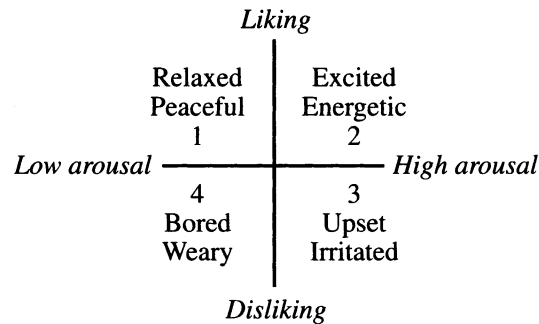


Figure 1. An adaptation of Russell's circumplex model of emotion.

1997), and which are shown in Figure 1.

Five-point rating scales were constructed for each of the eight adjectives, in which 1 represented "not at all" and 5 represented "very". Participants used each in response to the question "how does this music make you feel?" in the same order for each excerpt in the study, namely relaxed, excited, upset, bored, peaceful, energetic, irritated, and weary. An additional 5-point scale was included, on which participants rated "how much do you like this music?" ("liking").

Musical material

Instrumental new age music was employed, as in previous studies (e.g., North & Hargreaves, 1996) because it has been shown to evoke different emotional reactions (Gregory & Varney, 1996); because specific associations with lyrics can be avoided; because excerpts can be selected which evoke varying levels of subjective complexity in listeners, and which are unfamiliar to them; and because their perceived style is sufficiently close to pop music to avoid instant expressions of dislike or rejection, which might otherwise be expected in participants in this age range with classical music, for example. A pilot study was conducted to select the musical material in which younger and older children, listening either alone or in small groups, rated each of 16 excerpts chosen so as to represent one of four quadrants of the circumplex. The mean ratings of these were used to select the four final excerpts for use in the main study, the details of which appear in the Appendix.

Procedure

Participants completed the rating scales in their schools, sitting in small rooms located near their classrooms. Standard instructions were given to them by the researcher, and they were familiarised with the rating scales by being asked to rate an example, the data for which were subsequently excluded. If they expressed any showed difficulties, the details were carefully explained. The four excerpts, lasting approximately one minute each, were played in two random orders to control for order effects. Children rated their emotional state and liking for each excerpt immediately after listening to it.

Results and Discussion

In order to check for potential order effects, a product-moment correlation between the two random playing orders was calculated on the participants' mean ratings on each of the four excerpts for each of the eight emotion rating scales and the liking scale. The coefficient was positive and significant ($r = 0.90$, $N = 36$, $p < 0.01$), and so

A MANOVA was calculated on the means of the raw scores over the four musical pieces for the eight emotion rating scales, with interpersonal context and age as the two between groups factors. A single two-way ANOVA was calculated in a similar manner for each emotion scale and the liking scale, and all the main effects for these results appear in Table 1. No significant interactions were found between interpersonal context and age on the overall MANOVA, nor for any of the individual scales, nor for the liking ratings.

Table 1
Means and MANOVA main effects for eight emotion scales
Means and ANOVA main effects for each emotion scale and liking

	Alone		Group		Interpersonal context	Age
	Younger	Older	Younger	Older	F (A/G)	F (Y/O)
Multivariate					3.24**	5.28***
Relaxed	2.92	2.99	3.38	3.20	6.43*	Ns
Peaceful	3.00	3.08	3.32	3.34	4.43*	Ns
Excited	2.24	1.77	2.42	1.87	Ns	18.24***
Energetic	2.27	1.74	2.44	1.93	Ns	16.80***
Upset	1.65	1.92	1.92	1.87	Ns	Ns
Irritated	1.78	1.95	1.97	2.34	6.56*	5.50*
Bored	1.92	2.53	2.11	2.88	4.67*	30.07***
Weary	2.12	2.28	2.24	2.42	Ns	Ns
Liking	3.28	2.53	3.42	2.46	Ns	54.77***

*p < 0.05

**p < 0.01

***p < 0.001

The Table shows that there were significant overall multivariate main effects for both interpersonal context and age. Four of the emotion rating scales showed significant main effects for interpersonal context (relaxed, peaceful, irritated, and bored), and in each case the means were higher when listening in groups than alone. Four of the eight scales also showed significant main effects for age, but these were not all in the same direction. The younger children rated the two “positive”, high arousal emotions (excited, energetic) significantly higher than the older children, whereas the opposite was true for two of the “negative” emotions (irritated, bored). There was also a significant main effect for liking: the younger children gave significantly higher mean ratings than the older ones.

The finding that participants’ emotional responses were more polarized when listening to music in groups than alone suggests that the group-related social functions of music were more pronounced than were the personal functions in this study. These effects of interpersonal context were all in the same direction, and occurred mainly for the “low arousal” emotional adjectives (relaxed, peaceful and bored). This result accords with those developmental theories, which emphasise the importance of peer-group relationships in adolescent social development (McGurk, 1992), though it is unclear why group-related effects should appear to be strongest for “low arousal” emotions. The significant main effects for age reveal an interesting pattern of differentiation between the positive and negative emotions. The younger children gave significantly higher mean ratings for the two positive/high arousal emotions (“excited” and “ener-

tween the positive and negative emotions. The younger children gave significantly higher mean ratings for the two positive/high arousal emotions ("excited" and "energetic"), as well as for liking, whereas the older children gave significantly higher mean ratings for "irritated" and "bored", both of which are negative emotions. This finding could be explained in light of developmental research, which suggests a general decrease in the motivation of early adolescents for some activities (e.g., Austin and Vispoel, 1995). It could also be explained in terms of the findings of research on age trends in musical preference. Children's "tolerance" for different musical styles has been found to decline in early adolescence, when their preferences suddenly become far more restricted than in late childhood (Hargreaves & North, 1999b; LeBlanc *et al.*, 1996). The younger children in this study were thus more likely to respond positively than the older children to an unfamiliar musical style.

The reason why the older children expressed more negative emotions than the younger ones may well be a result of their attitude to new age music as a whole. Finnäs (1987), for example, found that many children at the age of 13-14 years wish to identify with wild, exciting and rebellious music, as this matches the typical adolescent self-image as a tough, wild, person. If the music is not perceived as such, they are likely to show their boredom and irritation as what, in their view, is an appropriate response. In contrast, the younger children have a more positive attitude towards a wider range of styles, including new age music.

We selected new age music as the material for this study for a number of reasons which were outlined earlier. It appeared to be a suitable choice in that it did not evoke extreme reactions; all four pieces were liked moderately. The excerpts were not instantly accepted or rejected in the way that some styles of "pop" or "classical" music might have been (Boal-Palheiros & Hargreaves, 2001). Although this was appropriate for the purposes of the present study, we cannot claim to have dealt with the powerful emotional effects engendered by those pop music styles that are strongly preferred by children of this age, and this must remain a task for further research.

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Appendix

Musical excerpts: Vangelis - *La petite fille de la mer* (example); Clannad - *Loch na Cailli*; Higher Agency Intelligence - *Alpha 1999*; Taucher & Koma - *Happiness*; Vangelis - *Hymn*.