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Uses of Music in Everyday Life

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The value of music in people's everyday lives depends on the uses they make of it and the degree to which they engage with it, which are in turn dependent on the contexts in which they hear it. Very few studies have investigated people's experiences of music in naturalistic, everyday circumstances, and this exploratory study provides some initial normative data on who people listen with, what they listen to (and what their emotional responses to this music are), when they listen, where they listen, and why they listen. A total of 346 people who owned a mobile phone were sent one text message per day for 14 days. On receiving this message, participants were required to complete a questionnaire about any music they could hear, or had heard since their previous message. Responses indicated a high compliance rate; a high incidence of exposure to music; that the greatest number of musical episodes occurred while participants were on their own; that pop music was heard most frequently; that liking for the music varied depending on who the participant was with, where they were, and whether they had chosen to be able to hear music; that music was usually experienced during the course of some activity other than deliberate music listening; that exposure to music occurred most frequently in the evening, particularly between 10 PM and 11 PM, and on weekends; that music was heard most frequently at home, with only a small number of incidences occurring in public places; that the importance of several functions of music varied according to temporal factors, the place where the music was heard, and the person or people the participant was with. Further research should include participants from a greater range of sociodemographic backgrounds and should develop context-specific theoretical explanations of the different ways in which people use music as a resource.

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THE ways in which we hear, listen to, engage with, value, and use music have changed dramatically during the past two centuries. In the nineteenth century, live music could be heard only in private homes or a public concert hall (Cook, 1998), and this would presumably include theatres, taverns, and other sites of social gatherings. This meant that music was arguably much more valued and prized than it is today, so that the composer, as generator of the “core product,” occupied the apex of a hierarchy of status. Lower down that hierarchy was the performer, seen as a “middleman” whose role was to pass the product on to the listener, who was viewed as a passive consumer at the lowest level of the hierarchy. Music was seen as a highly valued treasure with fundamental and near-mystical powers of human communication: It was experienced within clearly defined contexts, and its value was intrinsically bound up with those contexts.

The development of the mass media in the twentieth century meant that music became much more widely and readily available, and so arguably lost its aura of automatic aesthetic value. It became viewed as a commodity that was produced, distributed, and consumed just like any other. Another important change was that the range of contexts within which people listened to music became far more varied and diverse: The cultural value placed on musical experience became dependent on the context in question (cf. the interaction between disc jockey [DJ] and “audience” in a nightclub and that between the orchestra and audience in a concert hall, for example), such that the distinction between “serious” and “popular” music became much less clear-cut.

The pace of technological change has accelerated further during the past 20 years or so, and these fundamental changes in the nature of musical experience and value have arguably become even more pronounced. Because so much music of different styles and genres is now so widely available via the Walkman, music video, the Internet, and other media, it is arguable that people now actively *use* it in everyday listening contexts to a much greater extent than hitherto. They are still exposed to music in shops, restaurants, and other commercial environments without active control: But they also control its use in the home, in the car, while exercising, and in other everyday environments. It might be expected that they should do this in order to achieve different psychological ends, such as creating certain mood states, or changing their levels of emotional arousal. Music can now be seen as a *resource* rather than merely as a commodity. People might consciously and actively use it in different situations at different levels of engagement, such that listening contexts ultimately determine the value of the musical experience to the individual listener (see North & Hargreaves, 2000, for one example of such a process; see also Hargreaves & North, 1997, 1999). Furthermore, the notion of music

as a resource has been employed by businesses and other organizations as well as individuals, such that the former have employed technological advances to impose music upon people in public places such as shops, restaurants, and the like: More simply, it might be expected that the notion of choice could mediate everyday musical behavior in the modern world.

The revolution in the way that music is recorded, processed, stored, and played means that many of the traditionally delineated roles of the composer, the performer, the arranger, the sound engineer, and even the listener, with their associated hierarchy of status, are increasingly blurred. Technological change has given people more choices regarding music: We would expect this increased level of choice to lead to people making logical decisions about the way in which they use music in everyday life. The composer is no longer the main “generator of the core product,” as innovation is negotiated with other participants in the creative process. Indeed, Brewster and Broughton (1999), in their discussion of the contemporary club DJ, go so far as to suggest that the listener forms part of a creative process in partnership with the DJ, who can also be considered as a composer and performer: This view could be seen as an extension of the notion of listeners making logical decisions about their uses of music in everyday life.

Approaches to Studying Music in Everyday Life

Given the complexity of the issues involved, several approaches have been taken to investigate how music is used in everyday life. Sociologists such as Frith (1996) have assessed the role of music in everyday life in terms of how it shapes and reflects an individual's identity. Similarly, DeNora (2000) conducted interviews with 52 British and American women 18–77 years old to examine how they used music in contexts such as shopping malls, exercise classes, and during karaoke: She considered music in everyday life as a way of organizing one's internal and social world, arguing that music is more than just the background to numerous activities but rather helps to continually reconstruct the aims of these activities. In short, “music” is regarded more as a process than an object. Similarly, in *My Music*, Crafts, Cavicchi, Keil and The Music in Daily Life Project (1993) adopted a cultural studies approach, focusing on interviews with North American music lovers from 4 to 83 years old and offering in-depth and detailed insights into the complex, idiosyncratic, and eclectic roles that music played in the everyday life of the participants. Crafts et al. assessed these with regard to the constrictions upon musical taste imposed by the music industry (see also Kleinen, 1991, 1997).

However, although undoubtedly making an important contribution to our understanding of musical behavior, such work has so far placed relatively little emphasis on the collection of quantitative data that may help to systematically specify the motives for everyday music listening.

In an attempt to address this, some previous research by social psychologists has adopted what has become known as the “uses and gratifications approach” to music in everyday life (e.g., North, Hargreaves, & O’Neill, 2000; see Zillmann & Gan, 1997, for a review). Within this approach, (usually adolescent) participants under laboratory (or quasi-laboratory) conditions are asked to select from a list of the possible functions that music might serve for them. However, although providing a quantitative assessment of the functions of music in everyday life, the majority of work on the uses and gratifications of music has unfortunately produced extremely inconsistent results. For example, different studies have found that mood enhancement is rated by some participants as an extremely important function of music (Roe, 1985), by other participants as unimportant (Gantz, Gartenberg, Pearson, & Shiller, 1978), and by other participants as of intermediate importance (Sun & Lull, 1986). One possible explanation for this inconsistency is provided by North and Hargreaves (1996a), who asked participants to imagine that they were in a variety of different music-listening situations (e.g., in a nightclub, doing housework) and to rate various functions that music ought to fulfill in these circumstances. The results showed clearly that music would be expected to fulfill completely different functions in different situations. Similarly, Behne (1997) investigated the concept of *Musikerleben* among German adolescents, examining how musical behavior could be interpreted in the context of other aspects of participants’ lifestyles (e.g., emotional problems that they face): This research allowed him to identify nine distinct listening styles, namely compensating, concentrated, emotional, distancing, vegetative, sentimental, associative, stimulative, and diffuse. Research such as this indicates that the social and interpersonal context (including factors such as physical location, presence of others, etc.) might determine the uses that people make of music in any given listening episode.

Perhaps the first experimental attempt to investigate how nonmusical circumstances impinge on music listening was by Konečni (see, e.g., Konečni, 1982). In a series of highly imaginative laboratory studies, he investigated how arousal evoked by music in the autonomic nervous system could interact with the arousal-evoking properties of music-listening contexts. The typical finding of this research was that participants followed an arousal-moderation strategy, such that they chose to hear music that would compensate for the extreme degrees of arousal caused by the music-listening context. For example in one study, Konečni, Crozier, and Doob (1976) found that participants who had been systematically insult-

ed (causing a high degree of arousal) would choose to listen to simple rather than complex melodies. Results such as these were interpreted as consistent with Berlyne's (1971) theory, which claimed that aesthetic judgments reflect participants' desire to moderate arousal in the autonomic nervous system. British research carried out some years later by North and Hargreaves (1997) reached broadly similar conclusions by again supporting some of the basic tenets of Berlyne's theory in a variety of everyday music situations. For example, arousal moderation was found to mediate the musical preferences of participants in aerobics and yoga classes, a university cafeteria, and a computer-simulated driving episode.

However, the ecological validity of such experimental research may be limited as a result of its experimenter-centered approach. Participants were made to listen to music of the experimenter's choosing in a situation of the experimenter's choosing and to select from several response options of the experimenter's choosing. A more participant-centered approach would of course be more likely to capture naturalistic responses to music as they occur in situ, and such an approach was taken recently by Sloboda, O'Neill, & Ivaldi (2001, see also Sloboda, 2001), who tested the viability of the Experience Sampling Method (see Csikzentmihalyi & Lefevre, 1989). Each participant was given an electronic pager, and over the course of 7 days this pager was activated once every 2 hours by a computer. Upon receiving this alert, participants were asked to describe the nature of any musical experience currently taking place, or any musical experiences that had occurred since the last activation of their pager. Specifically, they were asked to describe who they were with, how the music was being played, what type of music they could hear, their emotional response to the music, and the function of the music.

Such a method inevitably involves a number of risks such as low compliance rates and the potential for error in participants' self-reports. Sloboda et al. (2001, p. 22) nevertheless concluded that "Our findings indicate that the Experience Sampling Method is a robust method for examining individuals' subjective experience during 'real' evolving musical episodes in everyday life." Although several interesting findings resulted from this study, the authors highlighted two major limitations of the method employed. First, using electronic pagers to contact participants was extremely costly, and this obviously limits their potential as a tool in future research. Second, following from this, the study was based on the responses of only 8 participants, which "does not allow strong inferences to wider populations" (p. 23).

Nevertheless, such an approach does overcome many of the drawbacks of a psychological research literature that frequently bears little relation to everyday music-listening situations. Indeed, the lack of ecological validity that typifies much of the research means that the extent of theorizing

within music psychology and sociology has greatly outstripped the collection of quantitative empirical data on the role of music in people's everyday lives. The present study was designed to redress this imbalance by exploring five aspects of the ways in which people use music in everyday life, namely, who are people with when they hear music? What are they listening to? When do they listen? Where do they listen? Why do they listen?

Who, What, When, Where, and Why?

Our analysis of the likely effects of technological development on musical behavior, together with the existing empirical literature, allows us to make some tentative hypotheses concerning the uses of music in everyday life in answer to these general questions of who, what, when, where, and why? With regard to who people listen to music with, studies within the uses and gratifications approach have indicated that adolescents listen to music primarily on their own. For example, Larson and Kubey (1983) found that 69% of all high school students' music-listening experiences occurred in privacy and rarely (23% of all episodes) with friends. However, this research is rather dated: Furthermore, our analysis of the increasing ease with which music can be accessed due to technological change suggests that music listening in the present day may be more likely to occur in the presence of others. Moreover, we know little of how liking for the music in question might be mediated by the presence of others. For example, Crowther (1985) showed how experimental participants could be guided toward selecting disliked music if they believed that their peers enjoyed listening to it. One possible hypothesis following from this is that when people listen to music in the presence of others they have less control over the choice of music and consequently like what they hear less. Furthermore, it seems reasonable to suspect that listening to music may serve different functions in different social settings. In particular, it is possible to make the more specific and tentative hypothesis that listening in isolation may be characterized by a greater degree of involvement with the music in question than that experienced when listening in the company of others (where the music may only be in the background). In summary, we might expect that a high proportion of music-listening episodes might occur in the presence of others, that liking for music heard in isolation is higher than liking for music heard in the presence of others, that the reasons for music listening may vary depending on the presence of other people, and that the amount of involvement with the music should be greatest when it is heard when other people are not present.

It is also possible to formulate several hypotheses concerning what music people listen to in everyday life. Recent years have seen growing

concern over declining sales of prerecorded classical music, leading several commentators to speculate whether the popularity of the genre is in terminal decline. Although falling sales are of course consistent with such a notion, they might simply reflect a decreasing propensity to *buy* classical music rather than low levels of actual exposure to it. In short, how frequently do people actually hear classical music? A second related issue concerns the functions of different musical styles in everyday life. If people's ability to choose what music they *hear* has increased as a consequence of technological advances, then we might expect that people choose to hear different types of music for different reasons. Do different musical styles serve different functions in everyday life, such that people for example listen to classical music to achieve certain ends and pop music to achieve other ends? Furthermore, do these musical styles serve different functions depending on whether people had either chosen to be able to hear music or had instead not chosen to be able to hear music?

To the best of our knowledge, no previous research has concerned how responses to music might vary as a function of time of day and day of the week (notwithstanding a limited number of studies published in recent years concerning temporal variations in emotional states—see, e.g., Parkinson, Briner, Reynolds, & Totterdell, 1995) Nevertheless, it is possible to predict that such temporal patterns in musical behaviour must exist. For example, the constraints of employment mean that exposure to music may be less prevalent during the working day than during the evening or weekends when the majority of people are at leisure. Similarly, given that the majority of the population is engaged in some task during the working day (be this paid employment, studying, or carrying out other forms of unpaid labor), we might expect that music serves different functions at different times of the day and week: Music experienced during the working day would be expected to complement other activities whereas music experienced during the evening and weekend would perhaps be more likely to fulfill emotional functions.

With regard to where people listen to music, our analysis of the relative ubiquity of music in the modern world suggests that music listening ought to occur in a wide variety of contexts. Although it is impossible to predict how much music listening might still occur within the home, we might also predict that a relatively high proportion of music listening episodes will occur outside the home environment and take place instead in cars and also commercial environments. For example, Rentfrow and Gosling (2003) found that their 74 participants reported listening to music most regularly while driving, but that the second most popular environment for music listening was "Alone at home." A second issue concerns the degree of choice that people feel they have over their ability to hear music in such environments. When people hear music outside the home, to what extent

do they feel able to control what they are listening to? We might expect that participants should have less choice over their ability to hear music when in public environments. Finally, does music fulfill different functions in different environments? The research just reviewed suggests that people might select music to fulfill logical mood management strategies, but would music be so useful in situations where participants have no choice over their ability to hear music?

Finally, although we might expect the reasons for listening to music to vary as a function of who else is present, the type of music being heard, the time of music listening, and the place where music listening occurs, it is also interesting to make an overall assessment of why people listen to music. Although the uses of music would vary as a function of interpersonal, musical, temporal, and situational factors, it nevertheless remains of interest to determine overall what the main functions of music are. More specifically, we might expect that the greater availability of music in the modern day might have led to music as a commodity being in some way "cheapened" such that people's reasons for listening to it are rather passive and detached.

The present study addressed these issues by contacting participants via text messages sent to their mobile phones. There exist many Internet sites that allow users to send free text messages to mobile phones worldwide. By eliminating the costs associated with contacting participants, the present study was able to recruit a much larger and heterogeneous sample ($N = 346$) than in any previous research. Since a high proportion of British people own a mobile phone, using ownership of a mobile phone as a criterion for inclusion in the research did not automatically bias the sociodemographic characteristics of the resulting sample. Participants in the present study were sent one text message per day over the course of 14 days. In response to this message, participants were asked to complete a questionnaire asking about who they were with, what music they could hear, what time it was, and where the participant was. Finally, those participants who had chosen to be able to hear music were questioned about why they were listening to music, and those participants who had not chosen to be able to hear music were questioned about the effect that music had on them.

Method

PARTICIPANTS

A total of 346 participants volunteered for the study; they were recruited from numerous commercial organizations and schools nationwide. In addition to this, undergraduate students were recruited from a university in the East Midlands region of the United Kingdom, and unemployed adults were recruited via a job center in the same area. No

financial incentive was offered for participation, although the university students were required to take part in research projects of their choosing as part of their course requirements. The mean age of participants was 25.96 years ($SD = 12.31$ years), with ages ranging between 13 and 78 years. Since each participant was asked to complete 14 questionnaires in all ($346 \times 14 = 4844$), the total number actually completed (4685) represents a very high compliance rate of 96.72%. Participants took a mean of 24.68 minutes ($SD = 27.72$ minutes) to respond to their daily text message by completing a questionnaire. A total of 83.3% of responses were made within an hour of the relevant text message being received, and all responses were made within 4 hours of the relevant text message being received.

The first time participants completed a questionnaire, they were asked to describe their ethnic background. A total of 75.2% of the participants regarded themselves as "White-British," and the corresponding figures for other ethnic groups were "Asian-Indian," 9.4%; "Asian-British," 5.8%; "White-Other," 2.3%; "Other," 1.8%; "Asian-Pakistani," 1.5%; "Black-British," 1.5%; "Asian-Other," 1.2%; and "Black-Other," 0.6%. A similar item on the questionnaire asked participants to state their occupation. Responses indicated that 44.8% of the participants described themselves as "university student," and the corresponding figures for other occupational groups were "managerial/administrative," 22.3%; "professional," 15.1%; "semi-skilled," 5.2%; "manual," 3.8%; "school pupil," 3.2%; "housewife," 2.7%; and "unemployed," 2.3%. Participants were then asked to write a few sentences describing their level of musical training/experience. Using this information, a panel of three independent judges assigned participants to a low musical training/experience group (50.3%), an intermediate musical training/experience group (15.2%), or a high musical training/experience group (8.9%). The remaining participants did not provide sufficient information to allow their level of musical training/experience to be classified with confidence.

INSTRUCTIONS AND QUESTIONNAIRE

Before beginning the study, participants were given a printed sheet containing instructions. This stated that "Every day for the next 14 days you will receive one text message from us on your mobile phone. As soon as you receive your message you should straight away fill in one of the questionnaires that we have given to you. The questionnaire asks you about the music you could hear when you received your message. You will only receive one text message each day, but the message could arrive at any time between 8:00 in the morning and 11:00 at night—consequently please try to make sure that you have a copy of the questionnaire (and a pen) with you at all times. Please note that the study begins on Monday XXXX—you might find it helpful to put this date in your diary. At the end of the 14 days please return the questionnaires to us—you will already have been given details about how to do this." An approximately equal number of text messages were sent during each hour of the study using free-of-charge Internet to mobile phone text messaging Internet sites. Participants were also given instructions concerning what they should do if their text message arrived at a time when they could not access their phone, namely "Make a note of the time at which the message arrived on your phone. Then just complete the questionnaire as soon as possible as though you were filling it in when the message arrived. For example, what should you do if you were driving your car when your daily message arrived at 10:37? You obviously can't complete the questionnaire while you are driving. Instead, as soon as it is safe and practical to do so, you should fill in your questionnaire on the basis of what you can remember from 10:37. Try to remember as much as you can about the music you might have heard at 10:37, and how you felt about it. If you really can't remember the answer to a question then just leave it blank." This same sheet informed participants that they were free to withdraw from the study at any time and provided them with a contact phone number should they wish to do so or should they have any other questions about the research. Furthermore, at the head of each questionnaire was printed the instruction "Please complete this questionnaire as soon as possible after you receive your daily text message. Please remember that your answers are completely

confidential. There are no right or wrong answers, nor any 'hidden agenda.' We're simply trying to find out more about how people experience music as they go about their everyday lives." These instructions were reinforced by three phone calls made to participants, one that was made 1 week before the start of the study, a second that was made during the weekend before the start of the study, and a third that was made 1 week after the study commenced. Participants' phone numbers were anonymous, and all records of the numbers were destroyed immediately upon completion of the research.

The questionnaire was divided into six sections. The first section asked participants to provide demographic information about themselves, the time they received their text message, and whether or not they could "hear any music at all" when they received their message. It was stressed that "You may not have been deliberately listening to the music, or paying attention to it. Similarly, it doesn't even matter if the music was really quiet, or it wasn't what you would call 'proper' music. We simply need to know whether there was *any music at all within hearing range*." Participants who could hear music were asked to complete the remainder of the questionnaire with respect to that particular music listening episode. Participants who could not hear music when they received their text message were then asked whether they had heard any music since the previous text message arrived. Participants who had been asked to complete the remainder of the questionnaire with respect to this most recent music listening episode (consistent with the methodology adopted in the study by Sloboda et al., 2001). Participants who had not heard music since the previous text message arrived were thanked and told that they need not complete any more questions that day.

The second section of the questionnaire asked participants to select from several options concerning who they were with during the musical episode in question. The third section asked participants to give details of what music they could hear, by choosing from a list of styles; stating how much choice they had in their ability to be able to hear music; and rating the volume of the music and their liking for it. The fourth section of the questionnaire asked participants to state where their music-listening episode occurred. The final section of the questionnaire was divided into two parts. The first part was for completion on those occasions when participants had chosen to be able to hear music: In this case, participants were asked to state the functions of music. The second part of this section was for completion by participants who had not chosen to be able to hear music: Here participants were asked to state the effects that the music had on them. In both cases, the response options selected for inclusion in the research were confirmed by a short pilot study in which 10 psychology undergraduates were asked to write a short paragraph concerning (a) the reasons why they listened to the last piece of music they had chosen to listen to and (b) the effects on them of the last piece of music they heard that they had not chosen to be able to hear: These responses did not raise any additional reasons/effects to those already identified.

The reasons for listening to music when participants had chosen to be able to hear music are set out in the top row of Table 2. "It helped me to concentrate/think" was included, given that several studies have investigated the effects of music on task performance, indicating that music can in some cases be beneficial and in other cases harmful (e.g., Nittono, 1997). "It helped to pass the time," "It brought back certain memories," "Helped create or accentuate an emotion," "I enjoyed it," and "Habit" were included, given the frequency with which this function of music has been cited by participants in uses and gratifications research (see review by Zillmann & Gan, 1997). "It helped to create the right atmosphere" was included, given research in consumer psychology indicating the impact of music on the perceived atmosphere of given environments (e.g., North & Hargreaves, 1998). "Someone else I was with liked it" was included, given research on conformity effects on music listening behavior (see, e.g., Crowther, 1985). "Helped create an image for me" and "I wanted to learn more about the music" were included, given research indicating the function of music in social group membership (see, e.g., Tarrant, Hargreaves, & North, 2001).

The effects of listening to music when participants had not chosen to be able to hear music are set out in the top row of Table 3. Some of these replicated the items employed

for participants who had chosen to be able to hear music (i.e., "It helped to create the right atmosphere," "I enjoyed it"). Given that participants had not chosen to be able to hear the music, they were also given response options concerning the direct opposite of these (i.e., "It created the wrong atmosphere" and "It annoyed me"). Other options were included because they were thought to be as closely analogous as possible to those options presented to participants who had chosen to be able to hear music. "Aided my attempts to do what I was trying to do" (and its opposite, i.e., "Hindered my attempts to do what I was trying to do") was intended to be analogous to the "It helped me to concentrate/think" option. Similarly "Made me look good" (and its opposite, namely, "It made me look stupid") was intended to be analogous to the "Helped create an image for me" option. "I wanted to hear the music for longer" (and its opposite, i.e., "I wanted to get away from the music as fast as I could") was included, given research in consumer psychology showing that these can be effects of forced exposure to liked/disliked music experienced in a public environment (North & Hargreaves, 1996b). Finally "None at all" was included so that participants were not forced into claiming that music experienced involuntarily had had an effect on them.

In all cases, participants were given forced-choice rather than open-response options, for three reasons. First, doing so facilitated the encoding of the large quantity of resulting data. Second, it avoided any inconsistencies that might have arisen from the coding of a large number of open-ended responses. Finally, forced-choice options allowed data to be collected concerning numerous specific issues raised by earlier research on the functions and everyday circumstances of exposure to music.

Results and Discussion

Music could be heard by participants on 1807 (38.6%) of those occasions on which they received a text message. For the remaining 2847 (60.8%) occasions, music could not be heard when a text message was received. On the remaining 31 questionnaires (0.6%), participants did not give a response to this item. Of those questionnaires stating that the participant could not hear any music when the text message arrived, 1383 (48.6%) indicated that the participants had heard some music since they received their last text message, 1381 (48.5%) stated that the participants had not heard any music since their last text message, and 83 (2.9%) did not contain any response. In summary, there was a high incidence of exposure to music.

WHO?

The first analysis investigated who participants were with when the listening episode occurred. A total of 1230 listening episodes (26.3%) occurred while participants were on their own, 863 (18.4%) occurred with friends, 332 (7.0%) occurred with spouse/partner only, 394 (8.4%) occurred with members of the family, 274 (5.8%) occurred with work colleagues, 152 (3.2%) occurred with a boy/girlfriend, 89 (1.9%) occurred with strangers, and 29 (0.6%) occurred in the presence of others. These data indicate that the great majority of listening episodes occurred in the

presence of other people, in contrast with the findings of previous studies indicating that music listening occurred primarily in private. Note that previous research on the issue employed adolescent samples, rather than the broader demographic range of the present sample. Nevertheless it is tempting to conclude that the present findings are at least consistent with the notion that recent technological changes (which increase people's ease of access to music) mean that music is now more likely than before to be experienced in the company of others.

Participants were asked to state how much they liked the music on a scale from 0 = "disliked very much" to 10 = "liked very much." A one-way analysis of variance (ANOVA) investigated any differences in liking for the music as a function of the person the participant was with. The result of this was also significant, $F(7, 3173) = 17.01, p < .001$. Means (and *SDs*) and the results of Tukey honestly significant difference tests are presented in Table 1. Consistent with the hypothesis, participants had the highest degree of liking for the music they could hear when they were on their own. Interestingly the next highest ratings were for intimates of the participant, namely, friends, boy/girlfriend, and spouse/partner only. The lowest liking ratings were assigned to music experienced while with strangers and work colleagues. It was argued earlier that this higher liking for music heard in isolation should result from a greater degree of choice concerning whether music could be heard. To test this, a chi-square analysis was carried out to investigate any association between who the participant was with and participants' "yes/no" responses to a question asking "Did you have any choice over whether you could hear the music?" The result of this was significant, $\chi^2(7) = 415.44, p < .001$, and

TABLE 1
Who the Participant Was With By Liking for the Music and Number of Episodes in Which the Participant Had a Choice Over Ability To Hear Music

Who With	Liking*	Number (%) of Episodes in Which the Participant Had a Choice
On my own	6.75 ^{a,b,c,d} (2.51)	1010 (82.7)
Friends	6.50 ^{e,f,g} (2.58)	405 (47.4)
Spouse/partner only	6.09 ^{a,h,i} (2.30)	124 (69.3)
Members of my family	5.85 ^{b,e} (2.72)	262 (66.8)
Boy/girlfriend	6.41 ^{j,k} (2.49)	93 (61.2)
Work colleagues	5.34 ^{e,f,h,j} (2.41)	116 (43.0)
Strangers	4.99 ^{d,g,i,k} (2.87)	20 (23.0)
Other	6.00 (2.41)	11 (37.9)

*Within the "Liking" column, values are means followed by *SDs* in parentheses. Means marked by the same superscript letter differ at $p < .05$ (e.g., "On my own" differs significantly from "Spouse/partner only," "Members of my family," "Work colleagues," and "Strangers").

the frequency (and percentage) of participants answering “yes” in each social grouping is presented in Table 1. The percentage figures indicate that of all the music listening episodes that occurred when participants were on their own, 82.7% involved the participant having the choice to be able to hear music. This percentage is much higher than for those occasions when the participant was with other people. For example, only 47.4% of those music-listening episodes that occurred with friends involved the participant being able to choose whether to hear music.

Participants who had chosen to be able to hear music were presented with a list of possible reasons for listening to music and asked to state those that applied in the particular listening episode in question. Participants were free to select as many of the reasons as they wanted. Table 2 presents the percentages of episodes in which participants stated that each reason applied in the listening episode in question. For example, of all the episodes that occurred when the participants were on their own, 216 (21.4%) involved the music helping the participant to concentrate/think: Music did not help the participant to concentrate/think in the remaining 78.6% of those episodes that occurred when participants were on their own. The most obvious conclusion that might be drawn from Table 2 is that each reason for listening to music gave rise to a significant chi-square result: The importance of each reason for music listening varied depending on who the participant was listening with. However, Table 2 also indicates little apparent difference in the reasons for listening to music in company as compared with when participants were listening on their own. For example, contrary to the hypothesis, there was no evidence that music served more of a “background” function in the presence of others and a more “foreground” function during those episodes that occurred when participants were on their own. Indeed very few of the percentages contained within Table 2 seem to stand out as particularly outlying, although a few are interesting. For example, using music to create the right atmosphere seemed particularly important in those episodes that occurred both with friends and with a boy/girlfriend (although this was interestingly not the case for those episodes that occurred with a spouse/partner). Similarly, “I enjoyed it” was more frequently cited as a reason for listening to music with friends, and “Someone else I was with liked it” was more frequently cited as a reason for listening with a boy/girlfriend.

A similar pattern of findings emerged when participants were asked to rate “How much attention were you paying to the music?” on a scale from 0 = “None at all” to 10 = “Complete attention.” A one-way ANOVA was carried out to test for any differences in ratings as a function of who the participant was with. The result of this was significant, $F(7, 3141) = 15.40$, $p < .001$, and the means (and *SDs*) are presented in the

TABLE 2
Who Participant Was With By Number of Listening Episodes in Which Participant Agreed That Each of 11 Factors Was an Effect of Listening to Music (For Those Episodes in Which Participants Had Chosen to Be Able to Hear Music)

Who Wit	No. (%) of Responses											Mean (SD) Attention
	"It helped me to concentrate /think"	"It helped to pass the time"	"It helped to create the right atmosphere"	"It brought back certain memories"	"Someone else I was with liked it"	"Helped create or accentuate an emotion"	"Helped create an 'image' for me"	"Habit"	"I wanted to learn more about the music"	"I enjoyed it"	"Other"	
On my own	216 (21.4)	474 (46.9)	262 (25.9)	102 (10.1)	0 (0)	219 (21.7)	36 (3.6)	343 (34.0)	26 (2.6)	42 (19.8)	48 (4.8)	5.17 (2.69)
Friends	41 (10.1)	109 (26.9)	180 (44.4)	56 (13.8)	116 (28.6)	86 (21.2)	21 (5.2)	101 (24.9)	17 (4.2)	167 (37.1)	17 (4.2)	5.11 (2.80)
Spouse/partner only	9 (7.3)	37 (29.8)	28 (22.6)	8 (6.5)	37 (29.8)	17 (13.7)	3 (2.4)	29 (23.4)	6 (4.8)	10 (18.2)	11 (8.9)	4.57 (2.80)
Members of my family	33 (12.6)	102 (38.9)	75 (28.6)	14 (5.3)	53 (20.2)	43 (16.4)	8 (3.1)	83 (31.7)	4 (1.5)	28 (21.5)	5 (1.9)	4.44 (2.69)
Boy/girlfriend	9 (9.7)	35 (37.6)	44 (47.3)	15 (16.1)	47 (50.5)	20 (21.5)	3 (3.2)	18 (19.4)	2 (2.2)	15 (25.4)	3 (3.2)	5.26 (2.50)
Work colleagues	31 (26.7)	53 (45.7)	25 (21.6)	8 (6.9)	12 (10.3)	19 (16.4)	6 (5.2)	43 (37.1)	2 (1.7)	43 (27.9)	6 (5.2)	3.57 (2.28)
Strangers	8 (40.0)	14 (70.0)	5 (25.0)	0 (0)	1 (5.0)	2 (10.0)	0 (0)	7 (35.0)	0 (0)	19 (28.4)	1 (5.0)	4.02 (2.97)
Other	3 (27.3)	5 (45.5)	5 (45.5)	0 (0)	0 (0)	3 (27.3)	2 (18.2)	3 (27.3)	0 (0)	6 (33.3)	1 (9.1)	5.55 (3.11)
$\chi^2(7)$	58.48	63.35	69.29	23.32	366.05	10.03	10.80	22.67	8.10	30.44	10.85	
p	<.001	<.001	<.001	.001	<.001	<i>ns</i>	<i>ns</i>	<.01	<i>ns</i>	<.01	<i>ns</i>	

“Mean Attention” column of Table 2. These means provide only limited support for our more tentative hypothesis that most attention should be paid to music during those episodes that occurred when participants listened on their own. Table 2 indicates that the greatest degree of attention was paid when participants were listening with a boy/girlfriend and with “other,” such that only the third highest rating resulted from those episodes that occurred when participants were on their own. In summary, music was liked more when it was heard with no other people present, and participants’ reasons for listening to music varied depending on who else was present, although there were few obvious differences between the reasons for listening (and also the amount of attention paid to the music) when participants were listening either on their own or in the presence of others.

In a comparable analysis, participants who had not chosen to be able to hear music were presented with a list of possible effects of listening to music and asked to state those that applied in the particular listening episode in question. Participants were free to select as many of the reasons as they wanted. Table 3 presents the percentages of episodes in which participants stated that each effect of music listening applied in the listening episode in question. In contrast with those episodes that occurred when participants had chosen to be able to hear music, Table 3 indicates that only five of the effects of involuntary exposure to music gave rise to significant associations with who the participant was with.

What?

Participants were asked to state what style of music they heard. “Chart pop” was the most frequently experienced style of music by a considerable margin (Table 4). Indeed, the seven different categories of pop music included in the research (cited in the first seven rows of Table 4) between them accounted for 67.1% of all experiences of music. Classical music was heard on only 140 (3.0%) occasions, which is apparently consistent with the low level of sales of prerecorded classical music and indicates clearly the low popularity of this musical style. Indeed, when asked to state whether the music they heard was the style they usually liked to listen to, participants gave 2262 (73.8%) “yes” responses and 803 (26.2%) “no” responses.

A second hypothesis was that different musical styles might serve different functions and that the functions served by different musical styles might vary as a consequence of whether people had chosen to be able to hear music. Two sets of analyses were carried out. The first investigated those episodes that had occurred when participants had chosen to be able

TABLE 3
Who Participant Was With By Number of Listening Episodes in Which Participant Agreed That Each of 12 Factors Was an Effect of Listening to Music (For Those Episodes in Which Participants Had *Not* Chosen to Be Able to Hear Music)

Who With	No. (%) of Responses											
	"It annoyed me"	"Aided my attempts to do what I was trying to do"	"I wanted to get away from the music as fast as I could"	"It helped to create the right atmosphere"	"It made me look stupid"	"None at all"	"I enjoyed it"	"Hindered my attempts to do what I was trying to do"	"I wanted to hear the music for longer"	"It created the wrong atmosphere"	"Made me look good"	"Other"
On my own	39 (18.4)	12 (5.7)	8 (3.8)	47 (22.2)	0 (0)	51 (24.1)	42 (19.8)	28 (13.2)	12 (5.7)	10 (4.7)	0 (0)	7 (3.3)
Friends	59 (13.1)	30 (6.7)	9 (2.0)	182 (40.4)	2 (0.4)	68 (15.1)	167 (37.1)	26 (5.8)	37 (8.2)	9 (2.0)	6 (1.3)	12 (2.7)
Spouse/partner only	6 (10.9)	1 (1.8)	2 (3.6)	18 (32.7)	1 (1.8)	16 (29.1)	10 (18.2)	2 (3.6)	0 (0)	0 (0)	0 (0)	1 (1.8)
Members of my family	19 (14.6)	8 (6.2)	4 (3.1)	32 (24.6)	0 (0)	38 (29.2)	28 (21.5)	7 (5.4)	5 (3.8)	2 (1.5)	0 (0)	1 (0.8)
Boy/girlfriend	4 (6.8)	4 (6.8)	0 (0)	21 (35.6)	1 (1.7)	11 (18.6)	15 (25.4)	3 (5.1)	5 (8.5)	1 (1.7)	0 (0)	1 (1.7)
Work colleagues	25 (16.2)	20 (13.0)	8 (5.2)	42 (27.3)	2 (1.3)	25 (16.2)	43 (27.9)	9 (5.8)	6 (3.9)	2 (1.3)	0 (0)	4 (2.6)
Strangers	15 (22.4)	6 (9.0)	2 (3.0)	15 (22.4)	0 (0)	18 (26.9)	19 (28.4)	2 (3.0)	1 (1.5)	4 (6.0)	0 (0)	2 (3.0)
Other	2 (11.1)	5 (27.8)	0 (0)	6 (33.3)	0 (0)	4 (22.2)	6 (33.3)	1 (5.6)	1 (5.6)	1 (5.6)	0 (0)	2 (11.1)
$\chi^2(7)$	10.39	21.96	7.21	32.34	7.40	21.96	30.44	17.80	13.09	11.56	9.32	7.59
<i>p</i>	<i>ns</i>	<.01	<i>ns</i>	.001	<i>ns</i>	<.01	<.001	<.05	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>

TABLE 4
Style of Music Heard

Style	Frequency	Percent
Chart pop	1218	38.0
Rap	118	2.5
R&B/soul	395	8.4
Rock	222	4.7
"Alternative" pop	172	3.7
Dance	247	5.3
"Golden oldies" pop	213	4.5
Blues	15	0.3
Classical music	140	3.0
Jazz	39	0.8
Country/folk	39	0.8
Blues	13	0.3
Light instrumental	87	1.9
Non-Western pop	45	1.0
Non-Western traditional music	74	1.6
Other	167	3.6

to hear music. These analyses employed the list of possible reasons for listening to music described earlier. Table 5 presents the percentages of episodes in which participants stated that each reason applied in the listening episode in question cross-tabulated by the musical style that could be heard. The second set of analyses investigated those episodes when participants had not chosen to be able to hear music. These analyses employed the list of possible effects of forced exposure to music described earlier. Table 6 presents the percentages of episodes in which participants stated that each effect applied in the listening episode in question cross-tabulated by the musical style that could be heard for participants who had not chosen to be able to hear music.

Table 5 indicates that when participants had chosen to be able to listen to music, only two of the reasons for listening failed to indicate effects of musical style, such that participants had different reasons for listening to different musical styles. Table 6 indicates that this pattern did not hold for those episodes where participants had not chosen to be able to hear music: Under such circumstances, only three of the effects of listening to music (one of which was "None at all") were related to the different musical styles. In summary, when participants chose to be able to hear music, then different types of music were chosen for different reasons: When participants had not chosen to be able to hear music, then on the whole there was little evidence that different musical styles had different effects on listeners. The obvious conclusion to draw from this is that when episodes result from forced exposure to music, participants regard "music" as a homogenous single concept; whereas when participants chose to be able to hear music, then they were willing and/or able to differentiate the rea-

TABLE 5
What Music Could Be Heard By Number of Listening Episodes in Which Participant Agreed That Each of 11 Factors Was an Effect of Listening to Music (For Those Episodes in Which Participants Had Chosen to Be Able to Hear Music)

Style	No. (%) of Responses										
	“It helped me to concentrate /think”	“It helped to pass the time”	“It helped to create the right atmosphere”	“It brought back certain memories”	“Someone else I was with liked it”	“Helped create or accentuate an emotion”	“Helped create an ‘image’ for me”	“Habit”	“I wanted to learn more about the music”	“I enjoyed it”	“Other”
Chart pop	99 (13.4)	335 (45.3)	213 (28.8)	38 (5.1)	88 (11.9)	115 (15.5)	15 (2.0)	115 (15.5)	8 (1.1)	368 (49.7)	49 (6.6)
Rap	16 (19.3)	45 (54.2)	37 (44.6)	10 (12.0)	11 (13.3)	21 (25.3)	4 (4.8)	21 (25.3)	5 (6.0)	45 (54.2)	2 (2.4)
R&B/soul	64 (23.4)	109 (39.9)	109 (39.9)	42 (15.4)	35 (12.8)	72 (26.4)	17 (6.2)	72 (26.4)	5 (1.8)	163 (59.7)	10 (3.7)
Rock	47 (28.0)	61 (36.3)	63 (37.5)	17 (10.1)	24 (14.3)	36 (21.4)	8 (4.8)	36 (21.4)	10 (6.0)	120 (71.4)	5 (3.0)
“Alternative” pop	22 (15.9)	56 (40.6)	45 (32.6)	17 (12.3)	21 (15.2)	30 (21.7)	10 (7.2)	30 (21.7)	5 (3.6)	86 (62.3)	4 (2.9)
Dance	20 (14.1)	51 (35.9)	40 (28.2)	21 (14.8)	21 (14.8)	32 (22.5)	6 (4.2)	32 (22.5)	6 (4.2)	79 (55.6)	3 (2.1)
“Golden oldies” pop	12 (9.4)	54 (42.5)	24 (18.9)	20 (15.7)	22 (17.3)	29 (22.8)	4 (3.1)	29 (22.8)	4 (3.1)	81 (63.8)	2 (1.6)
Blues	5 (57.5)	6 (62.5)	6 (67.5)	1 (12.5)	1 (10.0)	2 (22.5)	1 (12.5)	2 (22.5)	1 (10.0)	5 (57.5)	0 (0)
Classical music	21 (20.6)	28 (27.5)	21 (20.6)	5 (4.9)	17 (16.7)	7 (6.9)	4 (3.9)	7 (6.9)	7 (6.9)	51 (50.0)	6 (5.9)
Jazz	6 (20.7)	9 (31.0)	9 (31.0)	4 (13.8)	4 (13.8)	4 (13.8)	2 (6.9)	4 (13.8)	1 (3.4)	18 (62.1)	1 (3.4)
Country/folk	10 (38.5)	14 (53.8)	4 (15.4)	10 (38.5)	2 (7.7)	14 (53.8)	0 (0)	14 (53.8)	0 (0)	21 (80.8)	1 (3.8)
Light instrumental	5 (19.2)	8 (30.8)	8 (30.8)	2 (7.7)	2 (7.7)	7 (26.9)	2 (7.7)	7 (26.9)	1 (3.8)	8 (30.8)	2 (7.7)
Non-Western pop	5 (15.2)	14 (42.4)	8 (24.2)	3 (9.1)	7 (21.2)	3 (9.1)	0 (0)	3 (9.1)	1 (3.0)	18 (54.5)	1 (3.0)
Non-Western traditional music	4 (9.1)	9 (20.5)	7 (15.9)	0 (0)	5 (11.4)	10 (22.7)	2 (4.5)	10 (22.7)	0 (0)	25 (56.8)	2 (4.5)
Other	15 (15.6)	33 (34.4)	30 (31.3)	16 (16.7)	17 (17.7)	28 (29.2)	4 (4.2)	28 (29.2)	3 (3.1)	60 (62.5)	4 (4.2)
$\chi^2(15)$	49.64	39.19	45.60	75.04	10.99	58.86	22.08	51.86	30.40	51.99	17.40
<i>p</i>	<.001	.001	<.001	<.001	<i>ns</i>	<.001	<i>ns</i>	<.001	.01	<.001	<i>ns</i>

sons for listening to different musical styles. Two other more specific aspects of Table 6 also deserve further comment. First, Table 6 indicates that under forced exposure to music, very few episodes resulted in the participant enjoying the music in question. Second, Table 6 indicates that under forced exposure to music, it was very rare for the participants to state "None at all" as a consequence of the music: Even when participants had not chosen to be able to hear it, they almost always felt that the music had had some effect on them.

When?

The first prediction made regarding temporal factors was that exposure to music should be less prevalent during the working day due to the constraints imposed by work and forms of unpaid labor. To investigate this, each day was divided into 1-hour periods. Although an approximately equal number of text messages were sent at different times of each day, unknown network factors meant that some messages were delayed. The two consequences of this were that more messages were delivered during the afternoon, and that a small number were received by participants outside the 8 AM to 11 PM period during which they were sent.

Consequently, an index of listening incidence was calculated by dividing the number of instances in which participants could hear music when they received their text message by the number of total number of text messages received that hour. This index in effect provides a measure of the times of day at which participants were most likely to hear music. The results of this are detailed in Table 7, in which the closer to unity is the index of listening incidence, the more popular was that time for music listening. Table 7 indicates that, consistent with the hypothesis, the evening was the most popular time for music listening, and listening incidence increased in particular between 10:00 PM and 10:59 PM. The relative infrequency of daytime musical experiences can be explained in terms of the participants being at work and not having leisure opportunities. However, the increasing propensity to hear music in the late evening is more difficult to explain from the present data alone. Further analyses then investigated whether participants were more likely to experience music on weekends, given the increased leisure opportunities. This was also done in terms of the index of listening incidence, and the results are shown in Table 8. These results indicate that, consistent with the hypothesis, participants were indeed more likely to hear music on the weekend, again presumably because of increased leisure opportunities.

Further analyses investigated whether participants' ability to be able to choose to hear music was associated with time of day. Time of day was

TABLE 7
Time of Day Variations in Whether Music Could Be Heard

Time of Day	Instances When Music Could Be Heard	Number of Text Messages Received	Index of Listening Incidence
12:00–12:59 AM	0	1	0.00
1:00–1:59 AM	1	3	0.33
2:00–2:59 AM	0	2	0.00
3:00–3:59 AM	1	2	0.50
4:00–4:59 AM	0	1	0.00
5:00–5:59 AM	1	1	1.00
6:00–6:59 AM	0	1	0.00
7:00–7:59 AM	1	5	0.20
8:00–8:59 AM	7	33	0.21
9:00–9:59 AM	52	193	0.27
10:00–10:59 AM	82	310	0.26
11:00–11:59 AM	180	538	0.33
12:00–12:59 PM	204	594	0.34
1:00–1:59 PM	159	411	0.39
2:00–2:59 PM	162	403	0.40
3:00–3:59 PM	149	426	0.35
4:00–4:59 PM	141	356	0.40
5:00–5:59 PM	229	495	0.46
6:00–6:59 PM	103	254	0.41
7:00–7:59 PM	120	224	0.54
8:00–8:59 PM	100	181	0.55
9:00–9:59 PM	61	120	0.51
10:00–10:59 PM	34	49	0.69
11:00–11:59 PM	3	11	0.27

divided into two sections, namely 8 AM to 4:59 PM (i.e., the working day for most people) and 5 PM to 11 PM (i.e., when most people have leisure time): These analyses excluded weekends. Questionnaires completed in response to the small number of text messages received at other times were not considered because these fell outside the time limits of the study and were thought likely to be the result of atypical circumstances. A chi-square test was carried out to investigate the association between time of day and whether or not participants stated that they were able to choose to be able to hear music. The results appear in Table 9, which shows no significant association between time of day and the ability to choose to be able to listen to music. This might at first appear inconsistent with the data contained in Tables 7 and 8, which indicate that experiences of music were more likely to occur when participants had leisure opportunities.

TABLE 8
Likelihood of Experiencing Music on Weekdays and on Weekends

Time of Week	Instances When Music Could Be Heard	Number of Text Messages Received	Index of Listening Incidence
Weekday	1200	3355	0.36
Weekend	601	1315	0.46

TABLE 9
Ability to Choose to Be Able to Hear Music By Time of Day

Time of Day	No. (%) of Responses	
	Could Choose	Could Not Choose
8 AM –4:59 PM	727 (63.9)	410 (36.1)
5–11 PM	653 (63.7)	372 (36.3)

$\chi^2(1) = 0.01, ns.$

Taken in conjunction with Table 9 however, it would seem that these increased leisure opportunities only increased participants' propensity to experience music and not their ability to choose to do so.

This analysis was then repeated in order to investigate day of week. Days of the week were divided into two groups, namely, weekdays and weekends. Questionnaires completed in response to the small number of text messages received at other times were not considered because these fell outside the time limits of the study and were thought likely to be the result of untypical circumstances. A chi-square test was then carried out to investigate any association between day of week and whether or not participants stated that they were able to choose to be able to hear music. The results appear in Table 10, which shows no significant association between the two factors. As with Table 9, these data seem to suggest that the increased leisure opportunities afforded by the weekend only increased participants' propensity to experience music and not their ability to choose to do so.

A second prediction concerning temporal factors was that music should serve different functions during the working day compared with the evening, and a more tentative further hypothesis was that participants might be more engaged with music experienced outside of working hours. To investigate these issues, four more sets of analyses were carried out. The first two sets of analyses investigated those episodes that had occurred when participants had chosen to be able to hear music: These analyses used the list of possible reasons for listening to music described earlier. The first analysis compared episodes that occurred between 8 AM

TABLE 10
Ability to Choose to Be Able to Hear Music By Day of Week

Time of Week	No. (%) of Responses	
	Could Choose	Could Not Choose
Weekdays	1420 (63.3)	823 (36.7)
Weekends	625 (66.2)	319 (33.8)

$\chi^2(1) = 2.43, ns.$

and 4:59 PM with those that occurred between 5 PM and 11 PM. Table 11 presents the percentages of episodes in which participants stated that each reason applied during the listening episode in question cross-tabulated by the time of day. The second analysis repeated this, but instead compared responses given on weekdays with those given on weekends. Table 12 presents the percentages of episodes in which participants stated that each reason applied during the listening episode in question cross-tabulated by day of week. The third and fourth sets of analyses repeated the two former analyses but for those listening episodes that had occurred when participants had not chosen to be able to hear music. The results of these analyses are presented in Tables 13 and 14, respectively.

Tables 11 and 12 indicate that when participants chose to be able to hear music, then "Someone else I was with liked it" was more likely to be a reason for listening to music during leisure time (i.e., evenings vs. working day or weekend vs. weekday). "It helped to pass the time" was more likely to be a reason for listening to music during the working day than during the evening. One other notable feature of Tables 11 and 12 is the absence of effects concerning reasons for listening that might intuitively have been expected to give rise to significant results, given that the data concern episodes when participants had chosen to be able to hear music. For example, "It helped me to concentrate/think" was no more a reason for listening to music during the working day than it was during the evening or weekend. Similarly, "I enjoyed it" was no more a reason for listening to music during the evening/weekend than it was during the working day. In short, the data do not support the hypothesis that music listening during leisure time (i.e., evening/weekend) is driven more by pleasure whereas music listening during the working day is motivated more by its ability to help people think or to pass the time.

Tables 13 and 14 indicate that temporal factors did not seem to be related to the effects of forced exposure to music: Forced exposure to music during leisure time had similar consequences to forced exposure to music at other times. The only exception to this (apart from responses to the "Other" category) was that forced exposure to music during the working day was more likely to "Help to create the right atmosphere" than it was during the evening. In support of this, it is worth noting that in the case of each of the four sets of analysis, two independent-subjects t-tests were also carried out to test for any temporal effects on ratings of liking for the music and amount of attention paid to the music: These indicated no temporal effects on either set of ratings with the exception of ratings for the amount of attention paid to the music in episodes where participants had chosen to be able to hear music: The mean rating for episodes occurring at the weekend ($M = 5.90$, $SD = 2.55$) was significantly higher, $t(2015) = 4.25$, $p < .001$, than the mean rating for episodes

occurring during weekdays, $M = 5.38$, $SD = 2.54$. In summary, the pattern of findings described here points to the counterintuitive conclusions that, although the propensity to hear music increased during leisure time, music did not serve different functions during the working day compared with the evenings and weekends, and that participants did not seem to be more engaged with music experienced outside of working hours than with music experienced during working hours.

Where?

The next section of the questionnaire asked participants to state where they were when they heard music, and a summary of these responses appears in Table 15. It was predicted that technological developments over recent years should mean that music would be heard in a wide variety of different settings. Although arguable, some evidence supported this prediction. Responses indicated that just over half of participants' musical experiences occurred within the home (50.1% of the total). In contrast, 17.9% of musical experiences occurred in overtly public places (i.e., in a restaurant, shop/shopping mall, place of religious worship, gym/while exercising, bus/train, pub/nightclub, waiting room, or concert). Furthermore, the second most popular single location for musical experiences was while driving (11.8%). Note also that "At home deliberately listening to music" and "Concert" accounted for only 11.9% of participants' experiences of music: In short, only 50.1% of musical experiences occurred within the home, and the great majority of incidences involved music being heard while the participant was primarily engaged in carrying out a task other than music listening. Hearing music was something that occurred predominantly in private, but in situations where the music was not the central focus of activities. Two other aspects of Table 15 should be noted. First, 14.4% of musical experiences occurred in restaurants, shops/shopping malls, and pubs/nightclubs, which highlights the prevalence of the uses of music for commercial ends. Second, all but 15.6% of the episodes investigated by the present research took place in one of the 15 listening situations cited in the table.

In order to investigate the low frequency of incidences of deliberate music listening (either at home or in a concert), participants were asked directly whether listening to music was the main task in which they were engaged. In response to this question, participants gave 835 (26.4%) "yes" responses and 2323 (73.6%) "no" responses. Similarly, participants were asked to rate how much attention they were paying to the music just before they received their text message on a scale from 0 = "no attention whatsoever" to 10 = "complete attention." This gave rise to a mean rat-

TABLE 15
**Where Participants Were and Whether They Could Choose to Be Able
 to Hear Music**

Place	No. (%) of Episodes	No. (%) of Episodes in Which Participant Had Chosen to Be Able to Hear Music
Restaurant	90 (2.8)	27 (30.3)
Shop or shopping mall	185 (5.8)	15 (8.2)
Place of religious worship	8 (0.2)	5 (62.5)
At home doing housework	222 (6.9)	199 (90.0)
At home doing an intellectu- ally demanding task	300 (9.4)	225 (75.0)
At home deliberately listening to music	370 (11.6)	345 (93.5)
At home eating	153 (4.8)	119 (78.3)
At home doing something else	556 (17.4)	368 (66.7)
Gym/exercising	29 (0.9)	6 (20.7)
Driving	377 (11.8)	331 (87.8)
Bus/train	57 (1.8)	33 (60.0)
Pub/nightclub	187 (5.8)	38 (20.4)
Waiting room	11 (0.3)	2 (20.0)
Friend's house	148 (4.6)	78 (53.1)
Concert	9 (0.3)	3 (33.3)
Other	501 (15.6)	247 (49.6)

ing of 4.87 ($SD = 2.74$), indicating further that music was not the central focus of participants' concerns. This does not mean that the music was disliked, however. When asked whether they liked to be able to hear music in their present situation, participants gave 2782 (87.4%) "yes" responses and 400 (12.6%) "no" responses.

A second analysis investigated whether participants had less choice over their ability to hear music when in public (rather than private) environments. This analysis determined the extent to which, in each of the situations identified in Table 15, participants had been able to choose whether they could hear music. Table 15 presents the number of episodes in which participants had been able to choose to hear music (and the percentage that this represents of the total number of listening episodes that took place within each situation). A chi-square test showed a significant association between the listening situation and whether the participant had been able to choose to be able to hear music, $\chi^2(15) = 863.30$, $p < .001$. Table 15 indicates unsurprisingly that participants had been particularly likely to be able to choose whether to hear music in episodes occurring while driving and at home, and particularly unlikely to be able to make such a choice in episodes occurring while in a pub/nightclub, in a gym/while exercising, in a shop/shopping mall, or in a restaurant. More simply, these findings support the hypothesis that participants should be most likely to be able to control their exposure to music in environments

they owned and least likely to be able to control exposure to music while in commercial environments.

A third prediction concerning the location of music listening episodes was that music should serve different functions in different locations, and a more tentative hypothesis was that music might fulfill logical arousal optimization and mood management strategies. To investigate these issues two sets of analyses were carried out concerning those episodes that occurred when participants respectively had chosen or had not chosen to be able to hear music. These analyses respectively employed the list of possible reasons for listening to music/effects of forced exposure to music described earlier, and investigated differences in the frequency with which these were selected between the different listening locations considered. These analyses are reported in Tables 16 and 17, respectively.

Table 16 is consistent with our hypothesis indicating that when participants chose to be able to hear music they did so for different reasons in different places. Each reason was significantly associated with variations in the listening situation such that participants' motivations for music listening were situation-dependent. Furthermore, several aspects of the data were consistent with the more tentative hypothesis that the reasons for music listening should follow a logical mood-optimization strategy such that participants seemed to listen to music that would help them to get the most from the given listening situation. For example, "It helped me to concentrate/think" was particularly likely to be selected as a reason for music listening in episodes where participants were doing an intellectually demanding task. Music was particularly likely to "help to create the right atmosphere" in episodes occurring in a pub/nightclub. "I enjoyed it" was particularly likely to be selected as a reason for music listening in episodes that occurred when deliberately listening to music at home or when on a bus/train. "Someone else I was with liked it" was particularly likely to be selected as a reason for music listening during episodes that occurred at a friend's house. "Habit" was particularly likely to be selected as a reason for music listening during episodes that occurred in the course of routine activities such as driving, eating, or doing housework. "It helped to pass the time" was particularly likely to be cited as a reason for music listening during episodes that occurred while driving or while the participant was on a bus/train.

Interestingly, Table 17 indicates that when participants had *not* chosen to be able to hear music, all but one of the effects of that music that were considered again gave rise to significant associations with the listening situations. As with voluntary exposure, the effects of involuntary exposure to music were situation-dependent. Furthermore, also consistent with the hypothesis, evidence again suggested that the pattern of these associations corresponded to the notion that the effects of music should relate to the

TABLE 16

Place Where Music Could Be Heard By Number of Listening Episodes in Which Participant Agreed That Each of 11 Factors Was a Reason for Listening to Music (For Those Episodes in Which Participants Had Chosen to Be Able to Hear Music)

Place	No. (%) of Responses										
	“It helped me to concentrate /think”	“It helped to pass the time”	“It helped to create the right atmosphere”	“It brought back certain memories”	“Someone else I was with liked it”	“Helped create or accentuate an emotion”	“Helped create an ‘image’ for me”	“Habit”	“I wanted to learn more about the music”	“I enjoyed it”	“Other”
Restaurant	6 (22.2)	8 (29.6)	9 (33.3)	5 (18.5)	6 (22.2)	2 (7.4)	4 (14.3)	3 (11.1)	1 (3.7)	10 (37.0)	2 (7.4)
Shop or shopping mall	5 (33.3)	6 (40.0)	2 (13.3)	1 (6.7)	0 (0)	0 (0)	2 (11.8)	3 (20.0)	0 (0)	8 (53.3)	0 (0)
Place of religious worship	1 (20.0)	2 (40.0)	3 (60.0)	0 (0)	2 (40.0)	2 (40.0)	0 (0)	0 (0)	0 (0)	4 (80.0)	0 (0)
At home doing housework	27 (13.6)	94 (47.2)	57 (28.6)	10 (5.0)	23 (11.6)	26 (13.1)	4 (2.0)	65 (32.7)	4 (2.0)	128 (64.3)	5 (2.5)
At home doing an intellectually demanding task	124 (55.1)	63 (28.0)	78 (34.7)	17 (7.6)	21 (9.3)	43 (19.1)	7 (3.1)	61 (27.1)	9 (4.0)	117 (52.0)	4 (1.8)
At home deliberately listening to music	34 (9.9)	165 (47.8)	126 (36.5)	54 (15.7)	52 (15.1)	95 (27.5)	18 (5.2)	100 (29.0)	13 (3.8)	243 (70.4)	7 (2.0)
At home eating something else	2 (1.7)	34 (28.6)	34 (28.6)	8 (6.7)	23 (19.3)	20 (16.8)	4 (3.4)	43 (36.1)	3 (2.5)	61 (51.3)	2 (1.7)
Gym/exercising	27 (7.3)	114 (31.0)	124 (33.7)	38 (10.3)	47 (12.8)	85 (23.1)	22 (5.9)	110 (29.9)	10 (2.7)	191 (51.9)	38 (10.3)
Driving	3 (50.0)	3 (50.0)	5 (83.3)	1 (16.7)	1 (16.7)	1 (16.7)	2 (28.6)	3 (50.0)	1 (16.7)	3 (50.0)	0 (0)
Bus/train	65 (19.6)	169 (51.1)	58 (17.5)	31 (9.4)	36 (10.9)	46 (13.9)	7 (2.1)	158 (47.7)	5 (1.5)	187 (56.5)	11 (3.3)
Pub/nightclub	7 (21.2)	28 (84.8)	5 (15.2)	8 (24.2)	0 (0)	10 (30.3)	1 (3.0)	9 (27.3)	1 (3.0)	24 (72.7)	2 (6.1)
Waiting room	0 (0)	6 (15.8)	27 (71.1)	4 (10.5)	9 (23.7)	16 (42.1)	5 (11.6)	1 (2.6)	0 (0)	21 (55.3)	4 (10.5)
Friend's house	1 (50.0)	2 (100.0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (50.0)	0 (0)	1 (50.0)	0 (0)
Concert	5 (6.4)	15 (19.2)	38 (48.7)	8 (10.3)	33 (42.3)	12 (15.4)	5 (6.4)	5 (6.4)	7 (9.0)	28 (35.9)	3 (3.8)
Other	0 (0)	0 (0)	1 (33.3)	0 (0)	1 (33.3)	2 (66.7)	1 (33.3)	0 (0)	0 (0)	1 (33.3)	0 (0)
	43 (17.4)	123 (49.8)	57 (23.1)	21 (8.5)	23 (9.3)	49 (19.8)	11 (4.4)	64 (25.9)	2 (0.8)	126 (51.0)	14 (5.7)
$\chi^2(15)$	313.93	128.48	101.02	32.38	86.05	56.06	40.39	98.33	26.05	64.75	49.12
p	<.001	<.001	<.001	<.01	<.001	<.001	<.001	<.001	<.05	<.001	<.001

TABLE 17
Place Where Music Could Be Heard By Number of Listening Episodes in Which Participant Agreed That Each of 12 Factors Was an Effect of Listening to Music (For Those Episodes in Which Participants Had *Not* Chosen to Be Able to Hear Music)

Place	No. (%) of Responses											
	“It annoyed me”	“Aided my attempts to do what I was trying to do”	“I wanted to get away from the music as fast as I could”	“It helped to create the right atmosphere”	“It made me look stupid”	“None at all”	“I enjoyed it”	“Hindered my attempts to do what I was trying to do”	“I wanted to hear the music for longer”	“It created the wrong atmosphere”	“Made me look good”	“Other”
Restaurant	6 (9.7)	2 (3.2)	1 (1.6)	25 (40.3)	1 (1.6)	11 (17.7)	14 (22.6)	2 (3.2)	5 (8.1)	1 (1.6)	0 (0)	0 (0)
Shop or shopping mall	25 (14.8)	8 (4.7)	4 (2.4)	54 (32.0)	0 (0)	49 (29.0)	55 (32.5)	7 (4.1)	9 (5.3)	5 (3.0)	0 (0)	4 (2.4)
Place of religious worship	0 (0)	2 (66.7)	0 (0)	1 (33.3)	0 (0)	0 (0)	1 (33.3)	0 (0)	1 (33.3)	0 (0)	0 (0)	0 (0)
At home doing housework	3 (13.6)	3 (13.6)	0 (0)	8 (36.4)	0 (0)	4 (18.2)	6 (27.3)	3 (13.6)	0 (0)	0 (0)	0 (0)	0 (0)
At home doing an intellectually demanding task	22 (29.3)	10 (13.3)	4 (5.3)	12 (16.0)	0 (0)	14 (18.7)	7 (9.3)	23 (30.7)	1 (1.3)	5 (6.7)	0 (0)	2 (2.7)
At home deliberately listening to music	4 (16.7)	1 (4.2)	0 (0)	3 (12.5)	0 (0)	1 (4.2)	6 (25.0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
At home eating	3 (9.1)	1 (3.0)	3 (9.1)	6 (18.2)	0 (0)	12 (36.4)	10 (30.3)	1 (3.0)	4 (12.1)	0 (0)	1 (3.0)	2 (6.1)
At home doing something else	26 (14.1)	10 (5.4)	7 (3.8)	45 (24.5)	2 (1.1)	54 (29.3)	45 (24.5)	14 (7.6)	11 (6.0)	6 (3.3)	0 (0)	4 (2.2)
Gym/exercising	2 (8.7)	11 (47.8)	1 (4.3)	12 (52.2)	0 (0)	1 (4.3)	8 (34.8)	0 (0)	0 (0)	1 (4.3)	0 (0)	0 (0)
Driving	2 (4.3)	3 (6.5)	1 (2.2)	11 (23.9)	0 (0)	6 (13.0)	7 (15.2)	1 (2.2)	4 (8.7)	1 (2.2)	0 (0)	0 (0)
Bus/train	7 (31.8)	1 (4.5)	1 (4.5)	4 (18.2)	0 (0)	5 (22.7)	4 (18.2)	0 (0)	1 (4.5)	0 (0)	0 (0)	1 (4.5)
Pub/nightclub	10 (6.8)	13 (8.8)	2 (1.4)	75 (50.7)	1 (0.7)	11 (7.4)	63 (42.6)	1 (0.7)	11 (7.4)	2 (1.4)	5 (3.4)	3 (2.0)
Waiting room	2 (25.0)	0 (0)	0 (0)	1 (12.5)	0 (0)	3 (37.5)	1 (12.5)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Friend's house	7 (10.1)	4 (5.8)	1 (1.4)	33 (47.8)	0 (0)	10 (14.5)	27 (39.1)	4 (5.8)	4 (5.8)	2 (2.9)	0 (0)	4 (5.8)
Concert	1 (16.7)	1 (16.7)	0 (0)	4 (66.7)	0 (0)	0 (0)	1 (16.7)	1 (16.7)	0 (0)	0 (0)	0 (0)	0 (0)
Other	49 (19.5)	16 (6.4)	8 (3.2)	67 (26.7)	2 (0.8)	51 (20.3)	74 (29.5)	21 (8.4)	16 (6.4)	6 (2.4)	0 (0)	10 (4.0)
$\chi^2(15)$	39.08	82.59	11.41	70.57	5.59	52.37	42.74	91.10	16.59	10.22	32.19	12.02
<i>p</i>	.001	<.001	<i>ns</i>	<.001	<i>ns</i>	<.001	<.001	<.001	<i>ns</i>	<i>ns</i>	<.01	<i>ns</i>

psychological demands of the listening location. For example, when participants were doing an intellectually demanding task, they were particularly likely to state that the effects of music were that “It annoyed me,” or that it “Hindered my attempts to do what I was trying to do.” “It helped me to create the right atmosphere” was particularly likely to be selected as effects of music experienced involuntarily during episodes where participants were in a restaurant, exercising/in a gym, at a pub/nightclub, or at a friend’s house. “It aided my attempts to do what I was trying to do” was particularly likely to be selected as an effect of music experienced involuntarily during episodes where participants were exercising/in a gym. In short, even in those situations where participants had no choice over their ability to hear music, the latter often (although certainly not always) had beneficial effects for the former. Future research may investigate one possible explanation for this, namely, that if the music had not had positive effects on the participants, then they would simply have left the situation in question or tried to identify other means of ending their exposure (see, eg, North & Hargreaves, 1999).

Why?

As shown earlier, the function of music listening varied according to who the participant was with, what music was involved, when the music was heard, and where the music was heard. Nevertheless, two separate further analyses were carried out in an attempt to provide an overall assessment of the functions of music in everyday listening episodes. These concerned those episodes respectively where participants had/had not chosen to be able to hear music, and investigated the overall frequency with which participants selected individual items from the list of possible reasons for listening to music/effects of listening to music.

Table 18 indicates, of all those episodes that occurred when participants had chosen to be able to hear music, the frequency (and percentage) with which each of the reasons for listening to music was selected by participants. Table 19 indicates, of all those episodes that occurred when participants had not chosen to be able to hear music, the frequency (and percentage) with which each of the effects of listening to music was selected by participants.

Consistent with the hypothesis, Table 18 indicates that when participants chose to be able to hear music, the most common functions of this music were rather disinterested and passive (and this in turn corresponds to the earlier findings described in the “Where?” subsection showing that music listening was rarely the main activity in which participants were involved). Although the most common function was simple enjoyment

TABLE 18
Functions of Music When Participants Chose to Be Able to Hear Music

Function of Music	Number (%) of Episodes in Which the Participant Had Chosen to Be Able to Hear Music
"It helped me to concentrate/think"	352 (17.2)
"It helped to pass the time"	832 (40.6)
"It helped to create the right atmosphere"	625 (30.5)
"It brought back certain memories"	206 (10.1)
"Someone else I was with liked it"	277 (13.5)
"Helped create or accentuate an emotion"	410 (20.0)
"Helped create an 'image' for me"	79 (3.9)
"Habit"	627 (30.6)
"I wanted to learn more about the music"	57 (2.8)
"I enjoyed it"	1155 (56.4)
"Other"	92 (4.5)

(cited in more than half of the episodes that occurred when participants chose to be able to hear music), the next most frequently cited functions of music were "It helped to pass the time" (40.6%), "Habit" (30.6%), and "It helped to create the right atmosphere" (30.5%). These functions contrast sharply with the more active and least frequently cited functions namely, "It aided my attempts to do what I was trying to do" (3.9%) and "It brought back certain memories" (10.1%). Note that the present data concern those occasions when participants had deliberately chosen to be able to listen to music. The infrequency with which active motivations for music listening were cited cannot be attributed to music being foisted upon uninterested participants: The data suggest instead that on most of those occasions when participants chose to listen to music, they did so with little thought, and seemed to opt deliberately to be subjected to a form of "sonic wallpaper" that formed the undemanding backdrop to some other task.

TABLE 19
Functions of Music When Participants Had Not Chosen to Be Able to Hear Music

Function of Music	Number (%) of Episodes in Which the Participant Had Not Chosen to Be Able to Hear Music
"It annoyed me"	169 (14.7)
"Aided my attempts to do what I was trying to do"	86 (7.5)
"I wanted to get away from the music as fast as I could"	33 (2.9)
"It helped to create the right atmosphere"	363 (31.6)
"It made me look stupid"	6 (0.5)
"None at all"	232 (20.2)
"I enjoyed it"	330 (28.7)
"Hindered my attempts to do what I was trying to do"	78 (6.8)
"I wanted to hear the music for longer"	67 (5.8)
"It created the wrong atmosphere"	29 (2.5)
"Made me look good"	6 (0.5)
"Other"	30 (2.6)

Table 19 lists the reported effects of music when participants did not choose to be able to listen to it: Consistent with the hypothesis, the data again indicate a rather disengaged approach to music experienced under such circumstances. "Creating the right atmosphere" (31.6%) was the most common effect of such music followed by "I enjoyed it" (28.7%), "None at all" (20.2%), and "It annoyed me" (14.7%). Note however that for each of these effects, the percentage of occasions on which they were actually selected by participants remained low. More simply, the data again point to a generally unengaged attitude towards the music in question.

Conclusions

A number of interesting conclusions can be drawn from the present data that reflect the changing role of music in modern technological society. With regard to who participants were with, a high proportion of music-listening episodes occurred in the presence of others, which is consistent with what might be expected given the increasing ease with which music can be heard. Furthermore, liking for music heard in isolation was higher than liking for music heard in the presence of others, consistent with the notion that the former is more under the control of the listener. Data on who the participants listened to music with also indicated that the reasons for listening to music varied depending on the presence of other people (particularly when participants had chosen to be able to hear music). With regard to what participants listened to, the data indicated that classical music and jazz were experienced infrequently (consistent with CD sales data); that when participants chose to be able to hear music they listened to different musical styles for different reasons, consistent with the notion that increased choice should mean that different types of music were selected deliberately in order to have different effects on the listener; and that when participants did not choose to be able to listen to music, then different styles did not have different effects. In episodes where music was not deliberately experienced, it is as though "music" was regarded by listeners as a homogenous entity.

With regard to when participants heard music, the incidence of music listening increased during periods when the majority of participants would be expected to be at leisure (i.e., evenings rather than during the working day, and weekends rather than weekdays). This is consistent again with the notion that music is employed by people as a leisure commodity. However, participants' ability to choose to be able to hear music was unaffected by temporal factors. Furthermore, contrary to the hypothesis, participants ratings of why they chose to be able to hear music/the

effects of music that they had not deliberately chosen to be able to listen to indicated a far more sophisticated pattern of responses than the simple notion that music heard during leisure time was for enjoyment and music heard during the working day served a more practical function. With regard to where participants heard music, a considerable proportion of listening episodes occurred outside the home, consistent again with the increased availability of music in the modern day. Episodes that occurred outside the home were less likely than episodes occurring within the home to be the result of the participant choosing to be able to hear music, indicating the extent to which music is employed by businesses and other organizations. Furthermore, music listening was rarely the main task in which participants were engaged, although the reasons for music listening were situation-dependent irrespective of whether the participant had or had not chosen to be able to listen to music, and seemed to follow a mood-optimization strategy indicative of logical purpose on the part of the listener. This conclusion is consistent with that reached by laboratory research (described earlier) on the goals of music listening. Finally, with regard to an overall assessment of why participants listened to music, participants' responses seemed to reflect a rather passive attitude towards music, which perhaps indicates how the increased availability of music has indeed led to a reduction in the value placed on it by listeners.

These findings are consistent with the view that people consciously and actively use music as a resource in everyday life, and the results lead to some speculations about the processes that might be involved. Any response to a specific musical stimulus in a particular situation can be explained in terms of the interaction between the characteristics of the stimulus, the situation and the listener, and it seems plausible that there exist reciprocal feedback relationships between each of these three dimensions. Listeners approach new situations with a history of personal tastes and preferences built up over many years, so that their reactions have a certain degree of predictability. They set their own limits and boundaries upon what they hear, orienting themselves to new sounds according to their personal "musical geographies." New listening experiences are encountered via a set of cultural preconceptions about which musical styles and genres are suitable for which specific activities and situations, and listeners' emotional and behavioral responses are thus to some degree predictable. However, listeners' active use of music as a resource, which has been demonstrated in our data, shows that this too is a reciprocal relationship. Situations involving music can determine listeners' behavioral responses to them. But when the choice of music is active and conscious, we could argue that the listener exerts control over that same situation.

Furthermore, the ability to use music toward ends such as these seems likely to be related to those technological changes highlighted earlier that

have increased ease of access to music in a variety of settings and to the degree of choice that people have in terms of the specific type of music that is experienced in those settings. However, this degree of accessibility and choice has arguably led to a rather passive attitude toward music heard in everyday life. The present results indicate that music was rarely the focus of participants' concerns and was instead something that seemed to be taken rather for granted, a product that was to be consumed during the achievement of other goals. In short, our relationship to music in everyday life may well be complex and sophisticated, but it is not necessarily characterized by deep emotional investment.

In summary, our results show very clearly that people do indeed consciously and actively use music in different interpersonal and social contexts in order to produce different psychological states, that the resulting musical experiences occur on a variety of different levels of engagement, and that the value placed upon the music is dependent on these contexts. They give some indication of the range of the social functions of music in everyday life, and of the contexts in which these are apparent. Future research that uses laboratory-based methodologies to develop theory must ultimately be able to account for these social functions and contexts. The present findings also suggest a number of more specific directions for further research.

First, the present sample was predominantly white and middle class, and it contained a large proportion of undergraduates. Although every effort was made to obtain participants from other socioeconomic groups, the present sample simply reflects a bias in the characteristics of those people who were willing to participate in the research. It remains to be seen whether similar patterns of music consumption might be found among participants from other sociodemographic (and national) groups. Second, in an attempt to minimize the amount of effort required, no further data were requested from participants when they had not heard music. Future research might explore the extent to which music-listening episodes are in any way unusual. For example, the majority of music-listening episodes may well have occurred in the participants' own homes in the present study because this was where participants spent most of their time. Similarly, the frequency of music listening while driving may be disproportionately high when considered in terms of the amount of time per day spent in a car. Third, it could be argued that merely asking participants to complete questionnaires about music might in some way bias their responses or that deficiencies in memory may mean that responses are inaccurate. The primary concern in devising the present methodology was a lack of obtrusiveness, although future research may attempt to replicate the present findings using a complementary experimental approach that facilitates the development of specific theoretical models for specific listening functions. Fourth, future research may examine self-reports of

affect both before and after exposure to music, since such measures may allow investigation of music as a means of affect regulation and provide a naturalistic demonstration of the effect of music on mood.

Finally, the present data have not allowed us to present anything but the most speculative theoretical explanations for the nature of musical experiences, and future research might attempt to isolate particular aspects of the present findings, and to develop more context-specific theoretical explanations of them. For example, why do most musical episodes occur at home in isolation? Can increased leisure opportunities explain why music listening is so prevalent in the (particularly late) evening? Why do people state that they are so likely to hear music for mundane reasons such as habit and passing the time, rather than in an attempt to achieve the more profound and rewarding experiences that music can undoubtedly produce (see, e.g., Gabrielsson & Lindstrom, 1996)? How can we explain the apparent disparity between the undoubtedly negative stereotype of the music heard in public places and the much more equivocal findings regarding this music elicited by the present research? Why do the functions of music vary depending on who the participant is with and where he/she is? The ever-increasing prevalence of music in people's lives, and the diversification of the ways in which they use and experience it, demand more sophisticated answers to these questions than at any time in the past.¹

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