# The Effects of Lyrical Fit in Advertisements

Joanne P. S. Yeoh

## **Abstract**

Music's ability to suggest certain brand impressions were investigated in this study based on the theory of 'musical fit.' This is because music/voice content that 'fit' should prime certain impressions of the listeners' knowledge for the brand and an increase/decrease in liking for the advertised product. This study, in particular, investigated the effects of using popular music with lyrics that 'fitted' an advertised product. Participants watched one of three versions of an advertisement whereby lyrics were varied in each version. The music selections were similar in lyrical meaning, tempo, style, rhythm, etc. The results contradicted previous findings; implying that music with lyrics that 'fit' may not necessarily improve affective responses to brand impressions. The implications of this were discussed in terms of Berlyne's theory and the limitations of musical fit.

Keywords: Musical fit, consumers, popular music, brand impressions, Berlyne's theory

Paper Submission Date: December 4, 2020; Paper sent back for Revision: February 15, 2021; Paper Acceptance Date: February 23, 2021; Paper Published Online: March 10, 2021

usic surrounds our lives for the most part of our waking hours, whether consciously or subconsciously, willingly, or otherwise. Much of our passive music exposure is derived from piped in music at commercial venues or advertisements we see on social and mass media (Bagdare & Bansal, 2014; North & Hargreaves, 2008; Yeoh & North, 2012). Music used in advertisements are usually crafted to enhance the product's image and/or to solicit a favourable response from consumers. Many advertisements rely on the influence of music rather than words to convey meaning (Pongiannan, 2009; Sumbly & Siraj, 2019; Yeoh & Allan, 2020), and as such, advertisers invest a huge sum of money in the hope that music augments certain attributes of the product, consequently leading to an increase in sales. One of the theories and approaches to the use of music in advertisements can be seen in the context of musical fit. Many empirical studies have also suggested that brand attitude, recall of products, and purchase intentions are dependent on the 'fit' between the advertisement's musical meaning and the brand image. However, there is limited research to date that has examined the use of different languages in advertisements. Studies have argued that lyrically fit music would give rise to positive results, nonetheless would lyrically fit music, sung in different languages offer the same?

Much of the work on musical fit has pitted music that are vastly different in styles and genres (see Areni & Kim, 1993; Yeoh & North, 2010a, Yeoh & North, 2013) and between pleasant (well-liked) and unpleasant (disliked) music (Bierly et al., 1985; Gorn, 1982; Tom, 1995). However, there are very few studies to date that have compared the use of popular music with variations to the lyrics. Among a handful of studies which explored this was by Allan (2006), who compared three advertisements by using popular music in three different settings (advertisement with original vocals, altered vocals, and instrumental version of the same). He argued that advertisements with lyrics that fitted had a more positive effect on attention and memory when compared to an instrumental version of the same. Meanwhile, Roehm (2001) suggested that instrumental music was more effective than a vocal version of the same in recalling advertising messages since consumers would sing along,

DOI: https://doi.org/10.17010/ijom/2021/v51/i3/158062

<sup>&</sup>lt;sup>1</sup> Associate Professor, Music Department, Faculty of Human Ecology, University Putra Malaysia, 43400 Serdang, Malaysia. (Email: joanneyeoh@gmail.com); ORCID iD: https://orcid.org/0000-0002-7891-3606

generating lyrics that carried the message. A corresponding study by Heaton and Paris (2006) examined the effects of vocal music versus instrumental music on advertisement recall and argued that there were no significant differences in recall between both conditions.

Despite the potential of instrumental/lyrical fit to explain consumers' responses to advertisements, there have also been confounding results. Previous research has sought to compare consumers' attention and recall for the advertised product. However, research demonstrating how songs with lyrics or an instrumental version of the same is able to affect consumers' beliefs for the product and their purchase intentions are far and few in between. Since attention and recall do not necessarily translate into beliefs, this research aims to be even more rigorous as it sets out to investigate if instrumental/lyrical fit is able to influence consumers' perceived characteristics for a product, leading to purchase intentions. Music is engrained in culture and it would be prudent to investigate whether any music that affects behaviour in one culture can also be identified in another (see Yeoh & North, 2010a, 2010b). For example, lyrics that are understood by one culture group may not necessarily be understood by another. The question therefore remains: would a popular piece of music, when sung in a different language, compel consumers to sing along the lyrics in their own language, and thereby generate the 'message' subconsciously? Can popular music be so overtly popular that it should be disliked, leading to negative beliefs of the product? The present research aims to extend from previous studies by investigating whether advertising with popular music (in a language that is understood; in a foreign language; and in an instrumental version) could affect consumers' beliefs for the product and their purchase intentions.

The use of popular music in advertisements is arguably one of the best ways to impact and influence individuals. Popular music is described as music that is 'well-liked' by 'ordinary people' (Shuker, 1994), and that has wide exposure and appeal but usually for a fixed period of time. With its potential to deliver a message, the integration of popular music with advertisements is able to give symbolic meaning to products (see Allan, 2006; Kellaris et al., 1993; Zhu & Myers-Levy, 2005). The effects of popular music with lyrics have clear implications, especially when it is linked to a brand. Familiar examples include the use of popular music "Like a Rock" for Chevrolet trucks (Clow & Baack, 2003) and Rolling Stones's "Start Me Up" for Microsoft (Sutherland & Sylvester, 2000). Similarly, Park and Young (1986) chose a number one chart hit as an example of positively liked background music and revealed how it enhanced brand attitude. Meanwhile, prior studies showed that hearing a melody from a popular song can cue the text of a song (Wallace, 1994), concurring with Roehm (2001), suggesting that instrumental versions of popular music can further enhance the encoding memory by forcing the listener to generate the lyrics of the song that carry the advertising message.

### **Materials and Method**

The present study employed four advertisements that featured an energy drink, Milo. Milo was considered one of the most popular drinks among participants of this age group. The first advertisement was fitted with pop music that carried lyrics in English which fitted the characteristics of the Milo drink. The second advertisement was fitted with the same music but in a different language (German). The third advertisement was fitted with an instrumental version of the same, and the fourth advertisement had no music to accompany it. Participants were then asked to rate their beliefs and purchase intentions for the advertised Milo drink.

### **Participants**

Two hundred and twenty five participants volunteered in this study with 52 males and 173 females. They were divided into four groups. Sixty-four participants watched the advertisement matched with pop music sung in English (Group A); 63 participants watched the advertisement matched with the same pop music sung in German (Group B); 48 participants watched the advertisement matched with an instrumental version of the same pop music (Group C); and 50 participants watched the advertisement without any music (Group D). Participants' mean age was 20.9 years (SD = 1.82). Participants were students who were approached individually at the library of a local university. Testing was conducted two weeks after the pilot study and participants were fluent English speakers.

### **Pilot Study**

The pilot study had 20 participants drawn from the same general population as the sample used in the main experiment. Each participant in the study watched the same advertisement matched with pop music sung in English, German, and an instrumental version of the same. Participants were unanimous in describing the music heard as 'very familiar,' 'current,' and was clearly identifiable as pop. The music used in this study, 'Let It Go' was taken from the Disney movie *Frozen*. 'Let It Go' has been recorded in 44 languages, has sold more than 10.9 million copies, and had an unusually obsessed following (Let It Go (Disney Song), 2021). Participants were then asked to identify the verse and chorus which they felt were most relevant to the Milo drink, and the most frequently nominated verse and chorus were employed in the present research.

### **Materials and Design**

The research adopted a between subjects design in which participants watched a 50 second advertisement featuring the Milo drink. The participants were played either music with English lyrics (Group A), the same music with German lyrics (Group B), instrumental version of the same (Group C), or 'no music' (Group D). The images used in the advertisement showed youths excelling at sporting events. The pop music condition employed lyrics which fitted the advertisement; for example the lyrics '....it's time to see what I can do, to test the limits and break through...' accompanied images of youths kicking a football into the net, while the chorus '....let it go, let it go, I am one with the wind and sky...' accompanied images of a long jumper leaping into the air and a basketball player jump shooting in mid air. Both advertisements in Group B and Group C employed the same segment of music used in Group A. In all three music groups, the song was played in the same key, voice, tempo, and with the exact same musical arrangement. The music was played at a comfortable background volume level via headphones attached to the laptop which played the advertisements.

#### **Procedure**

The study was carried out between 9:00 am to 11:00 am over six weeks in August and September 2019. This time of day was selected as it represented an advantageous time to watch a Milo advertisement as the drink is usually consumed at breakfast. Participants were recruited by approaching people individually to volunteer for which they would be asked to complete a questionnaire in return for free drinks. All participants were tested individually. Participants were requested to watch the 50 second advertisement and they were then given unlimited time to complete the eight-item questionnaire. Question 1 required them to pick an answer on how often they drank Milo with a) more than once a week, b) once a month, and c) less than once a month. Question 2 asked if the participants recognized the music that was playing while they watched the advertisement. Question 3 asked participants to what extent they were inspired by this advertisement to drink Milo more frequently and to give a rating between 0–5, with 0 being "very inspired" to 5 being "totally uninspired." Question 4 asked participants to what extent they felt that the music fitted the advertisement and to give a rating between 0–5, with 0 being "very well" to 5 being "not at all." Questions 5 – 8 asked participants to what extent they felt the advertisement emphasized nutrition, energy, health, and strength and to give a rating between 0–5, with 0 being "very strongly" and 5 being "not at all."

## **Analysis and Results**

The questionnaire gave rise to a Cronbach's alpha of 0.75. A one-way ANOVA was carried out to determine whether the perceived characteristics of the Milo product varied as a function of the type of music that was played (while controlling for variations in the frequency with which participants drank Milo and variations to the recognition of the music that was being played). The results (Table 1) indicate an interaction between all four groups and their perceived characteristics of the Milo product, (F(3,221) = 10.14, P < .001). Participants in Group A rated the Milo drink at a mean of 9.20 (SD = 2.14), and participants in Group B rated the Milo drink at a mean of 11.43 (SD = 2.19). Meanwhile, participants in Group C rated the Milo drink at a mean of 10.10 (SD = 2.22) and a mean of 10.80 (SD = 2.93) for Group D. More simply, the advertisement which employed German lyrics was found to be most effective in leading participants to believe that the Milo drink emphasized nutrition, energy, health, and strength.

Next, a one-way ANOVA was carried out to determine the extent by which participants were inspired to drink Milo more frequently (Q3), which varied as a function of the type of music/no music that was played (while controlling for variations in the frequency with which participants drank Milo). The results (Table 2) indicate an interaction between the four groups and the extent by which they were inspired to drink Milo more frequently (F(3, 221) = 3.82, P < .05). Participants in Group A rated their intentions to drink Milo at a mean of 2.81 (SD = 0.71), while Group B rated their intentions at a mean of 3.08 (SD = 0.94), Group C at a mean of 2.58 (SD = 0.77), and Group D at a mean of 2.92 (SD = 0.67), respectively. To put it simply, participants who listened to music with German lyrics were most inspired to drink Milo more frequently.

Next, a Pearson's correlation coefficient test was run to assess the relationship between the extent by which the advertisement emphasized positive characteristics of the Milo drink and to the extent participants were then inspired by the advertisement to drink Milo more frequently (Q3). The results indicate a positive correlation with r = .541, n = 225, P < .001. In other words, participants who rated the advertisement positively were also more inspired to drink Milo more frequently. And lastly, there is no correlation between the frequency of participants drinking Milo (Q1) and their beliefs for the drink. The results here demonstrate that participants' beliefs for the drink were not influenced by their drinking habits. The results of this experiment provide valuable insights into advertising with popular music, in particular highly saturated popular music.

Table 1. Mean Ratings and SD in Responses to the Perceived Characteristics of Milo for all Groups

•				
Groups	Music	N	Mean	SD
Group A	English lyrics	64	9.20	2.14
Group B	German lyrics	63	11.43	2.19
Group C	Violin	48	10.10	2.22
Group D	No Music	50	10.80	2.93

Table 2. Mean Ratings and SD in Responses to Participants Being Inspired to Drink Milo More Frequently for all Groups

, , , , , , , , , , , , , , , , , , ,						
Groups	Music	N	Mean	SD		
Group A	English lyrics	64	2.81	0.71		
Group B	German lyrics	63	3.08	0.94		
Group C	Violin	48	2.58	0.77		
Group D	No Music	50	2.92	0.67		

In this study, participants who watched the advertisement in a foreign language rated the drink most positively and were most likely to purchase the drink followed by the advertisement with no music. There may be two possible reasons for this: firstly, the music used was overtly popular, which in turn could have appeared crass, leading to the advertisement in question being somewhat hackneyed. This could also explain why the advertisement which had no music playing was rated more positively than the advertisement in English. As observed in Berlyne's (1974) theory of aesthetics, the degree of complexity, uncertainty, novelty, and conflict are related to one's liking for artistic or hedonic stimuli. For example, music that has the potential to arouse listeners is liked best, and this degree of liking decreases steadily as the amount of arousal gets closer to the extremes of the arousal continuum. Simply said, the relationship between one's preference and the potentiality of arousal can be best described as an inverted U-shaped curve. Along these lines, the present research corroborates that a degree of novelty and uncertainty (advertisement in German) is able to stimulate pleasure and liking. Similarly, when a piece of music is overused (advertisement in English), an opposite effect is produced. Although there have been many laboratory-based studies that support this theory, evidence is significantly lacking in natural settings. Two studies of relevance here are by Simonton (1980) and North and Hargreaves (1996). The former analyzed over 15,000 musical themes by over 450 classical composers and found that pieces with moderate levels of originality were rated more popular among his participants. The latter discovered an inverted-U relationship between ratings of complexity and liking, when music was played in aerobic and yogic relaxation classes.

Consistent with previous findings, Burke and Edell (1986) discovered that music which is repeatedly played in an advertisement is able to promote recall of the advertisement's content, but can also cause a 'wear out' effect. The authors reasoned that since music is capable of being 'worn out,' repeated exposure to the same music can cause a dislike and a decline in attitude towards the advertisement (see also Craton & Lantos, 2011; Hargreaves, 1984; Hargreaves et al., 2006; Tan et al., 2006).

The second reason to the findings could also be explained by the fact that participants were stimulated by the incongruity of the lyrics, or lack thereof, hence recalling/forcing them to generate the lyrics that carried the message (see Roehm, 2001; Wallace 1994). The incongruity was not too high a level that it would be disliked by participants, but instead stimulated recall. Some works have suggested that music which fits the product is crucial for high cognitive – involvement consumers as it intensifies the advertisement's message. However, in some cases, incongruity can assist memory as it is able to increase liking for the advertisement (North et al., 2004). Incongruity of information can also affect highly involved consumers to process the message with higher cognitive effort (see Heckler & Childers, 1992; Srull et al., 1985). Moreover, incongruency is able to enhance the affective state via mood elevation and affect transfer mechanisms (Kellaris et al., 1993).

To further strengthen the results of this study, participants who were regular drinkers of Milo did not necessarily rate their beliefs for Milo more positively. However, under the right conditions (when the advertisement was matched with slightly incongruent music), participants were inspired to drink Milo more frequently. Similar to the findings by McInnis and Park (1991), the authors found that fit music had an equally strong effect on low and high involvement participants' attention to the advertised message. It would be reasonable therefore to argue that using popular music that 'fits' can enhance consumers' perception of the product, regardless of their previous exposure to the product.

## **Managerial and Theoretical Implications**

There are clear implications for the retail and advertising industry from this study. It may be possible for an advertiser or retailer to draw consumers' attention to the product using musical fit strategies. However, much care is needed on the choice of music. Music used has to be unambiguous and well known, and yet not overtly used or played in its natural settings. For example, consumers may not infer the proper intentions from the music if they do

not have prior experience of that music. Alternatively, music that is heard too many times loses its sophistication and novelty. Sacks (2010) described how repetition can ultimately provoke annoyance. The constant repetition of songs in the minds of the consumers may negatively influence the advertisement's attributes. Abolhasani et al. (2017) found that music that is repeated too often can give rise to resistance to the homogenising routines of the market. These authors argued that consumers have a desire and potential for more authentic experiences.

The use of popular music in advertisements is a double-edged sword. On the one hand, it is irrefutable that popular music in advertisements have been able to appropriate certain characteristics of the product positively, and enhance brand image (Allan, 2006; Shankar et al., 2009). On the flip side, it has also been argued that music is created for nobler purposes rather than mere commercialization and profit (Adorno & Horkheimer, 1997). The concerns here are not without valid points. Although the use of popular music in advertising allows companies the opportunity to communicate brand image, there are valid fears from musicians and music aficionados alike on such commercialization strategies. Music fans are concerned that exploiting lyrics of songs to sell a product would lessen the aesthetics of the art per se (Abolhasani et al., 2017). In this context, using the English version of the song 'Let It Go' suggested that participants were aware of market manipulation and revealed participants' critical awareness and a sense of resistance to the use of overtly popular music in promoting the advertised product.

## **Limitations of the Study and Scope for Further Research**

The research on popular music with advertisements has shown the effectiveness of 'lyrically fit' music, and the literature now is furthered by the exploration of lyrics in different languages. The product used in the current study is of mainstream value. Future research could, for instance, investigate the potentiality and limitations of lyrical fit on a more affluent product, for example, a luxury car (e.g. Mercedes Benz). Would non-German speaking consumers be more attracted to an advertisement which uses German arias playing in the background, or the sounds of art music in their own language? More product types and genres should be observed. In conclusion, musical fit is able to potentially influence consumers' beliefs for the product and this present research has highlighted one possible limitation on the generality of this. Still, further research is needed and necessary before advertisers and practitioners can fully employ the effect of musical fit in real commercial settings.

#### **Author's Contribution**

Joanne P. S. Yeoh conceived the idea and developed a quantitative design to undertake the empirical study. All interviews, analysis, and computations using SPSS and the writing up of the manuscript were conducted by Dr. Yeoh.

### **Conflict of Interest**

The author certifies that she has no affiliations with or involvement in any organization or entity with any financial interest, or non-financial interest in the subject matter, or materials discussed in this manuscript.

## **Funding Acknowledgement**

The author received no financial support for the research, authorship, and/or for the publication of this article.

## References

- Abolhasani, M., Oakes, S., & Oakes, H. (2017). Music in advertising and consumer identity: The search for Heideggerian authenticity. *Marketing Theory*, 17(4), 473-490. https://doi.org/10.1177%2F1470593117692021
- Adorno, T.W., & Horkheimer, M. (1997). Dialectic of enlightenment. Continuum.
- Allan, D. (2006). Effects of popular music in advertising on attention and memory. *Journal of Advertising Research*, 46(4), 434–444. https://doi.org/10.2501/S0021849906060491
- Areni, C. S., & Kim, D. (1993). The influence of background music on shopping behavior: Classical versus top-forty music in a wine store. In, L. McAlister & M. L. Rothschild (eds.), *NA Advances in Consumer Research* (Vol. 20, pp. 336–340). Association for Consumer Research.
- Bagdare, S., & Bansal, P. (2014). Effect of music on branding effectiveness: An experimental study on telecom brands. *Indian Journal of Marketing*, 44(3), 43 52. https://doi.org/10.17010/ijom/2014/v44/i3/80428
- Berlyne, D. E. (1974). The new experimental aesthetics. In D.E. Berlyne (Ed.), *Studies in the new experimental aesthetics: Steps toward an objective psychology of aesthetic appreciation*. Halsted Press.
- Bierly, C., McSweeney, F.K., & Vannieuwkerk, R. (1985). Classical conditioning of preferences for stimuli. *Journal of Consumer Research*, *12*(3), 316–323. https://doi.org/10.1086/208518
- Burke, M.C., & Edell, J.A. (1986). Ad reactions over time: Capturing changes in the real world. *Journal of Consumer Research*, *13*(1), 114–118. https://doi.org/10.1086/209051
- Clow, K.E., & Baack, D. (2003). Integrated advertising, promotion, and marketing communications. Prentice Hall.
- Craton, L.G., & Lantos, G.P. (2011). Attitude toward the advertising music: An overlooked potential pitfall in commercials. *Journal of Consumer Marketing*, 28(6), 396 411. https://doi.org/10.1108/07363761111165912
- Gorn, G. J. (1982). The effects of music in advertising on choice behavior: A classical conditioning approach. *Journal of Marketing*, 46(1), 94–101. https://doi.org/10.2307/1251163
- Hargreaves, D.J. (1984). The effects of repetition on liking for music. *Journal of Research in Music Education*, 32(1), 35–47. https://doi.org/10.2307%2F3345279
- Hargreaves, D. J., North, A. C., & Tarrant, M. (2006). Musical preference and taste in childhood and adolescence. In G. E. McPherson (Ed.), *The child as musician : A handbook of musical development* (pp.135 154). Oxford University Press.
- Heaton, M., & Paris, K. (2006). *The effects of music congruency and lyrics on advertisement recall*. https://www.uwlax.edu/globalassets/offices-services/urc/jur-online/pdf/2006/heaton.paris.pdf
- Heckler, S. E., & Childers, T. (1992). The role of expectancy and relevancy in memory for verbal and visual information: What is incongruency? *Journal of Consumer Research*, 18(4), 475–492. https://doi.org/10.1086/209275
- Kellaris, J., Cox, A.D., & Cox, D. (1993). The effect of background music on ad processing: A contingency explanation. *Journal of Marketing*, 57(4), 114–125. https://doi.org/10.2307/1252223

- Let It Go (Disney Song). (2021, January 15). In Wikipedia. https://en.wikipedia.org/wiki/Let It Go (Disney song
- MacInnis, D. J., & Park, C. W. (1991). The differential role of characteristics of music on high and low involvement consumers' processing of ads. *Journal of Consumer Research*, 18(2), 161–173. https://doi.org/10.1086/209249
- North, A. C., & Hargreaves, D. J. (1996). Responses to music in aerobic exercise and yogic relaxation classes. *British Journal of Psychology*, 87(4), 535 547. https://doi.org/10.1111/j.2044-8295.1996.tb02607.x
- North, A.C., & Hargreaves, D.J. (2008). The social and applied psychology of music. University Press.
- North, A.C., MacKenzie, L.C., Law, R. M., & Hargreaves, D. J. (2004). The effects of musical and voice "fit" on responses to advertisements. *Journal of Applied Social Psychology*, 34(8), 1675 1708. https://doi.org/10.1111/j.1559-1816.2004.tb02793.x
- Park, C. W., & Young, S. M. (1986). Consumer response to television commercials: The impact of involvement and background music on brand attitude formation. *Journal of Marketing Research*, 23(1), 11 24. https://doi.org/10.2307/3151772
- Pongiannan, K. (2009). Perception towards memorability of advertisements on TV A descriptive study. In dian Journal of Marketing, 39(9), 35–39. http://indianjournalofmarketing.com/index.php/ijom/article/view/37087
- Roehm, M. L. (2001). Instrumental vs. vocal versions of popular music in advertising. *Journal of Advertising Research*, 41(3), 49–58. https://doi.org/10.2501/JAR-41-3-49-58
- Sacks, O. (2010). Brainworms, sticky music, and catchy tunes. In M. Petracca & M. Sorapure (Eds.), *Reading pop culture* (pp.99–104). Prentice Hall.
- Shankar, A., Elliott, R., & Fitchett, J. A. (2009). Identity, consumption and narratives of socialization. *Marketing Theory*, 9(1), 75–94. https://doi.org/10.1177%2F1470593108100062
- Shuker, R. (1994). *Understanding popular music*. Routledge.
- Simonton, D. K. (1980). Thematic fame, melodic originality, and musical zeitgeist: A biographical and transhistorical content analysis. *Journal of Personality and Social Psychology*, 38(6), 972 983. https://content.apa.org/doi/10.1037/0022-3514.38.6.972
- Srull, T. K., Lichtenstein, M., & Rothbart, M. (1985). Associate storage and retrieval processes in person memory. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 11*(2), 316 – 345. https://psycnet.apa.org/doi/10.1037/0278-7393.11.2.316
- Sumbly, Y., & Siraj, S. (2019). Brand experience A systematic review and research agenda. *Indian Journal of Marketing*, 49(5), 33–48. https://doi.org/10.17010/ijom/2019/v49/i5/144023
- Sutherland, M., & Sylvester, A. K. (2000). Advertising and the mind of the consumer. Allen & Unwin.
- Tan, S. L., Spackman, M. P., & Peaslee, C. L. (2006). The effects of repeated exposure on liking and judgments of musical unity and patchwork compositions. *Music Perception*, 23(5), 407 421. https://doi.org/10.1525/mp.2006.23.5.407
- Tom, G. (1995). Classical conditioning of unattended stimuli. *Psychology & Marketing*, 12(1), 79 87. https://doi.org/10.1002/mar.4220120106

- Wallace, W.T. (1994). Memory for music: Effect of melody on recall of text. *Journal of Experimental Psychology:* Learning, Memory, and Cognition, 20(6), 1471–1485. https://doi.apa.org/doi/10.1037/0278-7393.20.6.1471
- Yeoh, J.P.S., & Allan, D. (2020). Sounds like chicken: Sensory marketing and sound effects. *Indian Journal of Marketing*, 50(8–9), 19–31. https://doi.org/10.17010/ijom/2020/v50/i8-9/154689
- Yeoh, J. P. S., & North, A. C. (2010a.). The effects of musical fit on choice between two competing foods. *Musicae Scientiae*, 14(1), 165–180. https://doi.org/10.1177%2F102986491001400107
- Yeoh, J. P. S., & North, A. C. (2010b.). The effect of musical fit on consumers' memory. *Psychology of Music, 38*(3), 368–378. https://doi.org/10.1177%2F0305735609360262
- Yeoh, J.P.S., & North, A.C. (2012). The effect of musical fit on consumers' preferences between competing alternate petrols. *Psychology of Music*, 40(6), 709–719. https://doi.org/10.1177%2F0305735611408994
- Yeoh, J.P.S., & North, A. C. (2013). The effects of musical fit on consumers' choice when opportunity and ability is limited. *Pertanika Journal of Social Sciences and Humanities*, 21(1), 105–118.
- Zhu, R., & Meyers-Levy, J. (2005). Distinguishing between the meanings of music: When background music affects product perceptions. *Journal of Marketing Research*, 42(3), 333-345. https://doi.org/10.1509%2Fjmkr.2005.42.3.333

### **About the Author**

Dr. Joanne P. S. Yeoh is a practising violinist whose interest also lies in the social and applied psychology of music. She obtained her first degree (B.A. Hons) from Middlesex University, UK in 1998. Following that, she graduated with MMus from Leeds University, UK in 1999, and a PhD in psychology from Heriot Watt University, UK in 2009. She presently lectures at the Music Department of University Putra Malaysia.