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Abstract

Mehrabian and Russell's (1974) Pleasure-Arousal-Dominance model states that a propensity to approach/avoid an environment can be conceptualized in terms of the pleasure and arousal it elicits and one's degree of dominance therein. Using the Experience Sampling Method, 177 individuals provided responses concerning Mehrabian and Russell's model throughout one week regarding music experiences that occurred in their daily life (including how the music was heard and how their responses related to the listening location). Results indicate that the time of day and day of week are related to where music is experienced, and that the consequences of what was heard are related to both time and location. While music was experienced more often in private locations than in public overall, interesting patterns of music experiences that occurred in public locations demonstrate in detail how music listening varies by location. Specifically, portable devices were associated with positive responses, which contrasted sharply with the responses to music broadcasted publicly in public settings. Participants' ratings of choice, liking, and arousal demonstrated the importance of considering choice as an indication of dominance, such that music usage is consistent with Mehrabian and Russell's model, and has functions that vary according to the specific characteristics of the situation.

Key Words: music; experience sampling method; everyday life; location; choice.

Running head: Music and location

The role of location in everyday experiences of music

In everyday life, music listening occurs in a variety of locations and contexts (e.g., listening as a part of a social gathering or through headphones alone), and for many different reasons (Watson & Mandryk, 2012). With mobile devices, personal computers, and the Internet, opportunities for interacting with music have never before been so varied (North, Hargreaves, & Hargreaves, 2004; O'Hara & Brown, 2006), and allow people to expand the places, times and ways in which they experience music (Heye & Lamont, 2010; Juslin, Liljeström, Västfjäll, Barradas, & Silva, 2008; Sloboda, Lamont, & Greasley, 2009). However, one limitation of the existing research concerns the relative lack of detail describing the current context of everyday listening in light of technological developments, as this has clear implications for the theoretical explanations developed.

Most listening encounters still occur at home (Juslin et al., 2008; Komulainen, Karukka, & Hakkila, 2010; North et al., 2004; Watson & Mandryk, 2012); prior research found that more than 50% (North et al., 2004)—or more than 64% (Greasley & Lamont, 2011)—of music episodes occurred at home. However, people in western societies experience a great deal of music throughout the day (Greasley & Lamont, 2011), including in a variety of commercial environments (North et al., 2004). In short, people encounter music in a range of everyday contexts, and potentially experience music differently as a consequence. In turn, any theoretical account of musical experience must account for these varying contexts in which they occur.

Therefore, the purpose of this research is to consider the role of location in everyday music listening. While previous research (e.g., North et al., 2004) broadly considered where listening takes place, the rise of mobile and internet-connected devices demands further investigation of this topic. The data used in the present study was collected at the same time as that presented in two recent publications ([references removed to facilitate blind review]), which detail the devices and selection behaviors involved in everyday listening, but which did not address location. Therefore, the aim of the present article is to explicitly consider the role of location in everyday listening. Further, in doing so it considers Mehrabian and Russell's model as a potential theoretical framework for

understanding everyday listening: the model provides a comprehensive conceptualization of the location (see previous non-musical research – e.g., Hines & Mehrabian, 1979; Yani-de-Soriano & Foxall, 2006) in terms of pleasure, arousal, and dominance. Previous work has shown that these three factors (to varying degrees and with varying degrees of specificity) are relevant to understanding the role of the immediate situation in individuals' attitudes and behaviour.

Background

Where does listening take place? One possible broad categorization dichotomizes listening locations as essentially private (e.g., at home) or public spaces (e.g., at a shop or restaurant). Prior research has indicated that individuals have more choice regarding their listening at home, in private (North et al., 2004), but generally encounter unchosen music while out in public (Sloboda, 2005). Moreover, in public, unchosen music was met with ambivalence or even disliked (Sloboda, 2005; Sloboda & O'Neill, 2001). Many criticize the perceived intrusiveness and unwanted nature of music experienced in public (Skånland, 2011), including active campaigns against music used in stores and public places (such as the United Kingdom's Pipedown) for instance. We might expect, therefore, that music heard at home or in private spaces would be liked more and given more attention than that encountered in public spaces, as people would likely feel more dominant/in control.

However, in present-day western society, the public versus private distinction may be simplistic. Even when in public, new mobile technology affords listeners the opportunity to create their own "auditory bubbles" via headphones and mobile devices (Bull, 2007). In fact, the majority of participants in Komulainen et al.'s (2010) study indicated listening to music in more than five locations on a weekly basis. Locations included at home and others' houses, but also in public settings such as at school, walking and on public transportation, in cars, at the gym, and while shopping (Komulainen 2010). For some users, mobile listening devices may act as "digital Sherpas"

(Bull, 2007)[1] that provide a companion as individuals go about their daily routines and traverse different settings. In public, individuals can use mp3 players as resources in order to create (and retreat to) a private environment, exerting control by selecting music to listen to (Skånland, 2011). In this manner, mobile devices provide an opportunity for people to exercise choice over their auditory environment even in public settings, such that mobile devices may offer listeners an altered sense of dominance over their auditory environment. How might new listening technologies relate to where the listening takes place?

New technologies mean that, in addition to considering whether the physical location is in public or private, it is important to consider the level of choice and control a person has over the music he or she is exposed to in those situations. We anticipate that—in contrast to previous research—high levels of choice and control might be observed in public locations, depending on the device by which the music in question is accessed in those settings: it is necessary to consider how the music is encountered, with regard to devices and selection behaviors, in our understanding of listening episodes in different locations.

Mehrabian and Russell's Pleasure-Arousal-Dominance Model

Mehrabian and Russell's (1974 - see also Andersson, Kristensson, Wästlund, & Gustafsson, 2012; Hines & Mehrabian, 1979) theory of environmental psychology asserts that people's interactions and interpretation of their contextual surroundings result from variations in three factors. The first two are pleasure and arousal. Pleasure-displeasure is a feeling state such as feeling good or happy; and the arousal factor refers to the extent to which one feels stimulated, alert, or active in an environment. However, the third factor, dominance (the extent to which one controls one's

[1] One definition of "Sherpa" is a person who guides mountain climbers as well as helps carry gear. With the term "digital Sherpas," Bull (2007) refers to a mobile listening device that accompanies a listener and mediates their experiences: it can function as a constant guide to users as they traverse their day through different locations.

environment), has been subject to relatively little examination. This is particularly pertinent in the light of the material above describing how modern technology directly influences the amount of control one exerts over one's own auditory environment. Indeed, applying this theory of environmental psychology to understanding music listening behaviors, pleasure and arousal in a music listening episode can be conceptualized as one's degree of preference (or liking) for the music, and how arousing one finds the music. Mehrabian and Russell were less precise in their definition of dominance, and, in fact, the inclusion of dominance in the model has been debated with its role downplayed in previous research (Yani-de-Soriano & Foxall, 2006). Dominance has tended to be defined using the adjective pair "dominance-submissiveness," and operationalized as one's "degree of control over a situation versus degree of being controlled by a situation" (e.g., Hines & Mehrabian, 1979, p. 224). One unfortunate consequence of this definition and operationalization is that, semantically, the term "submissiveness" simply does not make sense in a musical context: research participants would likely be confused if invited to consider the extent to which the music ins a situation is controlling them. Consequently, the present research adopted a more suitable definition of dominance, and one that does lend itself to music listening behaviors, which operationalizes the concept in terms of having control over one's contextualized music listening.

Indeed, music has often been considered in terms of pleasure and arousal. Musical preferences vary according to the situation, reflecting the emotional connotations of the situations: North and Hrgreaves (1996a) found that people prefer music that has the same emotional connotations as the situation in which listening occurs, so that, for example, people in calm situations prefer calming music. In retail settings, consumers respond to environmental cues, including music: preference for music, for instance, has a significant effect on consumers' cognitive and emotional evaluations, which, in turn, affect approach and affiliation behaviors (Sweeney & Wyber, 2002). North and Hargreaves (1996b) focused on music preference in particular, demonstrating a positive correlation between liking the music and liking the atmosphere of a cafeteria and the likelihood of approaching an information stall. Moreover, musical preference relates to arousal goals in a situation: individuals preferred 'high-arousal music' for aerobic exercise activity but 'low-arousal

music' during guided relaxation. However, when stating preferences after relaxing or exercising, participants' music selections suggested attempts at moderating their arousal levels (North & Hargreaves, 2000), indicating that different arousal states may be considered appropriate for different situations (Hargreaves & North, 2010). An individual's opportunity to use arousal-based strategies in everyday music listening in situ is of course growing as digital technology makes music more portable.

In contrast, previous research on music has tended to ignore dominance and, similarly, research on the Mehrabian and Russell (1974) model has debated the importance of this factor partly because research was able to obtain impressive findings using just the pleasure and arousal dimensions (e.g., Desmet, 2010; Donovan, Rossiter, Marcoolyn, & Nesdale, 1994; Mattila & Wirtz, 2001). More recent work, however, has concluded that the three-dimensional model (including dominance) is superior to the two-dimensional model (Yani-de-Soriano & Foxall, 2006). Although situations that provoke pleasure and dominance are most preferred (Mehrabian, Wihardja, & Ljunggren, 1997), people are not always in control of the music they encounter. However, as a consequence of digital technology and the myriad of ways we encounter music, dominance (conceptualized as control related to the music) may be a key component to understanding everyday listening.

In addition to the theoretically driven arguments derived from the Mehrabian and Russell (1974) model, there are also more data-driven grounds for suspecting that control may be important in everyday music listening. A body of psychological research has demonstrated that control (and even the perception or illusion of control) over aspects of one's life mediates aspects of health and well-being, and reactions to pain and stress in particular (Lachman & Weaver, 1998; Lee, Ford, & Gramotnev, 2009; Mitchell, MacDonald, & Knussen, 2008), such that we anticipate that having a greater degree of choice in what is heard will likely correspond to positive reactions. For example, a person's own, preferred music has been found to significantly increase his/her perceived control over painful stimuli and reduce anxiety (Mitchell & MacDonald, 2006; Mitchell et al., 2008). In this way, we expect a similar pattern of findings concerning dominance in the context of music listening to that

identified by research in other contexts concerning the Mehrabian and Russell model: locations conducive to people exerting control/choice over their listening (dominance) will be met with positive responses, such as greater preference for the music, and positive mood and consequence responses.

Present study

The Experience Sampling Method (see Czikszentmihalyi & Lefevre, 1989), a methodology that asks participants to respond to prompts in real time, is well suited to explore the role of location in everyday music listening. It offers a way to examine individuals' subjective real-time musical experiences while maintaining high ecological validity (Sloboda, O'Neill, & Ivaldi, 2001). Given the literature reviewed, we developed the following five research questions and hypotheses. Numbers 1-3 concern specific details of how music listening takes place, and set the context for numbers 4 and 5, which make predictions based on Mehrabian and Russell's model:

1: Where does everyday listening take place? North, et al. (2004) reported that 50.1% of the total listening occurrences took place within the home, while 17.9% occurred in overtly public places (such as a restaurant, gym, shopping mall, etc.). We expect that the majority of listening experiences will still take place at home. However, we also expect that the percentage of listening episodes occurring in places outside the home will be greater, leading to a lower percentage of listening episodes occurring at home than indicated by previous research.

2: Does the time of day or week relate to the location of everyday music listening? North et al. (2004) found that a greater percentage of listening incidences occurred later in the evening and at the weekend. To determine this they calculated the proportion of episodes in which music could be heard, and did so separately for each hour of the day and for each day of the week. The percentage of occasions on which music could be heard ranged from 20%-46% between 7:00 and 18:59, whereas the percentages ranged from 51% to 69% between 19:00 and 22:59; and the overall percentage for weekdays was 36% whereas the corresponding figure for weekends was 46%. We expect that while listening may still take place to a greater degree at these times (namely in the evening and at the

weekend), the percentage corresponding to hearing music during daytime hours will be greater than previously reported due to mobile and computer listening devices allowing people to listen to music in the locations in which they find themselves in the daytime, such as the workplace.

3: How is music heard (e.g., device and selection behaviors) in private and public locations? By acknowledging that this is partially determined by what is available in a location, we anticipate that the means by which music is heard will be more varied in private locations than in public. Further, we expect that listening in public locations will occur via mobile devices in addition to broadcasted recorded music that is out of one's personal control. Regarding selection behaviors, we anticipate that selection behaviors that rely more on individualized input (such as choosing a particular song or creating a personal playlist) will take place in private locations as an expression of dominance over the listening situation by the individual.

4: How do ratings of pleasure, arousal, and dominance relate to music listening in differing locations? While past research has focused on pleasantness and arousal, we expect that dominance may also relate to responses to music in everyday listening locations. We expect that people will express higher ratings of choice in private versus public locations, and that these will also be associated with higher ratings of liking for the music. However, regardless of location, high choice ratings will likely be made when listening via mobile devices. We also expect that there will be variations between locations in the arousing qualities of the music experienced (North & Hargreaves, 1996c, 2000). In particular, we anticipate high arousal ratings to be associated with the music experienced in situations in which individuals deliberately seek a high level of arousal (e.g., while at the gym): similarly, listening episodes that occur at work may indicate the selection of music of low arousal-evoking properties, in an apparent attempt to use music to induce calm, or minimize distraction.

5: Does location relate to the perceived consequences of hearing music? Given the findings of previous Experience Sampling Method research concerning music (e.g., Greasley & Lamont, 2011; Juslin et al., 2008; North et al., 2004), we might expect that motivations for listening are situation-dependent and apparently reflect an intention of using music to help achieve a broader goal.

For instance, North et al. (2004) found that a reason such as "it helped me concentrate" was selected particularly in situations where participants were doing intellectual tasks, while listening as a "habit" occurred during routine activities, such as doing housework and eating. As these motivations for listening to music were situation-dependent (North et al., 2004), we expect differences in the consequences of music experienced in different locations based on interpretations of how the music assisted or hindered a person's broader objectives in that place.

Method

Participants

In total, 177 individuals residing in the UK completed the weeklong study. Recruitment included posters, information on the internet, and emails to students and alumni at a university in Scotland. The sample included 101 females (57.06%), was aged 17-75 years (*M*: 32.70, *Mdn*: 28, *SD*: 14.61). The majority of the sample identified their legal nationality as UK/Ireland (85.88%), and all were required to use a United Kingdom mobile telephone in order to participate (and so were legal residents of the country). About half of the sample was employed (51.41%), while 41.24 % were students, 4.52% were retired, 2.26% were stay at home carers, and 0.56% were unemployed.

Design and Procedure

Data presented here was collected at the same time as that reported in [references removed to facilitate blind review]. To begin, participants completed a short online background questionnaire reporting their age, sex, musical background, level of engagement with music, and contact details. Participants wrote open-ended responses regarding their musical background and education, which were then rated by three judges as representing low, moderate, and high musical background/ experience (North & Hargreaves, 1995). "Low" level classification pertained to those participants with no to little experience, "moderate" referred to playing an instrument recreationally or to grade 5 within the UK examination structure, and "high" reflected playing an instrument proficiently (beyond UK examination structure grade 5) and those who were professional musicians, music

teachers, or having studied music at the university level. As defined, 49.7%, 38.4%, and 11.9% participants were allocated to low, moderate, and high musical experience groupings respectively. The intra-class correlation coefficient for the three raters was .89.

Two questions probed music engagement: participants indicated how many hours they listen to music on an average day and rated how important they consider music to be on a seven point scale (1 = *not at all*, 7 = *extremely*). In return, participants were given a unique identification number and detailed information about the response procedure.

For seven days, participants received two text messages sent to their personal mobile telephones daily - one between 8:00 and 15:29 and one between 15:30 and 23:00 - prompting them to complete a response entry online as soon as they could safely do so. An online random day and time value generator (random.org) was used to select times for the text messages within each time period, and a free Internet service (esemes.co.uk) was used to send the texts. An online response form was used following a pilot test trialing both paper and online formats in order to maximize completion rates.

Each entry required participants to enter their unique identification number, the date and time they received the text message, and the time that they completed the entry. If participants had not heard music in the two-hour period prior to receiving the text message, they simply noted this. If they had heard music, they then responded to a series of questions regarding the most recent listening experience.

Participants reported where they were from a list of options namely at home, at work, at a friend's house, at the gym, driving a car, in a car, public transportation, walking, restaurant, pub/ club, concert, shopping, religious worship, in class/ university lecture, and other. In addition to this, individuals indicated the device through which the music was played (i.e., mobile mp3 player, mobile telephone, mobile CD player, computer own, computer stream, computer cloud, mp3 stereo device, CD stereo device, radio, TV, live music in a public place, and recorded music broadcasted in public) and how the music was selected (i.e., specific song, specific artist, specific album, personal pre-made playlist, a premade playlist made by someone else, random/ shuffle, live performance,

radio, watched TV, website streaming, “I did not have any control,” “someone I was with chose,” and other).

Participants responded to four questions about the music using seven-point scales (1 = *none/ not at all* to 7 = *total/ very much*), including “How much choice did you have in what you heard,” “How much attention were you paying to the music,” “How much did you like what you heard,” and “How arousing was the music you heard?” Lastly, individuals responded to 12 statements adapted from North et al. (2004) concerning the consequences of experiencing music: a principal components analysis of ratings in response to these statements (reported in [reference removed]) showed that the consequences could be grouped into three factors, namely purposive listening, actively engaged listening, and validation-seeking listening. For example, “learning about the music" and "enjoying the music” were characteristic of actively engaged listening, while helping concentration and motivation were characteristic of purposive listening, and use to “help a person look good” was characteristic of validation-seeking listening. (Note that the entire questionnaire appears in the Appendix.)

Results

Data Analysis

The data presented concerns the episodes for which participants indicated that music was heard. To account for the fact that individual participants completed multiple responses, a hierarchical structure whereby episodes were nested within participants was used when performing generalized linear mixed method (GLMM) analyses ($\alpha = .008$, unless otherwise noted).

Overall Location Frequencies

The first research question considered where everyday listening takes place. Participants selected where each music experience took place from a list of 15 options. Three locations (shopping, religious worship, university lecture/class) received fewer than 15 responses so were

removed from further analyses. Participants selected "other" for only 4.3% of their music experiences, indicating that the list of choices adequately described nearly all listening events. Consistent with North et al.'s (2004) findings, the home was the most common location for people to experience music. Overall frequencies revealed that music was heard next most often when driving a car, and while at work (see Table 1).

-Table 1-

The location options were also grouped into two categories: private and public spaces (henceforth considered as "location type"). At home, at a friend's house, driving a car, and in a car comprised the private space category, and the remainder (excluding "other") comprised the public space category. Overall, 73.25% of the music experiences occurred in private spaces. Although listening incidents in public settings were less frequent, their greater prevalence when compared to North et al.'s 2004 findings may be indicative of the growing use of portable digital technology.

When and Where Music Listening Happens

To address the second research question, a series of analyses were performed that considered time of day, day of week, location type, and the specific locations.

Firstly, a GLMM analysis considered if participant background characteristics influenced whether music was experienced in public or private locations. Age, sex, music importance rating, average daily listening amount (hours), and music education level were entered as predictor variables (see Table 2). Age and the average listening amount were both significant, such that younger participants were more likely to experience music in public locations than older participants and those who reported listening to more hours of music on average were also more likely to encounter music in public locations compared to those who spend less hours listening.

-Table 2-

A GLMM analysis tested for an association between time of day (namely 8:00-8:59, 9:00-16:59, 17:00-20:59, and 21:00-23:59) and location type (public vs. private space; F (3, 998) = 13.77, $p < .001$, $\eta_p^2 = .040$; see Table 3). The time of day intervals were based on a typical day in that 8:00-8:59 might be considered "before work," 9:00-16:59 as during work hours, 17:00-20:59 as after work hours, and 21:00-23:59 as late night.

During each period of the day, the incidence percentage was higher for private spaces than for public spaces. However, additionally, significant pairwise comparisons indicated that 8:00-8:59, 17:00-20:59, and 21:00-23:59 were all significantly more likely to involve private locations than public when compared to 9:00-16:59. Moreover, music heard between 21:00-23:59 was significantly more likely to be heard in private than that between 17:00-20:59. This pattern is not surprising due to the likelihood of being at home at the early and later time periods. In fact, being at home was the most common location in which to experience music across every time period, and individuals were most likely to hear music in a pub/club between 17:00-20:59 and 21:00-23:59.

-Table 3-

A GLMM analysis revealed an association between the part of the week (weekday vs. weekend) and location type, (F (1, 1000) = 15.21, $p < .001$, $\eta_p^2 = .015$; see Table 3). Music was heard in private spaces significantly more often at the weekend than on weekdays. A GLMM analysis between part of the week and specific locations also revealed significant contrasts as displayed in Table 4 (F (10, 1038) = 4.36, $p < .001$, $\eta_p^2 = .013$). Specifically, hearing music at work and at the gym was more likely to occur on weekdays than weekends in comparison to being in a car, at a restaurant and at home. Hearing music at a friend's house occurred more often on the weekends compared to eight of the other locations. Moreover, listening at home occurred to a greater extent at the weekend than during the week compared to driving or using public transportation.

-Table 4-

Device Usage by Location

The third research question concerned the interaction between location and device use. A GLMM analysis demonstrated a significant association between location type and the device from which the music was heard (F (11, 980) = 10.63, $p < .001$, $\eta_p^2 = .108$; Table 3). Significant pairwise contrasts illustrate that recorded music broadcasted publicly was significantly more likely to be heard in public locations compared to every other device. Mobile mp3 devices were significantly more likely involved in public locations than mobile CD players, computers (personal, streaming, and cloud collections), stereo devices (both mp3 and CD), the radio, and TV. Similarly mobile telephones were significantly more often associated with public experiences than mobile CD players, personal computer collections, stereo (mp3 and CD), radio and TV. Additional differences existed for computer devices: a personal collection on a computer was a device more likely employed in private than a computer streaming device and a computer streaming device more likely used in public than a stereo CD device. Stereo mp3 devices were significantly more private than music performed live as well.

The frequencies of music experiences associated with various devices across the specific locations (Table 5) reveal that the radio, computer, and TV were the three predominant devices in the home. While driving and in the car, music experienced via stereo CD was the second most frequent device behind the radio. In contrast, mobile telephones and mp3 players together accounted for more than 86.9% of all the devices used on public transportation and when walking. At the gym, mp3 player usage was most popular as well. Most of the music heard in a restaurant and while in a pub/ club was recorded music broadcasted publicly. Lastly while at work, the radio accounted for 40.0% of musical experiences with the remaining percentage shared across the computer, mobile, and stereo devices. The greater prevalence of mobile devices (as opposed to exposure to recorded music) in public settings indicates a shift in our ability to shape our listening outside of private spaces (such as

the home). No longer do we only encounter pre-recorded music from loudspeakers while in public: we are far more likely to encounter music in public via mobile devices.

-Table 5-

Selection Behavior by Location

A GLMM analysis examined the method by which people selected music in terms of location type (private vs. public). The results demonstrated a series of significant pairwise contrasts between selection methods by location type (F (12, 970) = 6.37, $p < .001$, $\eta_p^2 = .073$; see Table 3). As might be expected, not having any control occurred more often in public than private when compared to most of the other selection behaviors (including someone I was with chose, specific artist specific album, specific song, random/shuffle, personal playlist, radio, TV, and website streaming). In contrast, someone I was with chose and specific albums were both selection behaviors more associated with private experiences than public experiences compared to random/shuffle, and both playlist types. Additionally, radio, and TV were significantly more likely to occur in private than random/shuffle, playlists made by other people, and personal playlists (website streaming, also was significantly more likely to occur in private compared to random/shuffle and playlists made by someone else). Moreover, TV was more often private than specific albums and specific songs more often private than playlists by someone else.

Cross-tabulating the selection method frequencies across the specific locations indicated the existence of more detailed patterns (see Table 5). Concerning specifically when "at a friend's house," both someone I was with chose and I did not have control were relatively common selection methods. When traveling by car, the radio was most common device and selection method indicated, although a difference between driver and passenger regarding selecting the music was evident: choosing a specific album was a more common selection method when driving, whereas someone else chose occurred to a greater degree when participants indicated that they were passengers. These results suggest that drivers were afforded control over music selection as well as driving itself.

Moreover, the high incidence of selecting specific albums corresponds with the high prevalence of stereo CD device usage in this setting.

Public settings again highlight striking contrasts in how music is played and selected based on location. Shuffling was popular on public transportation and when walking, but selecting a specific artist was cited most frequently on public transportation, while listening to a personal playlist was more common while walking. Similarly personal playlists and random/shuffle were most common at the gym, where the most used device was a mobile mp3 player.

Choice, Attention, Liking, & Arousal

Research question 4 considered how ratings of pleasure, arousal, and dominance relate to music listening in differing locations. To address this question, four separate GLMM analyses (α = .013) were performed to examine whether the 11 locations were associated with differences in respondents' ratings of choice, attention, liking, or arousal (see Tables 6 and 7).

-Table 6 & 7-

Regarding choice ratings (F (10, 1031) = 21.27, $p < .001$, $\eta_p^2 = .171$), significant deviation contrasts indicated that at home, driving a car, and public transportation were three locations associated with significantly higher choice ratings than the overall mean. In contrast, a restaurant and pub/club were two locations for which choice ratings were significantly lower than the overall mean.

The analysis of attention ratings was also significant (F (10, 1029) = 8.71, $p < .001$, η_p^2 = .078). Significant deviation contrasts indicate that at home, public transportation, and walking were associated with significantly higher than overall mean attention ratings, while at work and at a restaurant were associated with ratings that were significantly lower than the overall mean attention rating.

Significant deviation contrasts demonstrated that the liking ratings for at home and public transportation were associated with significantly higher liking ratings compared to the overall mean and at a restaurant was associated with significantly lower liking ratings compared to the overall mean (overall analysis: F (10, 1031) = 9.87, $p < .001$, $\eta_p^2 = .087$).

Regarding arousal ratings (F (10, 1028) = 6.86, $p < .001$, $\eta_p^2 = .063$), significant deviation contrasts demonstrated that those associated with being at the gym were significantly higher than the overall arousal mean, while arousal ratings for restaurant and at work were significantly lower than the overall mean.

Consequences

Three GLMM analyses were performed to examine the final research question, namely whether time and location interacted to affect the perceived consequences of a given music experience. The three factor scores concerning the consequences of the music (namely actively engaged, purposive, and validation-seeking listening) were entered as the dependent variables and location type (*public* vs. *private*), part of the week (*weekday* vs. *weekend*), and time of day (1 = *8:00-8:59*, 2 = *9:00-16:59*, 3 = *17:00-20:59*, and 4 = *21:00-23:59*), as well as the possible interactions were entered as predictor variables (see Tables 8-10).

The part of week by location type interaction was significant for purposive listening. Pairwise comparisons (Table 10) illustrate that purposive consequences experienced in public spaces were significantly different dependent on whether the episode occurred at a weekday or weekend. In particular, the purposive consequence was experienced more positively on weekdays as compared to weekends.

For actively engaged consequences, the significant location type by time of day interaction demonstrated that individuals perceived the consequence differently when the individual was in public depending on the time of day (there were no significant differences in private locations). Specifically, significant pairwise comparisons indicated that the actively engaged consequences were perceived more positively if the music is heard publicly between 8:00-8:59 compared to 9:00-16:59

and 17:00-20:59. Moreover, the actively engaged consequence was also experienced more positively between 17:00-20:59 than between 9:00-16:59 in public locations. Additionally, the part of week by time of day interaction was significant. On the weekends (but not weekdays), the perception of the actively engaged consequence was dependent on the time of day. Specifically, from 8:00-8:59, participants perceived the actively engaged consequence more positively in public spaces as compared to 9:00-16:59 and 17:00-20:59 as well as for the music heard between 17:00-20:59 compared to 9:00-16:59.

No interactions or main effects were significant with regard to validation-seeking listening.

-Tables 8-10-

The three GLMM analyses were then repeated using the 11 specific locations as a predictor rather than location types. No interactions were significant, and only the location variable was significant as a main effect for purposive listening (see Tables 11 and 12). The motivating aspect of music while at the gym is evident from the significant deviation contrast for that particular location with respect to purposive listening. In contrast, significantly lower scores than the overall mean were associated with being at a restaurant and pub/club for this type of listening (i.e., indicating that the music does not motivate, etc.).

-Tables 11 and 12-

Data on the consequences of music were also considered in the context of Mehrabian and Russell's (1974) Pleasure-Arousal-Dominance framework via three GLMM analyses ($\alpha = .017$). Each analysis was based on one of the three consequence factors (and the ratings of choice, liking, and arousal were entered as predictor variables). Prior to analysis, factor scores were squared and then the root of the product was obtained so that the analysis concerned only the magnitude of the factor score rather than its direction (see Table 13). None of the three domains were significantly

associated with validation-seeking listening. Liking was the single negative predictor for actively engaged listening. Though potentially counter-intuitive that liking for music demonstrated a negative relationship with actively engaged listing, this analysis focused on the magnitude of the perceived consequence (as opposed to whether it was positively or negatively perceived), so it is perhaps indicative of a preference for moderate as opposed to extreme stimuli.

For purposive listening, all three predictors were significant: liking was negatively associated, while arousal and choice were positively associated with purposive listening. The negative association between liking and purposive listening suggests that liking for music means that it may actually represent a distraction. That choice was a significant predictor indicates that dominance is indeed an important component to responses to music in everyday listening locations. Mehrabian and Russell (1974) suggested that locations conducive to exerting control would be met with positive responses; and it seems that this is true for the purposive consequence since the association was positive. Findings concerning purposive listening also appear to demonstrate the use of music to achieve different arousal states. In the light of this, it is interesting that this reason was particularly prominent among listening episodes that occurred at the gym.

-Table 13-

General Discussion

In western society, music is experienced in a wide range of locations in people's daily lives. The present study illustrated that where music experiences occur interacts with when they take place and how they take place. Results indicate that the time of day and day of week do influence where music is experienced in daily life. Additionally, younger individuals and those who spend more time listening to music on average experience more music in public settings.

While music was experienced more often in private locations than in public overall, interesting patterns of music experiences that occurred in public locations demonstrate in detail how music listening differs by location. In fact, a perceived lack of control does not necessarily

characterize all of the episodes that occurred in public—differing locations gave rise to a diverse use of devices and selection methods (addressing research question 3). In public, people's listening appears to be dominated by the use of mobile listening devices, such that these experiences occur under one's own control. Mobile mp3 and telephone use accounted for 44.3% of all public music experiences, far exceeding both recorded and live public music which supports the idea that listeners are using digital technology to create a private space within a public space (Bull, 2007; Skånland, 2011). In particular, use of different technology, such as mobile devices, allows for many selection behaviors to be possible in locations in which a person may not have previously had control over their auditory environment.

Location-based differences may be in part due to the range of device and selection options available in a particular setting. For instance, whereas all of the possible devices included in the research were employed on at least one recorded occasion at home (where there are many devices and selection methods that may be employed to experience music), 98.6% of music experiences on public transportation (a location with fewer available options) involved mobile telephones and mp3 players. This same reasoning applies in the other contexts as well. For instance, a high frequency of music experiences that occurred at the gym did so via playlists and shuffle on a mobile device, while pre-recorded broadcasted music accounted for a high frequency of restaurant episodes. These results demonstrate that although there are many ways that music is accessed and heard, the pattern of usage is dependent on the specific options available in a given context and the suitability of those options for use during the task at hand therein.

These results have practical implications for the marketing of music and of listening devices. For instance, it is easy to understand the recent increase in sales of noise-cancelling and higher quality headphones in light of the increase in mobile music listening potentially occurring in public spaces. Additionally, this work has implications for the music information retrieval community and those designing music recommendation programs and applications. Developers wanting to tailor the listening experience need to account for where, how, and why people are listening. The inclusion of these sorts of variables will improve and extend current listening recommendation systems, and

provide a degree of control over contextualized music listening that the present results indicate will have beneficial consequences for users and application developers alike. Furthermore, as mobile devices of ever-greater capacity become increasingly common, people's ability to access a range of music will increase further: mobile devices (and associated listening applications) will continue to shape everyday listening behaviors both in public and private settings.

Choice, Attention, Liking, and Arousal

Research question 4 considered choice, attention, liking, and arousal ratings of the music in terms of the location of the music experience. The high choice ratings at home and driving a car support the contention that people have a high degree of dominance over music experiences in private spaces. However, while it was expected that individuals would exert a greater degree of choice over music experiences in private locations than in public locations, the pattern of significant contrasts demonstrated that the specific context was more important than this broad categorization of privacy. The high means and significant contrasts regarding choice and attention ratings for public transportation and walking (two public locations) demonstrate that in these situations, people may actively choose what they would like to hear, creating a personal (and private) "audio bubble" rather than listening to the world around oneself. With such relatively high ratings of choice, it is intuitive that the music would be well liked, not only because it is chosen over the ambient sounds of the natural surroundings but also because the listener personally selects it. It is interesting that in this digital era, these public locations appear to have supplanted the home and concert hall as locations in which people might go in order to listen most attentively to music. In contrast, choice ratings corresponding to restaurants and pubs/clubs were significantly lower than the overall mean—both public spaces, where listening to one's own music may not be socially sanctioned. It is tempting to speculate that music experiences in such settings fulfill a background function, thereby demanding less attention than when music is the focus of the situation.

When considering the devices most likely to be used in the different locations, the pattern of results concerning choice ratings becomes clearer: the travel-related public locations were dominated

almost entirely mp3 players and mobile phones, whereas restaurant and pub/club locales were dominated by broadcasted recorded music. In this context, it is interesting to consider whether choice ratings reflect the dominance dimension in Mehrabian and Russell's (1974) model. These results suggest that a user's level of input (dominance via choice/ control) may well influence how music is received in public. In turn, Sloboda's (2005) observation that individuals encountered unchosen music in public holds true when considering restaurant, pub, and club environments, but the increasing prevalence of mobile listening is apparently changing the auditory landscape of public spaces. Using various technologies, listeners are able to exert dominance over their listening in different contexts (including those outside their homes), and this has the potential to alter how music is perceived in different locations. Consequently, Bull's (2007) notion of music as a "digital Sherpa" may be more representative of people's experiences in public, especially when traveling. This finding also supports the conclusions of prior research, like that by Skånland (2011), which showed that participants valued being able to exert control over their auditory experience while in public. In this way, one's dominance over music in a particular context may contribute to approach-avoidance behaviors, such as willingness to remain within the environment, and one's broad emotional response to that environment.

Choice and liking demonstrated a similar pattern of responses, which suggests that these two variables are associated (and indeed the Pearson correlation between them was significant: r (1073) = .56, $p < .01$), such that the ability to control one's listening might directly affect enjoyment of the music. Overall, mean liking ratings were high across the different locations: seven of the 11 locations gave rise to mean liking ratings greater than five (on a seven-point scale), indicating that most of the music encountered, whether in public or private spaces, was received positively. Contrary to criticisms that music encountered in public might be unwanted and intrusive (Skånland, 2011), these results showed that while generally less-liked than in other locations, music experienced in restaurants, pubs, and clubs (public contexts) was nonetheless not necessarily disliked.

As for arousal, the significant contrasts demonstrate that differences may be due to the different functions that music fulfills in different settings by helping people to achieve given levels

of arousal. For instance, the ambient music at a restaurant has a different function than does music listened to at the gym for the purposes of motivation. Broadly, the findings support the notion that while people may use music to achieve different arousal states, their motivations may not always be based on moderating their arousal levels. In particular, arousal optimization is a more likely explanation for the high ratings given at the gym, consistent with prior research (e.g., North & Hargreaves, 1996c, 2000). Collectively, it appears that ratings of arousal, as well as choice, liking, and attention are associated with the location in which the listening takes place; thus, the notion of arousal offers a direction for future research.

Consequences of Hearing Music

The fifth research question concerned the consequences of hearing music. While prior research demonstrated that motivations for music listening were situation-dependent (e.g., North et al., 2004), the present results demonstrate that, regardless of intentions, the consequences of everyday exposure to music are subject to an interplay of location and time. In general, the nature of the consequences experienced indicates that music is not only experienced as an entertainment pursuit. Moreover, the analysis concerning the extent to which listening consequences could be predicted by ratings of liking, arousal, and choice supports the contention that Mehrabian and Russell's model may be a useful framework to use when explaining everyday listening experiences. That choice was significantly related to the purposive consequence type of listening extends the argument that control is related to music experiences in everyday life. While not a direct test of Mehrabian and Russell's model, the findings lend support to the idea that this model might apply to music listening. Indeed, future research could directly consider Mehrabian and Russell's model in order to better define choice and control in a musical context.

Limitations and Future Research

All participants resided in the UK and used their personal mobile phone to participate. Therefore, while the results present an overview of the role of location in everyday listening in the

UK (and likely the western world), they may not generalize to other geographic areas. For instance, the high prevalence of the radio in music listening may be a consequence of using a sample residing in the UK. While location was considered in terms of the immediate context, it is possible that the broader geographic region plays a role as well, and in particular, future cross-cultural research could address differences in how people experience music in everyday life by comparing western to non-western experiences. For instance, the prevalence of using the Internet and mobile telephones to access music may vary by geographic location. Similarly, cultural factors would likely impact upon the specific pieces that the individual selects to hear in a given location: the specific music that an individual in one culture finds, for example, calming would almost certainly from the music that an individual from a different musical culture finds to have the same effect (e.g., North & Davidson, 2013). Moreover, it will be important for future research to consider individual differences. Age and hearing-ability may very well interact with the location in which an individual spends time (the proclivity to be in certain contexts, exercising at a gym or on public transportation, for instance) and/or with the devices involved in playing music. In terms of the technology used, we equated 'modern technology' with 'digital technology' but it would also be interesting to see whether people's relationship to the former would be the same as their relationship with the latter.

Similarly, the consequences of listening could be considered in terms of a person's reasons/intentions for listening as well (Lonsdale & North, 2011), so that the listening experience may also depend on that person's use of music; and research on the relationship between personality and musical taste (e.g.,North, 2010) suggests that the 'big five' personality factors also ought to mediate the specific music selected in given locations. Future location-based research could also address music and emotion, which researchers have argued should be undertaken in natural contexts using methods such as experience sampling methods (e.g., Eerola & Vuoskoski, 2013). It seems likely that, as the consequences of listening were dependent on variables such as time and location, so too would be individuals' emotional responses. Moreover, if participants indicated that no music was heard, they did not provide further information for that episode: while this minimized demands on participants, it seems prudent that future research should consider how listening episodes might

otherwise differ from non-musical episodes. Finally, future research might consider how the present results map onto a consideration of music creation in everyday life. For instance, does the degree of choice and volition that one has over one's music-making have implications for other responses, such as enjoyment and motivation to persevere?

Conclusion

The results of this study suggest that, rather than focusing simply on where everyday listening occurs, a more informative approach to understanding the role of location in music listening is to also consider the listening context as including the device that music is played through and the individual's perception of control over it (as a measure of dominance). The significant findings concerning participants' ratings of choice, attention, liking, and arousal regarding the music experienced also demonstrated the role of these as potentially important elements of context, particularly in the case of music experiences that occurred in public. The influence of mobile listening devices on people's ability to control their soundscapes was evident, as the positive responses that resulted when portable devices were used (i.e., high choice, attention, and liking ratings) contrasted sharply with those recorded in response to music broadcasted publicly. The results concerning the perceived consequences of hearing music also indicate the importance of context, suggesting that music functions in different ways depending on the specific characteristics of the situation in which it is heard.

Overall, the data indicate that music is embedded within people's everyday routines. It appears that these routines have not been altered to accommodate music, but that the proliferation of music listening devices has allowed for the inclusion of music within the stream of daily Western life. Therefore it is not so much that daily life has changed, but rather that a musical soundtrack has become embedded within it. As O'Hara and Brown (2006) stated, "the way we consume music is not simply about listening but involves the ways it becomes integrated into our personal and social lives" (p. 3). This was most evident in the present study through the use of music while travelling. Not only in the car, but also on public transportation and while walking through public locales,

individuals are able to create and control auditory soundtracks via mobile listening devices. Attention must be paid to the means by which everyday music consumption is shaped by people's ability to control and actively use music as a resource.

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List of Tables

Table 1.

Overall Frequencies of Reported Locations

	Frequency	Percent	Valid Percent [a]
At home	462	42.0	44.0
Driving a car	177	16.1	16.9
At work	113	10.3	10.8
Public transportation	70	6.4	6.7
In a car	63	5.7	6.0
Other	47	4.3	4.5
At a friend's house	32	2.9	3.1
Walking	23	2.1	2.2
At the gym	22	2.0	2.1
Restaurant	21	1.9	2.0
Pub / Club	19	1.7	1.8
Total	1049	95.4	100.0
Removed:			
Missing	17	1.5	
Shopping	14	1.3	
Concert	7	0.6	
Religious worship	7	0.6	
In class/ University lecture	6	0.5	
Total	1100	100	

[a] "Valid percent" expresses the percentage of responses considered in the analyses.

Table 2.

Participant Background Variables Predicting Private Versus Public Music Episodes

Predictor	F	η_p^2
Age	F (1, 996) = 12.61, p < .001	.012
Sex	F (1, 996) = 0.10, p = .755	.000
Music importance rating	F (1, 996) = 0.79, p = .373	.001
Average daily listening amount (hours)	F (1, 996) = 5.55, p = .019	.006
Music education level	F (1, 996) = 0.00, p = .990	.000

Note. N = 1002; * p < .05, ** p < .01, *** p < .001.

Table 3.

Pairwise Contrasts Pertaining to the GLMM Analyses Considering Private Versus Public Music Experiences

Predictor variable	Pairwise contrast	t		95% CI	η^2
Time of day	Pre work (8:00-8:59) -- Work day (9:00-16:59)	4.63	***	[0.12, 0.29]	.021
	Pre work (8:00-8:59) -- After work (17:00-20:59)	1.95		[0.00, 0.18]	.004
	Pre work (8:00-8:59) -- Late night (21:00-23:59)	-0.44		[-0.11, 0.07]	.000
	Work day (9:00-16:59) -- After work (17:00-20:59)	-3.29	**	[-0.18, -0.05]	.011
	Work day (9:00-16:59) -- Late night (21:00-23:59)	-6.56	***	[-0.29, -0.16]	.041
	After work (17:00-20:59) -- Late night (21:00-23:59)	-3.21	**	[-0.18, -0.04]	.010
Part of week	Weekday -- Weekend	-4.39	***	[-0.20, -0.08]	.019
Device	Mobile mp3 player -- Mobile telephone	-0.57		[-0.36, 0.20]	.000
	Mobile mp3 player -- Mobile CD player	-4.21	***	[-0.78, -0.28]	.017
	Mobile mp3 player -- Computer - own	-9.05	***	[-0.76, -0.49]	.076
	Mobile mp3 player -- Computer - stream	-3.56	***	[-0.60, -0.18]	.013
	Mobile mp3 player -- Computer - cloud	-3.02	**	[-0.70, -0.15]	.009
	Mobile mp3 player -- Stereo - mp3 device	-7.23	***	[-0.73, -0.42]	.050
	Mobile mp3 player -- Stereo - CD	-9.43	***	[-0.75, -0.49]	.082

Mobile mp3 player -- Radio	-8.85	***	[-0.69, -0.44]	.073
Mobile mp3 player -- TV	-7.38	***	[-0.71, -0.41]	.052
Mobile mp3 player -- In public - live	-1.04		[-0.63, 0.19]	.001
Mobile mp3 player -- In public - recorded	4.36	***	[0.16, 0.43]	.019
Mobile telephone -- Mobile CD player	-2.59	*	[-0.79, -0.11]	.007
Mobile telephone -- Computer - own	-4.04	***	[-0.80, -0.28]	.016
Mobile telephone -- Computer - stream	-1.78		[-0.65, 0.03]	.003
Mobile telephone -- Computer - cloud	-1.88		[-0.70, 0.02]	.004
Mobile telephone -- Stereo - mp3 device	-3.41	**	[-0.77, -0.21]	.012
Mobile telephone -- Stereo - CD	-4.07	***	[-0.80, -0.28]	.016
Mobile telephone -- Radio	-3.59	***	[-0.75, -0.22]	.013
Mobile telephone -- TV	-3.18	**	[-0.78, -0.18]	.010
Mobile telephone -- In public - live	-0.55		[-0.62, 0.35]	.000
Mobile telephone -- In public - recorded	2.79	**	[0.11, 0.64]	.008
Mobile CD player -- Computer - own	-0.80		[0.31, 0.13]	.001
Mobile CD player -- Computer - stream	0.94		[-0.15, 0.44]	.001
Mobile CD player -- Computer - cloud	0.67		[-0.21, 0.42]	.000

Mobile CD player -- Stereo - mp3 device	-0.32		[-0.28, 0.20]	.000
Mobile CD player -- Stereo - CD	-0.80		[-0.32, 0.13]	.001
Mobile CD player -- Radio	-0.29		[-0.25, 0.19]	.000
Mobile CD player -- TV	-0.27		[-0.26, 0.20]	.000
Mobile CD player -- In public - live	1.35		[-0.14, 0.77]	.002
Mobile CD player -- In public - recorded	7.23	***	[0.60, 1.05]	.050
Computer - own -- Computer - stream	2.43	*	[0.04, 0.42]	.006
Computer - own -- Computer - cloud	1.47		[-0.07, 0.46]	.002
Computer - own -- Stereo - mp3 device	0.81		[-0.07, 0.17]	.001
Computer - own -- Stereo - CD	-0.05		[-0.08, 0.08]	.000
Computer - own -- Radio	1.48		[-0.02, 0.14]	.002
Computer - own -- TV	1.14		[-0.04, 0.16]	.001
Computer - own -- In public - live	1.95		[0.00, 0.81]	.004
Computer - own -- In public - recorded	21.95	***	0.84, 1.00]	.326
Computer - stream -- Computer - cloud	-0.23		[-0.34, 0.27]	.000
Computer - stream -- Stereo - mp3 device	-1.61		[-0.40, 0.04]	.003
Computer - stream -- Stereo - CD	-2.42	*	[-0.42, -0.04]	.006

Computer - stream -- Radio	-1.86		[-0.36, 0.01]	.003
Computer - stream -- TV	-1.72		[-0.37, 0.02]	.003
Computer - stream -- In public - live	0.75		[-0.28, 0.62]	.001
Computer - stream -- In public - recorded	6.94	***	[0.49, 0.88]	.046
Computer - cloud -- Stereo - mp3 device	-1.02		[-0.43, 0.14]	.001
Computer - cloud -- Stereo - CD	-1.50		[-0.46, 0.06]	.002
Computer - cloud -- Radio	-1.05		[-0.40, 0.12]	.001
Computer - cloud -- TV	-1.00		[-0.41, 0.13]	.001
Computer - cloud -- In public - live	0.90		[-0.25, 0.66]	.001
Computer - cloud -- In public - recorded	5.36	***	[0.46, 0.99]	.028
Stereo - mp3 device -- Stereo - CD	-0.83		[-0.18, 0.07]	.001
Stereo - mp3 device -- Radio	0.12		[-0.12, 0.13]	.000
Stereo - mp3 device -- TV	0.12		[-0.13, 0.15]	.000
Stereo - mp3 device -- In public - live	1.66		[-0.06, 0.77]	.003
Stereo - mp3 device -- In public - recorded	13.29	***	[0.74, 1.00]	.150
Stereo - CD -- Radio	1.61		[-0.01, 0.13]	.003
Stereo - CD -- TV	1.27		[-0.03, 0.16]	.002

	Stereo - CD -- In public - live	1.99	*	[0.01, 0.81]	.004
	Stereo - CD -- In public - recorded	22.51	***	[0.84, 1.00]	.337
	Radio -- TV	0.02		[-0.10, 0.10]	.000
	Radio -- In public - live	1.64		[-0.07, 0.76]	.003
	Radio -- In public - recorded	20.75	***	[0.78, 0.94]	.301
	TV -- In public - live	1.64		[-0.07, 0.76]	.003
	TV -- In public - recorded	13.77	***	[0.74, 0.98]	.160
	In public - live -- In public - recorded	2.49	*	[0.11, 0.92]	.006
Selection method	I did not have control -- Someone I was with chose	-4.99	***	[-0.59, -0.26]	.024
	I did not have control -- Specific artist	-2.77	**	[-0.44, -0.07]	.008
	I did not have control -- Specific album	-4.56	***	[-0.53, -0.21]	.020
	I did not have control -- Specific song	-3.32	**	[-0.58, -0.15]	.011
	I did not have control -- It was performed live at the time	-1.30		[-0.62, 0.13]	.002
	I did not have control -- Random/shuffle	-2.14	*	[-0.37, -0.02]	.005
	I did not have control -- Personal premade playlist	-1.78		[-0.39, 0.02]	.003
	I did not have control -- Premade playlist made by someone else	-0.42		[-0.35, 0.23]	.000

I did not have control -- Listened to the radio	-6.20	***	[-0.57, -0.29]	.037
I did not have control -- Watched TV	-6.72	***	[-0.65, -0.35]	.043
I did not have control -- Website streaming	-4.12	***	[-0.59, -0.21]	.017
I did not have control -- Other	-5.99	***	[-0.67, -0.34]	.035
Someone I was with chose -- Specific artist	1.91		[-0.01, 0.34]	.004
Someone I was with chose -- Specific album	0.64		[-0.10, 0.20]	.000
Someone I was with chose -- Specific song	0.57		[-0.14, 0.26]	.000
Someone I was with chose -- It was performed live at the time	0.90		[-0.21, 0.55]	.001
Someone I was with chose -- Random/shuffle	2.65	**	[0.06, 0.40]	.007
Someone I was with chose -- Personal premade playlist	2.21	*	[0.03, 0.44]	.005
Someone I was with chose -- Premade playlist made by someone else	2.50	*	[0.08, 0.64]	.006
Someone I was with chose -- Listened to the radio	-0.13		[-0.14, 0.12]	.000
Someone I was with chose -- Watched TV	-1.19		[-0.21, 0.05]	.001
Someone I was with chose -- Website streaming	0.26		[-0.14, 0.19]	.000
Someone I was with chose -- Other	-1.03		[-0.23, 0.07]	.001
Specific artist -- Specific album	-1.85		[-0.24, 0.01]	.003

Specific artist -- Specific song	-1.01		[-0.32, 0.10]	.001
Specific artist -- It was performed live at the time	0.05		[-0.36, 0.38]	.000
Specific artist -- Random/shuffle	0.77		[-0.10, 0.23]	.001
Specific artist -- Personal premade playlist	0.66		[-0.14, 0.27]	.000
Specific artist -- Premade playlist made by someone else	1.35		[-0.09, 0.48]	.002
Specific artist -- Listened to the radio	-2.52	*	[-0.31, -0.04]	.006
Specific artist -- Watched TV	-3.54	***	[-0.38, -0.11]	.012
Specific artist -- Website streaming	-1.43		[-0.34, 0.05]	.002
Specific artist -- Other	-3.02	***	[-0.41, -0.09]	.009
Specific album -- Specific song	0.11		[-0.17, 0.19]	.000
Specific album -- It was performed live at the time	0.71		[-0.22, 0.48]	.001
Specific album -- Random/shuffle	2.64	**	[0.05, 0.32]	.007
Specific album -- Personal premade playlist	2.02	*	[0.01, 0.37]	.004
Specific album -- Premade playlist made by someone else	2.30	*	[0.01, 0.37]	.005
Specific album -- Listened to the radio	-1.16		[0.05, 0.58]	.001
Specific album -- Watched TV	-2.54	*	[-0.23, -0.03]	.006
Specific album -- Website streaming	-0.30		[-0.20, 0.14]	.000

Specific album -- Other	-1.92		[-0.26, 0.00]	.004
Specific song -- It was performed live at the time	0.62		[-0.25, 0.49]	.000
Specific song -- Random/shuffle	1.66		[-0.03, 0.38]	.003
Specific song -- Personal premade playlist	1.45		[-0.06, 0.42]	.002
Specific song -- Premade playlist made by someone else	1.99	*	[0.00, 0.60]	.004
Specific song -- Listened to the radio	-0.74		[-0.24, 0.11]	.001
Specific song -- Watched TV	-1.61		[-0.30, 0.03]	.003
Specific song -- Website streaming	-0.33		[-0.25, 0.18]	.000
Specific song -- Other	-1.41		[-0.33, 0.05]	.002
It was performed live at the time -- Random/shuffle	0.31		[-0.30, 0.41]	.000
It was performed live at the time -- Personal premade playlist	0.30		[-0.33, 0.45]	.000
It was performed live at the time -- Premade playlist made by someone else	0.84		[-0.25, 0.62]	.001
It was performed live at the time -- Listened to the radio	-1.02		[-0.54, 0.17]	.001
It was performed live at the time -- Watched TV	-1.43		[-0.60, 0.09]	.002
It was performed live at the time -- Website streaming	-0.80		[-0.53, 0.22]	.001
It was performed live at the time -- Other	-1.30		[-0.64, 0.13]	.002

Random/shuffle -- Personal premade playlist	0.03		[-0.20, 0.21]	.000
Random/shuffle -- Premade playlist made by someone else	0.91		[-0.15, 0.41]	.001
Random/shuffle -- Listened to the radio	-3.49	**	[-0.37, -0.11]	.012
Random/shuffle -- Watched TV	-4.46	***	[-0.45, -0.17]	.020
Random/shuffle -- Website streaming	-2.34	*	[-0.38, -0.03]	.005
Random/shuffle -- Other	-3.89	***	[-0.47, -0.15]	.015
Personal premade playlist -- Premade playlist made by someone else	0.84		[-0.17, 0.42]	.001
Personal premade playlist -- Listened to the radio	-2.85	**	[-0.41, -0.08]	.008
Personal premade playlist -- Watched TV	-3.55	***	[-0.49, -0.14]	.012
Personal premade playlist -- Website streaming	-1.83		[-0.44, 0.02]	.003
Personal premade playlist -- Other	-3.46	**	[-0.49, -0.14]	.012
Premade playlist made by someone else -- Listened to the radio	-2.80	**	[-0.63, -0.11]	.008
Premade playlist made by someone else -- Watched TV	-3.35	**	[-0.70, -0.81]	.011
Premade playlist made by someone else -- Website streaming	-2.34	*	[-0.62, -0.06]	.005
Premade playlist made by someone else -- Other	-3.38	**	[-0.69, -0.19]	.011

Listened to the radio -- Watched TV	-1.75	[-0.15, 0.01]	.003
Listened to the radio -- Website streaming	0.40	[-0.12, 0.18]	.000
Listened to the radio -- Other	-1.23	[-0.19, 0.04]	.002
Watched TV -- Website streaming	1.28	[-0.05, 0.26]	.002
Watched TV -- Other	-0.02	[-0.10, 0.10]	.000
Website streaming -- Other	-1.14	[-0.28, 0.07]	.001

Note. The reference category was "Public" locations.

Table 4.

Pairwise Contrasts Pertaining to the GLMM Analysis Considering the Location of Music Experiences on Weekdays Versus Weekends (N = 1049)

Location pair	t		95% CI	η^2
At home -- At a friend's house	2.72	**	[0.07, 0.46]	.007
At home -- At work	-4.93	***	[-0.25, -0.11]	.023
At home -- At the gym	-2.75	**	[-0.30, -0.05]	.007
At home -- Driving a car	-2.82	**	[-0.16, -0.03]	.008
At home -- In a car	1.26		[-0.05, 0.21]	.002
At home -- Public transportation	-2.95	**	[-0.23, -0.05]	.008
At home -- Walking	-0.69		[-0.19, 0.09]	.000
At home -- Restaurant	0.92		[-0.13, 0.36]	.001
At home -- Pub/ Club	-0.64		[-0.23, 0.12]	.000
At home -- Other	-1.24		[-0.19, 0.04]	.001
At a friend's house -- At work	-4.34	***	[-0.64, -0.24]	.018
At a friend's house -- At the gym	-3.99	***	[-0.66, -0.22]	.015
At a friend's house -- Driving a car	-3.60	***	[-0.56, -0.17]	.012

At a friend's house -- In a car	-1.51		[-0.42, 0.05]	.002
At a friend's house -- Public transportation	-3.80	***	[-0.61, -0.20]	.014
At a friend's house -- Walking	-2.67	**	[-0.54, -0.08]	.007
At a friend's house -- Restaurant	-0.86		[-0.50, 0.19]	.001
At a friend's house -- Pub/ Club	-2.53	*	[-0.57, -0.07]	.006
At a friend's house -- Other	-3.22	**	[-0.55, -0.13]	.010
At work -- At the gym	0.04		[-0.12, 0.12]	.000
At work -- Driving a car	2.06	*	[0.00, 0.16]	.004
At work -- In a car	3.64	***	[0.12, 0.40]	.013
At work -- Public transportation	0.82		[-0.06, 0.14]	.001
At work -- Walking	1.77		[-0.01, 0.27]	.003
At work -- Restaurant	2.37	*	[0.05, 0.54]	.005
At work -- Pub/ Club	1.34		[-0.06, 0.30]	.002
At work -- Other	1.61		[-0.02, 0.23]	.002
At the gym -- Driving a car	1.21		[-0.05, 0.21]	.001
At the gym -- In a car	2.98	**	[0.09, 0.43]	.008
At the gym -- Public transportation	0.64		[-0.08, 0.15]	.000

At the gym -- Walking	0.13		[-0.06, 0.31]	.000
At the gym -- Restaurant	2.15	*	[0.03, 0.56]	.004
At the gym -- Pub/ Club	1.14		[-0.09, 0.33]	.001
At the gym -- Other	1.17		[-0.07, 0.27]	.001
Driving a car -- In a car	2.63	**	[0.05, 0.31]	.007
Driving a car -- Public transportation	-0.84		[-0.14, 0.05]	.001
Driving a car -- Walking	0.66		[-0.09, 0.19]	.000
Driving a car -- Restaurant	1.73		[-0.03, 0.45]	.003
Driving a car -- Pub/ Club	0.45		[-0.14, 0.22]	.000
Driving a car -- Other	0.36		[-0.10, 0.14]	.000
In a car -- Public transportation	-2.93	**	[-0.37, -0.07]	.008
In a car -- Walking	-1.38		[-0.32, 0.06]	.002
In a car -- Restaurant	0.25		[-0.22, 0.28]	.000
In a car -- Pub/ Club	-1.31		[-0.35, 0.07]	.002
In a car -- Other	-2.07	*	[-0.31, -0.01]	.004
Public transportation -- Walking	1.04		[-0.08, 0.26]	.001
Public transportation -- Restaurant	1.90		[-0.01, 0.51]	.003

Public transportation -- Pub/ Club	0.86	[-0.11, 0.27]	.001
Public transportation -- Other	0.86	[-0.08, 0.21]	.001
Walking -- Restaurant	1.18	[-0.11, 0.44]	.001
Walking -- Pub/ Club	-0.06	[-0.22, 0.21]	.000
Walking -- Other	-0.30	[-0.19, 0.14]	.000
Restaurant -- Pub/ Club	-1.12	[-0.47, 0.13]	.001
Restaurant -- Other	-1.41	[-0.45, 0.07]	.002
Pub/ Club -- Other	-0.19	[-0.22, 0.18]	.000

Table 5.

Reported Time, Device, and Selection Method Frequencies by All Locations

Variable	Item	At home	At a friend's house	At work	At the gym	Driving a car	In a car	Public transportation	Walking	Restaurant	Pub / club	Other	Total
Device	Mobile mp3	23	1	9	9	23	4	51	17	0	0	9	146
	Mobile phone	13	2	6	4	4	0	18	3	0	0	2	52
	Mobile CD	7	1	0	1	3	2	0	1	0	0	1	16
	Computer - own	98	10	7	0	0	0	1	0	0	0	0	116
	Computer - stream	37	3	18	0	0	0	0	0	0	0	4	62
	Computer - cloud	15	3	8	0	0	0	0	0	1	0	1	28
	Stereo - mp3 device	23	2	10	0	11	6	0	0	0	0	1	53
	Stereo - CD	51	1	1	2	33	8	0	0	1	1	3	101
	Radio	96	5	44	1	102	42	0	0	1	1	2	294
	TV	91	1	5	1	0	0	0	0	1	5	4	108
	In public - live	4	2	1	1	0	0	0	2	0	2	14	26
	In public - recorded	1	0	1	3	0	0	0	0	17	9	5	36
	Total	459	31	110	22	176	62	70	23	21	18	46	1038

Selection method	I did not have any control	44	4	16	4	6	1	1	2	18	15	9	120
	Someone I was with chose	27	11	10	1	7	8	0	0	0	0	4	68
	Specific artist	38	2	4	0	5	3	20	3	0	0	2	77
	Specific album	65	1	10	1	32	5	12	2	0	0	5	133
	Specific song	17	1	4	0	3	4	5	0	0	0	3	37
	It was performed live at the time	5	1	1	1	1	0	0	0	0	3	8	20
	Random/shuffle	49	1	13	5	13	1	16	8	0	0	2	108
	Premade playlist - your own	36	1	3	6	10	1	10	6	1	0	3	77
	Premade playlist - made by someone else	9	0	5	2	4	1	0	2	2	0	2	27
	Listened to the radio	81	3	37	1	94	37	4	0	0	0	0	257
	Watched TV	54	1	3	0	1	0	0	0	0	0	2	61
	Website streaming	19	0	5	0	0	0	0	0	0	0	2	26
	Other	8	3	0	0	1	1	1	0	0	0	5	19

Total	452	29	111	21	177	62	69	23	21	18	47	1030

Table 6.

Estimated Means, Standard Errors, and 95% Confidence Intervals of the GLMM Analyses Concerning Choice, Attention, Liking, and Arousal Ratings

	Choice (N = 1042)			Attention (N = 1040)			Liking (N = 1042)			Arousal (N = 1039)		
Location	M	SE	95% CI	M	SE	95% CI	M	SE	95% CI	M	SE	95% CI
At home	4.86	0.16	[4.54, 5.18]	4.54	0.10	[4.35, 4.73]	5.50	0.08	[5.34, 5.66]	4.40	0.10	[4.21, 4.59]
At a friend's house	3.38	0.43	[2.54, 4.21]	4.67	0.25	[4.17, 5.16]	5.64	0.28	[5.09, 6.18]	4.49	0.31	[3.87, 5.10]
At work	4.48	0.38	[3.74, 5.23]	3.63	0.19	[3.27, 4.00]	5.22	0.18	[4.87, 5.57]	4.01	0.20	[3.62, 4.40]
At the gym	4.40	0.61	[3.21, 5.59]	4.43	0.36	[3.71, 5.14]	5.38	0.34	[4.71, 6.04]	6.06	0.26	[5.55, 6.57]
Driving a car	4.84	0.20	[4.45, 5.23]	4.37	0.13	[4.11, 4.63]	5.47	0.11	[5.26, 5.68]	4.36	0.16	[4.05, 4.66]
In a car	4.40	0.28	[3.86, 4.95]	4.42	0.20	[4.03, 4.81]	5.10	0.17	[4.77, 5.44]	4.23	0.20	[3.84, 4.62]
Public transportation	6.17	0.27	[5.65, 6.69]	5.27	0.20	[4.89, 5.65]	6.17	0.11	[5.96, 6.38]	4.37	0.20	[3.98, 4.76]
Walking	5.83	0.53	[4.79, 6.87]	4.92	0.33	[4.28, 5.56]	5.78	0.30	[5.20, 6.37]	4.83	0.37	[4.11, 5.55]
Restaurant	1.07	0.38	[0.33, 1.81]	2.71	0.28	[2.16, 3.25]	3.82	0.30	[3.23, 4.41]	2.96	0.30	[2.35, 3.57]
Pub/ Club	1.33	0.41	[0.53, 2.13]	3.70	0.47	[2.79, 4.62]	4.49	0.43	[3.64, 5.34]	4.88	0.43	[4.04, 5.71]
Other	3.97	0.41	[3.17, 4.77]	4.77	0.30	[4.19, 5.35]	5.29	0.23	[4.84, 5.73]	4.65	0.29	[4.08, 5.21]

Table 7.

Deviation Contrast Results from the GLMM Analyses Regarding the Choice, Attention, Liking, and Arousal Ratings

	Choice				Attention				Liking				Arousal			
Deviation Contrasts	t		95% CI	η^2	t		95% CI	η^2	t		95% CI	η^2	t		95% CI	η^2
At home -- mean	4.45	***	[0.44, 1.14]	.019	2.00	***	[0.01, .45]	.004	2.60	***	[0.06, 0.42]	.006	-0.70		[-0.30, 0.14]	.000
At a friend's house -- mean	-1.77		[-1.45, 0.07]	.003	1.48		[-0.12, 0.83]	.002	1.38		[-0.16, 0.91]	.002	0.04		[-0.57, 0.59]	.000
At work -- mean	1.11		[-0.32, 1.15]	.001	-3.75	***	[-1.03, -0.32]	.013	-0.22		[-0.39, 0.31]	.000	-2.50	***	[-0.83, -0.10]	.006
At the gym -- mean	0.60		[-0.76, 1.42]	.000	0.33		[-0.56, 0.78]	.000	0.38		[-0.49, 0.72]	.000	6.09	***	[1.07, 2.09]	.035
Driving a car -- mean	3.85	***	[0.38, 1.17]	.014	0.44		[-0.20, 0.32]	.000	1.95		[0.00, 0.43]	.004	-0.77		[-0.42, 0.18]	.001
In a car -- mean	1.19		[-0.22, 0.89]	.001	0.55		[-0.28, 0.49]	.000	-0.89		[-0.50, 0.19]	.001	-1.29		[-0.62, 0.13]	.002
Public transportation -- mean	8.32	***	[1.61, 2.60]	.063	5.27	***	[0.60, 1.32]	.026	7.77	***	[0.68, 1.14]	.055	-0.54		[-0.47, 0.27]	.000
Walking -- mean	3.62	***	[0.81, 2.72]	.013	2.01	*	[0.01, 1.20]	.004	1.93		[-0.01, 1.06]	.004	1.06		[-0.30, 1.01]	.001
Restaurant -- mean	-8.21	***	[-3.72, -2.28]	.061	-5.83	***	[-2.15, -1.07]	.032	-4.89	***	[-2.02, -0.86]	.023	-5.10	***	[-2.10, -0.93]	.025
Pub/ Club -- mean	-6.90	***	[-3.51, -1.96]	.044	-1.44		[-1.44, 0.22]	.002	-1.95		[-1.54, 0.00]	.004	1.05		[-0.35, 1.15]	.001
Other -- mean	-0.28		[-0.79, 0.60]	.000	1.68		[-0.08, 1.00]	.003	0.13		[-0.37, 0.43]	.000	0.66		[-0.34, 0.69]	.000

Note. DF = 1042 for Choice and Liking; 1029 for Attention; and 1028 for Arousal; * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 8.

GLMM Analyses Predicting the Consequences of Listening Using Time and Location Type

	Purposive listening		Actively engaged listening		Validation-seeking listening	
Predictor	F	η_p^2	F	η_p^2	F	η_p^2
Part of day	F (3, 952) = 0.90, p = .440	.003	F (3, 952) = 8.00, p < .001	.025	F (3, 952) = 1.93, p = .123	.006
Part of week	F (1, 952) = 1.53, p = .216	.002	F (1, 952) = 1.77, p = .184	.002	F (1, 952) = 0.76, p = .383	.001
Location type	F (1, 952) = 0.49, p = .484	.001	F (1, 952) = 0.00, p = .958	.000	F (1, 952) = 1.24, p = .265	.001
Part of day x Part of week	F (3, 952) = 3.21, p = .023	.010	F (3, 952) = 6.51, p < .001	.020	F (3, 952) = 1.96, p = .118	.006
Part of day x Location type	F (3, 952) = 1.67, p = .172	.005	F (3, 952) = 6.31, p < .001	.019	F (3, 952) = 2.65, p = .048	.008
Part of week x Location type	F (1, 952) = 7.07, p = .008	.007	F (1, 952) = 0.08, p = .778	.000	F (1, 952) = 0.00, p = .994	.000
Part of day x Part of week x Location type	F (3, 952) = 1.94, p = .122	.006	F (3, 952) = 3.36, p = .018	.010	F (3, 952) = 0.29, p = .830	.001

Note. N = 968; * p < .05, ** p < .01, *** p < .001.

Table 9.

Estimated Means, Standard Errors, and 95% Confidence Intervals of the GLMM Analyses Concerning the Significant Interactions Pertaining to Predicting the Consequences of Hearing Music

Outcome variable	Interaction variables		M	SE	95% CI
Purposive listening	Weekday	Private	-0.05	0.06	[-0.17, 0.06]
		Public	0.13	0.12	[-0.11, 0.37]
	Weekend	Private	0.08	0.11	[-0.14, 0.30]
		Public	-0.27	0.15	[-0.56, 0.03]
Actively engaged listening	8:00-8:59	Weekday	0.05	0.10	[-0.15, 0.25]
		Weekend	0.71	0.14	[0.45, 0.98]
	9:00-16:59	Weekday	-0.07	0.06	[-0.18, 0.05]
		Weekend	-0.23	0.12	[-0.47, 0.01]
	17:00-20:59	Weekday	-0.04	0.09	[-0.22, 0.13]
		Weekend	0.14	0.12	[-0.10, 0.38]
	21:00-23:59	Weekday	0.09	0.16	[-0.21, 0.40]
		Weekend	0.05	0.37	[-0.68, 0.77]

Actively engaged listening	8:00-8:59	Private	0.22	0.17	[-0.11, 0.55]
		Public	0.54	0.07	[0.40, 0.68]
	9:00-16:59	Private	0.12	0.06	[0.00, 0.24]
		Public	-0.42	0.13	[-0.66, -0.17]
	17:00-20:59	Private	0.08	0.09	[-0.09, 0.26]
		Public	0.02	0.14	[-0.26, 0.29]
	21:00-23:59	Private	-0.06	0.10	[-0.26, 0.14]
		Public	0.20	0.37	[-0.53, 0.94]

Note. N = 968.

Table 10.

Pairwise Contrasts Concerning the GLMM Analyses Predicting the Consequences of Listening Using Time and Location Type

Analysis	Pairwise Contrasts		t		95% CI	η^2
Purposive	Private	Weekday -- Weekend	-1.20		[-0.35, 0.09]	.001
listening	Public	Weekday -- Weekend	2.31	*	[0.06, 0.73]	.005
Actively	Weekday	Pre work (8:00-8:59) -- Work day (9:00-16:59)	1.12		[-0.09, 0.32]	.001
engaged		Pre work (8:00-8:59) -- After work (17:00-20:59)	0.74		[-0.15, 0.33]	.001
listening		Pre work (8:00-8:59) -- Late night (21:00-23:59)	-0.27		[-0.37, 0.28]	.000
		Work day (9:00-16:59) -- After work (17:00-20:59)	-0.27		[-0.22, 0.16]	.000
		Work day (9:00-16:59) -- Late night (21:00-23:59)	-1.04		[-0.47, 0.15]	.001
		After work (17:00-20:59) -- Late night (21:00-23:59)	-0.86		[-0.44, 0.17]	.001
	Weekend	Pre work (8:00-8:59) -- Work day (9:00-16:59)	5.45	***	[0.60, 1.28]	.028
		Pre work (8:00-8:59) -- After work (17:00-20:59)	3.06	**	[0.20, 0.94]	.009
		Pre work (8:00-8:59) -- Late night (21:00-23:59)	1.70		[-0.10, 1.43]	.003
		Work day (9:00-16:59) -- After work (17:00-20:59)	-2.16	*	[-0.71, -0.03]	.004
		Work day (9:00-16:59) -- Late night (21:00-23:59)	-0.74		[-1.01, 0.45]	.001
		After work (17:00-20:59) -- Late night (21:00-23:59)	0.24		[-0.67, 0.86]	.000

Private	Pre work (8:00-8:59) -- Work day (9:00-16:59)	0.59		[-0.24, 0.45]	.000
	Pre work (8:00-8:59) -- After work (17:00-20:59)	0.75		[-0.22, 0.50]	.001
	Pre work (8:00-8:59) -- Late night (21:00-23:59)	1.49		[-0.09, 0.66]	.002
	Work day (9:00-16:59) -- After work (17:00-20:59)	0.36		[-0.15, 0.22]	.000
	Work day (9:00-16:59) -- Late night (21:00-23:59)	1.55		[-0.05, 0.41]	.002
	After work (17:00-20:59) -- Late night (21:00-23:59)	1.27		[-0.08, 0.37]	.002
Public	Pre work (8:00-8:59) -- Work day (9:00-16:59)	7.87	***	[0.72, 1.19]	.057
	Pre work (8:00-8:59) -- After work (17:00-20:59)	3.92	***	[0.26, 0.78]	.015
	Pre work (8:00-8:59) -- Late night (21:00-23:59)	0.91		[-0.39, 1.07]	.001
	Work day (9:00-16:59) -- After work (17:00-20:59)	-2.49	*	[-0.77, -0.09]	.006
	Work day (9:00-16:59) -- Late night (21:00-23:59)	-1.64		[-1.36, 0.13]	.003
	After work (17:00-20:59) -- Late night (21:00-23:59)	-0.49		[-0.93, 0.56]	.000

Table 11.

GLMM Analyses Concerning Time and Specific Locations Predicting the Consequences of Listening

	Purposive listening		Actively engaged listening		Validation-seeking listening	
Predictor	F	η_p^2	F	η_p^2	F	η_p^2
Part of day	F (3, 945) = 0.32, p = .808	.001	F (3, 945) = 1.45, p = .227	.005	F (3, 945) = 2.09, p = .100	.007
Part of week	F (1, 945) = 0.04, p = .845	.000	F (1, 945) = 0.97, p = .227	.001	F (1, 945) = 0.26, p = .611	.000
Location	F (10, 945) = 2.92, p = .001	.030	F (10, 945) = 1.33, p = .212	.014	F (10, 945) = 1.80, p = .057	.019
Part of day x Part of week	F (3, 945) = 1.18, p = .315	.004	F (3, 945) = 1.40, p = .240	.004	F (3, 945) = 0.77, p = .511	.002
Part of day x Location	F (24, 945) = 1.05, p = .404	.026	F (24, 945) = 0.84, p = .688	.021	F (24, 945) = 1.00, p = .459	.025
Part of week x Location	F (10, 945) = 1.00, p = .445	.010	F (10, 945) = 0.87, p = .560	.009	F (10, 945) = 0.85, p = .580	.009
Part of day x Part of week x Location	F (17, 945) = 0.94, p = .525	.017	F (17, 945) = 1.27, p = .202	.022	F (17, 945) = 0.89, p = .590	.016

Note. N = 1014; * p < .05, ** p < .01, *** p < .001.

Table 12.

Deviation Contrasts Pertaining to the Location Main Effect for Purposive Listening

	Purposive listening			
Deviation Contrasts	t		95% CI	η^2
At home -- mean	0.09		[-0.17, 0.19]	.000
At a friend's house -- mean	0.29		[-0.27, 0.37]	.000
At work -- mean	0.11		[-0.37, 0.42]	.000
At the gym -- mean	5.58	***	[0.77, 1.60]	.029
Driving a car -- mean	0.29		[-0.24, 0.33]	.000
In a car -- mean	-0.39		[-0.44, 0.29]	.000
Public transportation -- mean	0.10		[-0.29, 0.32]	.000
Walking -- mean	-0.35		[-0.63, 0.44]	.000
Restaurant -- mean	-2.03	*	[-1.07, -0.02]	.004
Pub/ Club -- mean	-2.21	*	[-1.01, -0.06]	.005
Other -- mean	-0.38		[-0.48, 0.32]	.000

Table 13.

GLMM Analyses Concerning the PAD Model Domains Predicting the Consequences of Listening

Predictor	Purposive listening		Actively engaged listening		Validation-seeking listening	
	F	η_p^2	F	η_p^2	F	η_p^2
Liking	F (1, 1034) = 24.73, $p < .001$	.023	F (1, 1034) = 6.19, $p < .001$	.006	F (1, 1034) = 3.21, $p = .073$	.003
Arousal	F (1, 1034) = 23.71, $p < .001$	.022	F (1, 1034) = 1.64, $p = .201$	.002	F (1, 1034) = 0.12, $p = .725$	.000
Choice	F (1, 1034) = 13.06, $p < .001$	.012	F (1, 1034) = 0.18, $p = .674$	.000	F (1, 1034) = 0.38, $p = .541$	.000

Note. N = 1038; * $p < .05$, ** $p < .01$, *** $p < .001$.

Appendix

Response Entry

Time that the text message was received: _____

Time when completing this entry: _____

□ Tick here if you did not hear music within a 2-hour period prior to receiving the text message.

If you heard music multiple times within the 2-hour block prior to receiving the text message, please fill out this entry about the most recent listening episode.

Directions: Please select what best applies and mark only one answer.

Where were you?	**How did you hear the music?**
____ At home	____ Mobile mp3 player
____ At a friend's house	____ Mobile telephone
____ At work	____ Mobile gaming device
____ Driving a car	____ Mobile CD player
____ In a car	____ Mobile cassette player
____ Public transportation	____ Computer – own collection (iTunes, Winamp, etc.)
____ Walking	____ Computer – online streaming (Spotify, LastFM, etc.)
____ Restaurant	____ Stereo – mp3 device
____ Shopping	____ Stereo – CD
____ Religious worship	____ Stereo – cassette
____ Pub / Club	____ Stereo – record
____ Concert	____ Radio
____ At the gym	____ TV
____ Other: (please state below)	____ In public – live artist/group/ensemble
_____	____ In public – recorded music

How did you select what you heard?

____ I did not have any control

____ Someone I was with chose

____ Specific artist

____ Specific album

____ Specific song

____ Random/shuffle

____ It was performed live at the time

____ Premade playlist – your own

____ Premade playlist – made by someone else

____ Created a playlist at the time

____ Listened to the radio

____ Watched TV

____ Downloaded from the Internet

____ Other: _____

How much choice did you have in what you heard?

None	__ 1	__ 2	__ 3	__ 4	__ 5	__ 6	__ 7	Total

How much attention were you paying to the music?

None	__ 1	__ 2	__ 3	__ 4	__ 5	__ 6	__ 7	Total

How much did you like what you heard?

Dislike very much	__ 1	__ 2	__ 3	__ 4	__ 5	__ 6	__ 7	Like very much

How arousing was the music you heard?

(Arousing in this case means how loud/fast/energizing/etc. was the music?)

Not at all	__ 1	__ 2	__ 3	__ 4	__ 5	__ 6	__ 7	Highly arousing

The effect of this music was…

Please mark your answer on the scales below. If you feel that the music did not have the listed effect, mark the middle, otherwise mark your answer closer to one of the two end points on each of the scales.

It hindered my concentration/ thinking	-3	-2	-1	0	1	2	3	It helped me to concentrate/think
It did not help to pass the time	-3	-2	-1	0	1	2	3	It helped to pass the time
It prevented or lessened an emotion	-3	-2	-1	0	1	2	3	It helped create or accentuate an emotion
It did not help the atmosphere	-3	-2	-1	0	1	2	3	It helped to create the 'right' atmosphere
It did not motivate me	-3	-2	-1	0	1	2	3	It motivated me
It hindered what I was trying to do	-3	-2	-1	0	1	2	3	It helped me with what I was trying to do
It did not bring back memories	-3	-2	-1	0	1	2	3	It brought back memories
It made me look bad	-3	-2	-1	0	1	2	3	It helped me look good
I learned nothing about the music	-3	-2	-1	0	1	2	3	I learned more about the music
It annoyed me	-3	-2	-1	0	1	2	3	I enjoyed it
I wanted to get away from the music	-3	-2	-1	0	1	2	3	I wanted to hear the music for longer
It hindered my worship	-3	-2	-1	0	1	2	3	It helped me worship
Other (please specify)	-3	-2	-1	0	1	2	3	Other (please specify)

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