All You Need is Love?
Communication Insights
From Pop Music's Number-One Hits

DAVID H. HENARD

North Carolina State
    University
dhhenard@ncsu.edu;
    henard@mac.com

CHRISTIAN L. ROSSETTI

North Carolina State
    University
clrosset@ncsu.edu

In response to calls for further investigation on the role of music and advertising, the authors of the current study analyzed popular music's most successful songs over a 50-year period (1960–2009). The current paper uses a combination of quantitative and qualitative approaches to uncover communication themes from nearly 1,000 songs that best resonated with mass audiences. The study identifies 12 communication themes and finds that they are used repeatedly over time; are largely emotional in nature; appear congruent with contemporary societal and environmental influences; and help predict a song's chances of commercial success. The results provide advertising professionals with a repertoire of themes for consideration in advertising and other marketing communications for mass audiences.

INTRODUCTION

Over the past 50 years, advertising has adapted to a continuous shift in the dynamics of consumer communications. From the Golden Age of Advertising to the new era of social media, the industry's interactions with consumers have evolved from one-way broadcasts into multi-way conversations.

One of the chief obstacles is to break through the clutter so that the message reaches as many target consumers as possible. Yet, today's consumers are more psychologically and technologically empowered to either engage with or ignore marketers than ever before. It is important, therefore, that advertisers develop messages that resonate with consumers on a deeper level, have relevance to their daily

---

Management Slant

- Consumers are more psychologically and technologically sophisticated than ever before, requiring new approaches to advertising.

- Marketing communications have evolved from one-way broadcasts to multi-way conversations. To be effective, advertisers must "join the conversation" rather than broadcast content.

- Emotional and cognitive themes can be identified in popular music lyrics and, therefore, help advertisers to better join the conversation.

- These themes, while constant over decades, vary according to contemporary environments, providing advertisers with a temporal guide to consumer conversations.

- Individuals' desire to express themselves in the context of current events and advertising plays a role in the social identity of individuals. Thus, future research aimed at uncovering the contemporary social realities of consumers can enhance advertising content.

---

lives, and acknowledge their social circumstances (Aitken, Gray, and Lawson, 2008).

With this in mind, the authors of the current study looked to popular music's top-rated songs for insights on message composition and on identifying consumer communication themes from the audience's perspective.

Throughout time, musical artists have created messages using lyrics and tunes. Those who became successful commercially wrote songs that resonated with a broad audience. Uncovering commercially successful communication themes increasingly is vital for advertisers—perhaps just as important as understanding the tools, techniques, and technology associated with advertising campaigns.

The relationship between an advertised message and product performance often is mediated by consumer perceptions of the good or service advertised. By contrast, individuals consume (*i.e.*, purchase, download, airplay) songs based on the characteristics of the song, with little-to–no mediation effect. This direct relationship between message and consumption provides an opportunity to more directly assess the relationship between message content and marketplace acceptance. For this and other reasons, the authors believe that popular music can provide advertisers with a template for successful audience communication.

LITERATURE REVIEW

The role of music in advertising has expanded dramatically to a point where music—especially popular music—plays a significant and integral role in advertisements (Allan, 2006, 2008; Dunbar, 1990; Hecker, 1984; Stewart, Farmer, and Stannard, 1990).

The inclusion of popular music in commercials is due to music's ability to provide relevance or perspective for consumers (Allan, 2008). This is consistent with the view that individuals interpret messages using cultural knowledge that is handed down across generations, drawn from other media information or past experience and congruent with their own life themes (Kenyon, Wood, and Parsons, 2008). Individuals simply do not decode media content for information; they also process it for meaning (Hirschman, 2003; Hirschman and Thompson, 1997; McCracken, 1987; Mick and Buhl, 1992).

Furthermore, advertisements featuring popular music are more effective than those without it, and advertisements with music vocals (*i.e.*, lyrics) are more effective than pure instrumentals (Allan, 2006). Music long has been viewed as an effective and efficient means of eliciting moods and influencing individual behavior (Alpert and Alpert, 1990; Bruner, 1990), and the association between music and information processing in the brain is well established (Schmidt and Trainor, 2001).

Yet, while music widely is recognized for its relevance and importance to advertising, some in the field note a relative lack of research on the topic (*e.g.*, Allan, 2008; Bruner, 1990; Stewart *et al.*, 1990).

The question of whether individuals independently processed lyrics and tunes—coupled with the lack of a quantitative methodology—forced previous research to focus on tunes and largely ignore the impact of song lyrics. Even when the inclusion of lyrics was shown to improve the effectiveness of advertisements (*e.g.*, Allan, 2008), researchers were unable to empirically evaluate those lyrics.

Certain developments make such an evaluation conceptually and empirically possible:

- An assortment of behavioral and neuropsychological research has demonstrated the independence of semantic and harmonic processing in the brain (*e.g.*, Barongan and Hall, 1995; Besson, Faita, Bonnell, and Requin, 1998; Peretz *et al.*, 1994; Wester, Crown, Quatman, and Heesacker, 1997). Simply stated, individuals process lyrics and tunes independently while listening to songs. From a marketing communications perspective, this independent processing heightens the importance of understanding the impact of the lyrical component of music on consumers in addition to that of tunes.

- Computational text analysis software makes sophisticated quantitative analyses of lyrics (and any written/spoken communication) possible.

The current study seeks answers to three fundamental research questions:

- Can communication themes quantifiably be identified in popular music lyrics?
- If identifiable, can these themes predict a song's commercial success or failure?
- If both of the above are true, what are the practical implications for advertising and marketing communications?

THE RELEVANCE OF MUSIC LYRICS TO ADVERTISING COMMUNICATIONS

Of the multiple forms of communication with which consumers interact, people report listening to music more than any other form, highlighting the integral role that music plays in our lives (Rentfrow and Gosling, 2003).

Music, arguably, is the dominant communication medium for which the commercial success depends on striking a balance between broad audience appeal and individual preferences. This is reminiscent of the advertiser/consumer dyad. Musicians develop musical styles at specific times and within a specific cultural context much like the field of advertising. Neither the communicator nor the

recipient fully can appreciate a message without some frame of historical reference.

This degree of contextual and temporal variance requires a *longitudinal* understanding of how successful recording artists have communicated with their audiences. Such an understanding over time can provide practitioners with multi-level insights, ranging from the construction of effective advertising communication themes to simply deciding which song might be appropriate for a specific advertisement at a specific point in time.

The commercial success of a song is determined by the audience's evaluation of both its tune and lyrics. By focusing on song lyrics, the authors seek to capture message themes that resonate best with a large number of consumers—over a sustained period of time—with the intent of understanding why some songs are more commercially successful than others. Although the influence of tunes cannot be discounted as a factor in a song's chart success, a combination of statistical methods does allow the authors to tease out the influence of lyrical themes.

Music is one of the oldest methods of entertainment and cultural transmission and is found in various forms in every known culture (Wallin, Merker, and Brown, 2000). This fact gives credence to the view that popular music is relevant to our interest in consumer communications. Music is framed best as a socially situated, communicative experience, which implies two important consequences (Scott, 1990):

- Interpretations of music not only are idiosyncratic but largely are shared.
- The interpretation of each musical communication is shaped by the sum of an individual's past listening experiences.

Thus, it is important to view marketing communications as having a connection to social and cultural issues and not as

Much like advertising, there is a large and indefinite potential range of audiences associated with music communications.

separate, disconnected activities (Thompson, 1994). Framing music as a socially situated, communicative experience (Scott, 1990) is appropriate in this instance as songs are constructed by artists to affect audiences in much the same way that advertisements and jingles are designed to have an impact on consumers.

Recent psychological research suggests that an individual's musical preferences are a representation of his or her attitudes, beliefs, and needs (North and Margreaves, 2007). Music represents a social situation in which the audience primarily is involved in receiving symbolic information produced by others to whom they cannot directly respond but with whom they can form bonds of friendship, affection, or loyalty (Thompson, 1994). Again, this is analogous to the relationship between advertisers and consumers.

Much like advertising, there is a large and indefinite potential range of audiences associated with music communications. This entails a certain narrowing of the range of symbolic cues that can be employed by the recording artist (Thompson, 1994). In essence, the most popular, commercially successful songs strike a chord with a large, diverse population of individuals in the same manner that endearing advertisements do.

Successful communications—musical or otherwise—do not tell us how to react or what to do. Rather, they present carefully constructed stimuli that evoke certain inner connections that elicit a desired behavior or reaction (Schwartz, 1981). Although no one can make *a priori* predictions as to the cognitive or affective themes

found in popular music's number-one hits, it is conventional thought to believe that musical effects can be equated with emotion (Dowling and Harwood, 1986, p. 202; Scott, 1990), as most electronic media emphasize feeling, appearance, and mood (Meyrowitz, 1994).

Advertising scholars associate such appeals with slower wear-out and lowered consumer forgetting (Bass, Bruce, Majumdar, and Murthhi, 2007; Friestad and Thorson, 1986; Pechmann and Stewart, 1989). These facts lend further support to the belief that a greater understanding of music lyrical themes can foster more successful advertising communications.

In sum, the authors of the current study looked to popular music for a variety of reasons:

- With regard to music in general, individuals appear to be "hardwired" to respond favorably to it, and the effectiveness of music in communication is demonstrated from the time of human infancy (Fernald, 1993; Rock, Trainor, and Addison, 1999; Trainor, Clark, Huntley, and Adams, 1997).
- There is ample research evidence to suggest that music (both lyrics and tunes) is an effective component of advertising yet sufficient evidence that more research is warranted.
- The neuropsychological research substantiation that individuals process music lyrics and tunes separately means that a greater understanding of the impact of music lyrics will complement our base of knowledge on the effects of tunes.

- The development of sophisticated quantitative software allows for an analysis of music lyrics that heretofore was unavailable.

METHODOLOGY

Data Source

Investigations of music lyrics neither are new nor confined to a single research stream (*e.g.*, Cole, 1971; Dukes, Bisel, Borego, Lobata, and Owens, 2003; Kuhn, 1999; Whissell, 2008). Yet, although much of the extant research has focused on the music of a particular artist or music genre, the research questions proposed in the current study call for a broad and objectively comprised set of lyrics.

As such, *Billboard* magazine's "Hot 100" song list is an appropriate data source for this research. In 1946, *Billboard* began to compile and publish statistics on the sales, airplay, and juke-box play of popular songs. This compilation and reporting system evolved until 1958, when the "Hot 100" songs list was developed. This list quickly became the U.S. industry standard for measuring the success of music singles and largely remains so today. The top 100 songs currently are reported weekly and are ranked on airtime impressions, sales data (both calculated by Nielsen), and online streaming activity. The list has always been composed of some combined measure of sales and airplay metrics indicators of commercial performance.

Collecting and Cleaning the Lyrics

To include a sufficient time horizon for historical analysis and simultaneously focus on songs that would be composed of lyrics best capable of reaching a diverse audience, all number-one songs between 1960 and 2009 ultimately were chosen for analysis. The authors' premise was that songs ranked number-one were those that best resonated with the public; therefore, only those songs that reached the top spot

were analyzed. This resulted in a list of 956 songs. These songs remained number one for an average of 19 days with a range of seven to 112 days. The median length of time at number one was 14 days.

After each song detail was catalogued, a search for the lyrics was performed using multiple electronic search engines. Located lyrics were then converted to text format for subsequent analysis. The lyrics for one song could not be located, and 12 additional songs were instrumentals having no associated lyrics, resulting in 943 songs (98.6 percent) for the final empirical analysis. There were a very few instances in which a song was number one on the chart for a period of days, then dropped below the top rank for a short period of time, and later returned to the top spot. In those instances, the song lyrics were analyzed once and the cumulative length of days spent at number one was listed once. Where a song reached the top spot across a period of years (*e.g.*, remix/remake by different artists in different years), the song lyrics were captured as separate occurrences.

There are 10,556 words across all songs and all years. The statistical analysis of so many lyrics over such an extended period of time understandably is complex. In the initial step of data purification, the authors independently catalogued all words and examined them for any spelling or punctuation irregularities that could adversely affect the analyses, correcting those words identified as empirically problematic (*e.g.*, dat → that; U R → you are; gonna → going to).

The authors next identified the top 1,000 most influential words, and each independently suggested additional corrections. To facilitate the analysis without losing the richness of the data, the authors independently combined similar words into more manageable and coherent terms that effectively comprised the diverse terms

(*e.g.*, Maria, Loretta, Maggie → female name). Lists were then compared to determine a final coding scheme. The few areas of initial discrepancy were rectified by discussion and additional examination of specific song lyrics.

Analyzing the Lyrics

One methodological goal of this manuscript was to go beyond simplistic word-count analysis and utilize a computational text analysis that allowed the researchers to subject written communication to more rigorous methodological evaluation.

Lyrics were analyzed using the centering-resonance analysis method of computerized text analysis (*cf.* Corman, Kuhn, McPhee, and Dooley, 2002; McPhee, Corman, and Dooley, 2002). Centering-resonance analysis (CRA) draws on centering theory (Grosz, Weinstein, and Joshi, 1995) and uses content analysis to code text by empirically representing it as a network composed of words and their grammatical relationships (Carley and Kaufer, 1993; Danowski, 1993).

In essence, mechanical coding rules replace latent methods that simply rely on human coders. This reduces the level of bias in the coding process allowing for a more detailed analysis of complex groups of words, sentences, and thematic relationships, which is appropriate to this research. The CRA method is an emerging empirical methodology that is demonstrated to provide convergent, divergent, and face validity (Corman *et al.*, 2002) and is used increasingly in a variety of research studies (*e.g.*, Canary and Jennings, 2007; Lee and James, 2007; Lichtenstein, Dooley, and Lumpkin, 2006; Rossetti and Dooley, 2010; Tate, Ellram, and Kirchoff, 2010).

CRA works by using natural language processing to break text into sentences to identify the various parts of speech. To form a CRA network, nouns and adjectives are extracted in the form of noun phrases and serve as nodes in a network. Words

that are contiguous or in the same noun phrase are connected together creating the links in the network.

CRA then calculates the relative, overall influence of each word (Freeman, 1979). Influence is defined as the extent to which a word figures prominently in a series of relationships with other words. Using this operational definition, the influence of a word is related to its ability to span conceptual boundaries and effectively implies that the most influential words represent the structural center of a CRA network.

After two or more networks are derived from a set of texts, their "resonance" (*i.e.*, similarity) is measured using a standard cosine-similarity metric (Corman *et al.*, 2002). Resonance measures the fraction of words that are shared by two texts, weighted by the influence of each word in each text. The resonance values can then be used to create a similarity matrix, which is empirically similar to a correlation matrix.

The resulting similarity matrix then is used as input into various multivariate methods.

Creating the Datasets

The authors began by creating a dataset with all top songs across all 50 years. Five datasets of song lyrics corresponding to the decades in which the song was ranked number one (*e.g.*, 1960–1969; 1970–1979) then were created. Each dataset contained individual text files corresponding to each unique song lyric and was analyzed creating a CRA network for each song. This yielded an influence score for each word in every song. The number of influential words ("nodes"), the density of those words, and their focus were recorded. "Density" refers to the number of word connections relative to the number of statistically possible connections, and "focus" refers to the degree of network density around the most influential words (See Table 1).

RESULTS AND DISCUSSION
Identifying Primary and Secondary Themes

As stated in the onset, the first research question is whether one can identify themes within the top songs. Given the complex nature of these data, both quantitative and qualitative analyses are necessary for interpretation. A factor analysis was conducted using the most influential words in the 1960–2009 lyrics dataset as a guiding parameter. As the goal of this research was to discover lyrical themes that are present—rather than test for the appearance of a specifically hypothesized number of themes—the factor analysis should be viewed as exploratory in nature.

Although several linear combinations were produced from the initial, unrotated factor analysis, interpretability of factors is crucial. For these specific data, solely relying on an empirical cutoff point (*e.g.*, Eigenvalue, correlation) to determine the number of factors is insufficient. Therefore, the key influence words were evaluated independently for each identified factor, and a list of descriptor labels appropriate to each factor was then created.

Songs associated with each factor then were identified, and the lyrics of each song were reviewed jointly to more accurately identify the themes as represented in the raw data. Evaluations then were compared, and the inter-rater reliability between the authors was greater than 95 percent. Discrepancies were rectified via discussion, and an overall theme label was assigned to each unique factor (See Table 2).

Identifying themes from the 50-year data provides one with the ability to evaluate the use of lyrical communications. Yet, by their broad nature, the resulting themes could tend to suppress statistically other themes that might be present and also vary by decade.

To tease out any secondary themes from these data, a second dataset was

TABLE 1

Centering-Resonance Analysis of *Billboard* #1 Songs by Decade

	1960s	1970s	1980s	1990s	2000s
Nodes:	1,960	2,266	1,786	2,328	3,019
Density:	0.003	0.003	0.004	0.003	0.002
Focus:	0.149	0.124	0.132	0.169	0.150
Influential Words:	Love	Love	Love	Quantity	Quantity
	Quantity	Quantity	Quantity	Baby	Baby
	Baby	Girl	Baby	Love	Girl
	Female name	Good	Time	Way	Way
	Time	Baby	Night	Man	Man
	Man	Man	Heart	Time	Time
	Good	Night	Man	Girl	Good
	Girl	Way	Eye	Dance	Nigga
	Heart	Time	Way	Life	Love
	Night	Eye	Life	Night	Boy

•*Note: Influential words are listed in descending order of importance.*

TABLE 2
Primary Communication Themes and Associated Descriptors (1960–2009)*

	Loss	Desire	Aspiration	Breakup	Pain	Inspiration	Nostalgia
Associated Descriptors:	Sadness	Longing	Dreams	Out of Love	Mixed Emotions	Optimism	Romantic
	Heartache	Wanting	Other Worldly	Loss	In the Moment	Energetic	Oneness
	Losing Love	Anticipation	Longing	Separation	Sadness	Vibrancy	Togetherness
	Loneliness	Lust	Anticipation	Goodbye	Change	Dancing	Dreamy
	Unrealized Romance	Coveting	Hope	Person-specific	Goodbye	Connectedness	Idealistic
Key Influential Words:	Heart	Move	Dream	Waiting	Bad	Life	Feeling
	Love	Tonight	Heaven	Time	Good	Everything	Morning
	Apart	Baby	Tonight	Leaving	Goodbye	Music	Woman
	Lonely	Body	Moon	Tear	Kiss	Good	Heart
	Leaving	Trying	Move	Goodbye	Moment	World	Time
	Feeling	Dance	World	Lonely	Woman	Dancing	Heaven

•*The 50 most influential words that appeared in at least 25 different song lyrics across all years were used to populate the dataset used to identify these themes. Key influential words are listed in descending order of influence.

created containing the top 250 words that appeared in at least five songs. The 50 previously identified words first were removed from the dataset, and principal component analysis was then performed. This ensured that the secondary analysis was granular enough to capture transitory themes yet not confounded by the previously identified primary lyrical communication themes (See Table 3).

Testing for Bias
Identifying the dominant lyrical themes allows one to gauge their level of appearance in communications over the 50-year time frame. Although an analysis of every commercially released song between 1960 and 2009 is beyond the scope of this manuscript, the authors are cognizant of the fact that, while using the number-one songs to populate the database clearly

allows one to evaluate commercially successful lyrical communications, the results are somewhat skewed by a success bias: Less commercially successful song lyrics are not represented in these data. Thus, the data were broken into quartiles by the length of days at number one to contrast the use of lyrical themes across the top and bottom 25 percent of songs. In this manner, the authors sought to

TABLE 3
Secondary Communication Themes and Associated Descriptors (1960–2009)*

	Rebellion	Jaded	Desperation	Escapism	Confusion
Associated Descriptors:	Rebellious	Reflective	Helpless	Fantasy	Confused
	Counter Culture	Jaded	Trapped	Escape	Distant Memories
	Rock 'n' Roll	Cynicism	Desperate	Ecstasy	Pointless
	Music	Trapped	Cornered	Love as a Drug	Secrets
		Contemplative	Coveting	Sex	
Key Influential Words:	Favorite	State	Corner	Deal	Memory
	Sunday	Favorite	Throw	Ecstasy	Suitcase
	Playing	Mirror	Line	Flying	Circle
	City	Sunday	Guess	Inside	View
	Rock	Heavy	Promise	Question	Secret
	Radio	Jet	Stupid	Grooving	Magic

*The 250 most influential words that appeared in at least five different song lyrics across all years were used to populate the dataset employed to identify these themes. The 50 influential words identified in the development of primary themes were removed from consideration prior to development of these secondary lyrical themes. Key influential words are listed in descending order of influence.

evaluate whether the use of themes differed across quartiles. Recent-era songs (1990–2009) tend to remain, on average, at number one longer than earlier-era songs (1960–1989). Thus, to eliminate any temporal bias in the analysis, the top 25 percent and bottom 25 percent of number-one songs from *each* year (1960–2009) were selected to populate the quartiles. No statistical difference in the use of primary or secondary themes across the quartiles was found.

Certain Themes Predict Commercial Success

The second research question was whether any identifiable themes could predict commercial success or failure. The authors are aware that a song's commercial success or failure is influenced by both its lyrics and its tunes. Therefore, in assessing commercial success, the effect of song tunes was controlled to the greatest extent possible by limiting this portion of the analysis to the catalogues of individual artists. Specifically, the authors strove to isolate the impact of lyrical themes from specific tunes and musical styles popular in each decade when assessing the commercial success of a specific theme by keeping recording artists constant.

For each of the five decades, the top two most successful recording artists as measured by weeks at number one on the *Billboard* Hot 100 list were identified (See Table 4). The authors captured as much of the entire song catalogue for each artist as was publicly available, noting which songs made, or did not make, the *Billboard* Hot 100 list. To ensure that there was a variance in theme usage across the catalogues of the top ten artists, a factor analysis was conducted for each artist to identify key influential words and themes across their entire song catalogue (both Hot 100 and non-Hot 100 songs).

Results appropriately indicated a variance in themes for each artist. In the same manner as detailed in earlier analyses, the songs were converted to text files and analyzed using the CRA technique to determine influential words and their respective influence scores. The seven primary theme factor scores for each song's lyrics then were calculated using the previously determined factor score loadings. Factor scores then were standardized. The 3,094 songs were then coded "1" if they reached Hot 100 status and "0" if they did not.

Direct logistic regression was used to determine whether the identified primary themes could predict whether a song would reach the *Billboard* Hot 100 list (*i.e.,* "commercial success") or not. Logistic regression was chosen because of

- the technique's flexibility, relative to other methods;
- its freedom from certain statistical restrictions; and
- the fact that the authors proposed no specific hypotheses regarding the relative importance of any particular song theme or interaction of themes.

The method allowed one to predict group membership from direct and first-order interaction theme effects. The resulting model had Cox and Snell and Naqelkerke pseudo R^2 values of 0.21 and 0.28, respectively.

In response to the second research question, the authors found that the presence of the identified primary themes could predict with 73.4 percent accuracy whether a song will or will not be commercially successful. Specifically, 24.3 percent of the Hot 100 songs were correctly identified as making the top 100 list, and 81.6 percent of the non-Hot 100 songs were correctly identified as not making the list.

TABLE 4
Top 10 Artists by Days at Number One (1960–2009)*

Decade	#1 Songs	Days at #1	Artist	Total Songs*	Hot 100 Songs**
1960s	6	225	The Beatles	351	61
	3	99	Elvis Presley	747	133
1970s	3	116	Rod Stewart	383	57
	4	109	Bee Gees	368	39
1980s	2	89	Paul McCartney	354	45
	2	89	Diana Ross	355	38
1990s	6	288	Mariah Carey	217	29
	2	187	Boyz II Men	115	17
2000s	2	180	Black Eyed Peas	91	11
	3	165	Beyoncé	113	15
Totals	33	1,547		3,094	445

*Two procedures were performed to test the robustness of the authors' model:
- The sample was randomly split and logistic regression was performed on both sub-samples. This yielded statistically identical results.
- A similar model was formulated using general linear model procedures outlined in SPSS 17.0. A negative binomial distribution was assumed due to the high ratio of non-performing songs. The model yielded similar statistically significant terms to the logistic regression analysis and had relatively good fit: deviance/degree of freedom = 0.384 and CAIC = 3,646.
** 1960–2009

To the authors' knowledge, this was the first time that research empirically had quantified lyrical themes in popular music and verified their ability to map with a song's commercial success.

Theme Usage Varies over Time

To complement the presentation of the primary and secondary themes and the associated descriptor words that comprise them, a graphic representation of the results provides additional insights.

The usage of themes is presented in these figures as a relative level of appearance. Namely, one can evaluate the relative use of a single theme across decades and the relative use of various themes within a specific decade in relation to a mean level of appearance. One can see that the use of the primary lyrical themes in the 1960s and 1970s was relatively less than that of the 1980s–2000s, which could indicate that themes other than the primary ones were more dominant in the first two decades or that no clearly dominant themes emerged from songwriters during those periods (See Figure 1).

The 1960s and 1970s in the United States were a socially turbulent time frame and, although one might expect themes such as loss, pain, and nostalgia to be well represented in those time periods, the primary themes uncovered here are more closely tied to *personal* loss, pain, and so on (*e.g.*, romantic relationship) than to societal issues (See Figure 2).

Interestingly, Coca Cola's now infamous "Hilltop" television-advertising campaign tapped the "Inspiration" theme through the use of original lyrics (*e.g.*, "I'd like to teach the world to sing") that mapped closely to one of the two relatively dominant themes of the 1970s. By contrast, the 1980s and 1990s were relatively less turbulent, and the 2000s again brought about an increased degree of social turmoil and a strong resurgence of the "Inspiration" theme.
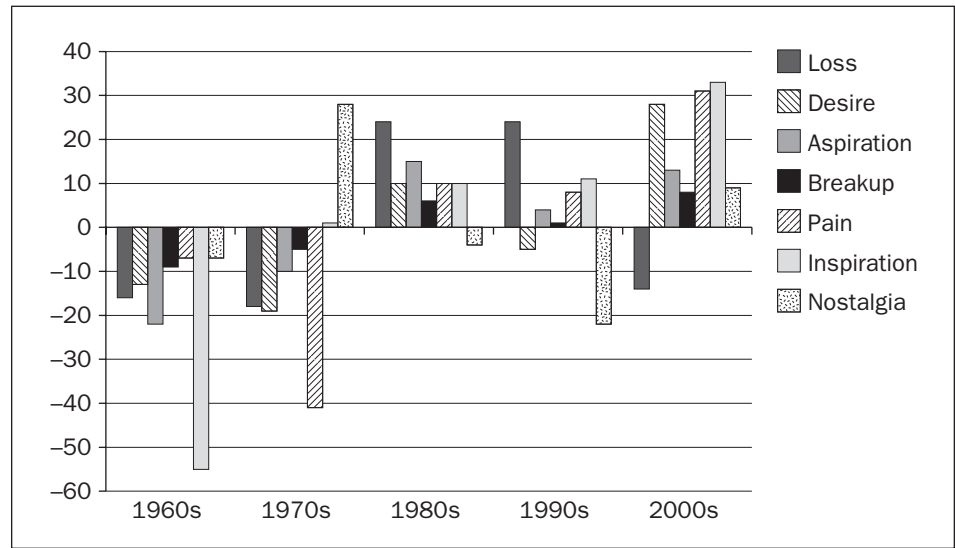

Figure 1 Occurrence of Primary Lyrical Themes by Decade
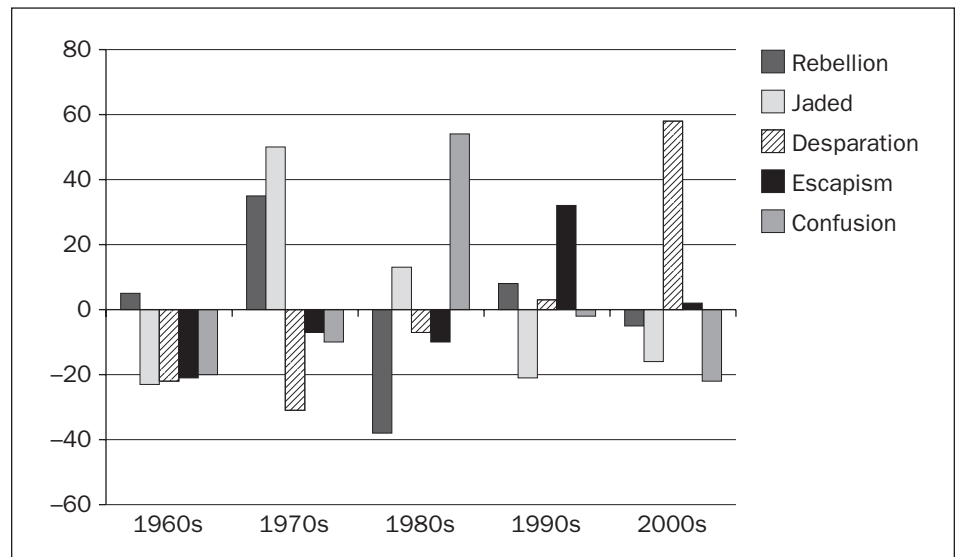

Figure 2 Occurrence of Secondary Lyrical Themes by Decade

Certain patterns of usage emerge from the primary themes analysis:

• The "Inspiration" theme shows a dramatic evolution from its relative non-use in the 1960s to its prominent appearance in the 2000s.
• The "Nostalgia" theme virtually stands distinct from the other primary themes in the 1970s, and yet it decreases in usage until the 2000s. "Loss"

(*i.e.*, personal loss) is a dominant theme in the 1980s and 1990s—decades generally viewed as times of personal abundance in the United States. It is interesting that these were the two relatively least environmentally volatile of the decades evaluated and could indicate that popular lyrics during turbulent times focus less on individual loss and more on collective or other broader issues.

- With the exception of the 1970s, the "Loss" and "Pain" themes appear to be offsetting.
- Among the primary lyrical themes, the "Breakup" theme appears to be used fairly close to mean levels with far less fluctuation across decades than the other six themes. This could either indicate that, outside of the 1960s and 1970s "Breakup" is a relatively underrepresented lyrical theme or that is a theme that is constantly represented among commercially successful lyrics and not as subject to temporal or environmental fluctuations as are the other primary themes. The "Breakup" theme historically also has been used to pitch an assortment of goods ranging from cleaning products and electronics to automobiles and Yellow Pages.

When examining the secondary lyrical themes, the greater disparity in the balance of theme usage relative to the primary themes is striking. The previous pattern of relative underrepresentation of themes in the 1960s again is present, with the exception of the "Rebellion" theme. There is a substantial fluctuation in the use of "Rebellion" across the 50 years, indicating that its usage ties closely with environmental cues. In the 1970s, the authors noticed a sharp contrast in the usage of the "Rebellion" and "Jaded" themes relative to the others. Interestingly, this was the peak relative usage for both themes.

The "Desperation" theme generally is underrepresented until the 2000s, where it dominates. This is reminiscent of the patterns exhibited by the primary themes of "Pain" and "Desire" and could track closely to the post-9/11 social environment. Though the use of "Desperation" in advertising may be more suited to mental health and pharmaceutical goods, the relative emergence of this (or any) theme in top hits could serve as an environmental

When examining the secondary lyrical themes, the greater disparity in the balance of theme usage relative to the primary themes is striking.

indicator of the general level of need for certain product classes.

There also is an intriguing juxtaposition between the "Rebellion" and "Confusion" themes across each of the decades, suggesting that, at times when "Rebellion" themes are most well received, individuals are least confused and vice versa. The "Desperation" and "Escapism" themes track similarly across the decades, with "Escapism" rising in the 1990s and "Desperation" elevating in the next decade. It could be that those periods of time where individuals are searching for escape and fantasy are followed by periods where they feel trapped and helpless.

In sum:

- The 1960s were marked by themes such as "Pain," "Nostalgia," and "Rebellion."
- The 1970s exhibited the dominant themes of "Nostalgia," "Rebellion," and "Jaded."
- The 1980s popularized "Loss," "Aspiration," and "Confusion."
- In the 1990s, the most widely used themes among the top songs were "Loss," "Inspiration," and "Escapism."
- The first decade of the 2000s was punctuated by themes such as "Inspiration," "Pain," and "Desperation."

Interestingly, McDonald's media communications over the last 50 years have closely mapped to the contemporaneous environment, evolving from the extended use of the word "you" in the 1960s and 1970s to more "Escapism" tones in the 1990s to the more recent upbeat use of the "Desire" theme and the emphasis of the word "smile" across their advertising mix.

CONCLUSION
Implications for Practice

The authors sought an audience perspective on communication themes using one of the most popular forms of human communication—music. The song lyrics evaluated in this research should be viewed as those derived from songs that were best received by a broad audience.

This research allows one to affirmatively answer the first two research questions, and the practical implications for songwriters are obvious. Yet, the third question asks for the practical relevance that the results have for advertising and marketing professionals. Broadly speaking, there are three overarching findings:

- Lyrical communication themes from commercially successful songs can be identified and are observed consistently over a 50-year span of time.
- These themes are overwhelmingly composed of emotional versus rationale content.
- These themes vary in relative usage across this time span.

The results support the view that a successful communication is likely to use a narrow range of symbolic cues or themes (Smith, 1982; Thompson, 1994). One practical implication of this is that advertisers should identify which cues or themes best resonate with their core audience.

For instance, Dove's acclaimed "Evolution" campaign relied on emotional themes such as "Desire," "Inspiration," and "Pain" that were timeless and well understood by their target consumers whereas Samsung's

recent "The Way We're Wired" commercial overtly emphasizes the "Aspiration" theme across a spectrum of recognizable life events.

Similar to songwriters, advertising professionals face pressure to produce commercially successful material. Media communication entails a distance between the communicator and the audience and, because message production and consumption occur across a space, this distance generally is bridged in practice via a combination of organizational strategies, presentational devices, and shared understandings. These understandings develop over time and define the legitimacy, normality, and boundaries of the communication process.

When themes are used repetitively over time, the result is a connection with the audience that extends beyond the power of any individual message in isolation (Moriarty, 1996). Coca Cola's repeated use of the word "real" in advertisements and tag lines across several decades is one example of this repetition as is their seasonal use of iconic images of Santa Claus in holiday ads.

Thus, one implication from this study's first finding is that practitioners need to identify themes that consistently resonate with their specific target audience on a deeper, innate level and consistently weave that theme throughout their integrated marketing communications.

This current research highlights a repertoire of widely accepted communication themes for consideration. The active role of audiences in media communication is important and, to create a successful message, practitioners should focus on universal values and shared experiences (Condit, 1985). Similar advice holds for global advertisers looking for ways to standardize international ad messages. For example, Absolut Vodka's "In An Absolut World" campaign used numerous appeal approaches yet consistently touched on the universal themes of "Inspiration," "Nostalgia," and "Escapism."

The authors do not argue that media communications should always center on one or more of the 12 themes identified here; yet, the implications of these findings are that the incorporation of these or similar themes in consumer communications likely could foster greater commercial success than a media communication in which they are absent.

The communication themes identified resonate with a diverse and large population of consumers and extend beyond the field of music. These themes are universal in the sense that most individuals have experienced them at some point and can relate to the message presented. They transcend geography and time and are themes that are replete across classical literature and art, thus demonstrating their rigor.

Each of us experiences pain, loss, and confusion. At some point in our lives, we—as consumers—each seek inspiration, aspire to greater things, or reflect nostalgically on the conjured idealism of the past. Likewise, we can become jaded, desire something different, and rebel against our current situation. These themes are universal. They are classic. They speak directly to our core humanity. They are communication themes with broad applicability and have stood the test of time, and that can help advertisers connect with audiences.

The second broad finding was that the successful music themes were overwhelmingly emotional in tone, which complements previous findings on the role of emotional appeals and advertising effectiveness (Binet and Field, 2009). The Beatles might have been slightly wrong with their prescription that "all you need is love" but, with so many thematic facets of the emotion identified here, there is little doubt that communications centered on emotional themes will have mass audience appeal.

Effective emotional appeals tend to be more generalized than cognitive appeals and rely on a well-formed frame of reference in the audience, which gives emotional appeals a broader target audience and broader appeal (Bettinghaus, 1973). Coupling this view with research demonstrating that the affective intensity of communication appeals are capable of evoking strong and non-random emotional responses (*e.g.*, Bruner, 1990; Edell and Burke, 1987; Holbrook and Batra, 1987; Larsen and Diener, 1987; Moore, Harris, and Chen, 1995), it is reasonable to expect that emotional themes will resonate with broad audiences well and that themes identified in commercially successful songs should translate into successful advertising communications as well.

Advertising professionals have great leeway in how themes are tactically communicated to consumers. For example, Sprint currently uses humorous twists on the "Breakup" theme. Nike's Inspiration-themed commercials take numerous media forms, yet the company now is actively expanding the theme via multiple social media vehicles such as YouTube, Twitter, and various sponsored blogs. Apple has been successful in multiple mediums by leveraging the "Desire" theme and Dodge, in keeping with the current social and environmental context, increased its "Nostalgia"- and "Inspiration"-themed message with the "Freedom" campaign.

Likewise, understanding the historical relevance of themes can provide a guide to assist in generational targeting campaigns using popular songs or song themes from an audience's formative years to target them in later years as demonstrated by Cadillac's "Break Through" campaign in the 2000s that featured the music of Led Zeppelin.

In sum, this research validates insights across several academic disciplines by highlighting the fact that commercially successful communication themes in popular music are those that resonate with core human experiences. They employ a relatively narrow range of themes that evoke emotional reactions, have a historical context, and complement the audience's contemporary social environment.

As such, the authors believe that communication themes gleaned from popular music's most commercially successful songs provide advertising professionals with a strong indication of which themes best resonate with a mass audience at a particular point in time.

Implications for Research

Though even something as simple as the frequency of music use in commercial messages largely remains unknown, the more concerning issue is that there is no definitive answer as to how music works in a marketing sense (Allan, 2008). Past research successfully has looked at the impact of music, needledrop, or jingles (*e.g.*, Alpert and Alpert, 1990; Gorn, 1982; Oakes and North, 2008; Scott, 1990; Zhu and Meyers-Levy, 2005) and has provided us with strong insights.

The current paper is presented as an additional step in deconstructing music for its potential advertising applications and in creating future research avenues for academics. When developing original music for advertisements, themes, or other communication efforts, marketers undoubtedly will draw on the intuition and training of professional musicians (Bruner, 1990). It is hoped that this research can make these efforts more productive. Those researchers specifically interested in the construction or use of music in advertisements can keep tunes constant while changing lyrics to test the isolated effect of particular lyrics

Future investigations could examine thematic use across specific song genres or determine how well themes resonate across certain demographic characteristics.

or lyrical themes on individuals in a variety of settings.

Future investigations could examine thematic use across specific song genres or determine how well themes resonate across certain demographic characteristics. Likewise, future research can explicate the impact that cross-cultural audiences have on the commercial effectiveness of lyrical or other communication themes. Those researchers interested in a more precise return on investment can expose lyrical themes to explicit measures of financial return.

Research indicates that songwriters use the same types of language in songs as are found in real-life communication and relationship situations (Kuhn, 1999), and the linguistic analysis of song lyrics to investigate an individual's use of language has also sparked recent research interest (*e.g.*, DeWall, Pond, Campbell, and Twenge, 2011; Pettijohn and Sacco, 2009).

Thus, the focus in the current paper on song lyrics has a practical bearing on the composition of broader marketing communications and serves as a first step for other researchers interested in the impact of themes on audience communication. By analyzing communication themes across 50 years of music, the authors were able to identify the evolution of certain communication themes.

The observation of emotional relative to cognitive themes was expected, yet the lopsided usage is insightful and begs for additional research to understand why

such a disparity exists. Additional research mapping the commercial or psychological (in)effectiveness of specific themes to specific brands also could provide practitioners with insights into how certain brand-theme pairings do or do not resonate with consumers.

The real content of an electronic communication is the relationship between the composition, the message, and the stored information in the minds of those who receive it (Schwartz, 1981). Social identity does not rest in individuals but in a network of social relations (Meyrowitz, 1994), and advertising can play a role in the establishment of these identities, often acting as a mirror that reflects back an image of society to itself (DeWall *et al.*, 2011; McQuail, 1987).

Most well-accepted models of communication discount the assumption that individuals simply receive messages from communicators and account for the desire to express themselves and their views to other individuals about current events (Pingree, 2007). As such, academics should conduct cross-disciplinary research aimed at uncovering the contemporary and historical social realities of various audiences with the goal of enhanced audience communication.

Similarly, a congruency analysis of contemporary song themes and popular public opinion might provide researchers with insights into themes that are likely to be successful in the near term. The authors' results also indicate a thematic carryover

effect across congruent decades. Such knowledge can be used to construct and test communication themes that assist practitioners with timely and targeted message development.

Beyond lyrical analyses, the CRA technique represents an empirical leap over previous word-count methodologies and can be applied to a host of marketing communications including advertising copy, e-mail communication, promotional materials, blogs, and the like.

In the advertising profession, where the spoken or written word plays such a prominent role, the ability to empirically evaluate copy presents both practitioners and academics with a strong analytical tool. Future research can identify which themes, either independently or combined, are suited best for specific communication vehicles, brands, products, or services ranging from advertising copy to blog content.

Limitations

Some limitations of this research should be noted. The authors did not measure tones, style, beat, or melodies and, as such, they do not account for the non-lyrical appeal of the songs in the current research. Since non-lyrical song components have been previously studied (*e.g.*, Alpert and Alpert, 1990; Gorn, 1982; Oakes and North, 2008; Scott, 1990; Zhu and Meyers-Levy, 2005), the authors of the current study purposefully chose to focus attention on lyrical message themes.

Although the method for determining commercial success and predictive capability somewhat controlled for the impact of tunes, the authors were unable to completely isolate the effectiveness of a lyrical theme from its associated tune. The authors did not measure total revenues generated from the songs in their database because the focus of this research was on consumer communication themes (which

spanned across songs) and not the commercial effect of a specific song.

The true reach of a communication medium is difficult to accurately ascertain and never can be more than an approximate estimate of who is being reached (McQuail, 1997), yet the use of the *Billboard* Hot 100 data provided the researchers with as precise a measurement of purchase and message approval as possible. By restricting their analyses to only those songs that reached *Billboard*'s top spot (as opposed to all 100 Hot 100 songs for a given period), the authors effectively are dealing with the efficient frontier of songs and song lyrics. The inclusion of non–number-one songs in the analysis could produce additional themes that might be under-represented in the authors' sample.   **JAR**

....

DAVID H. HENARD, PhD, is the board of advisors professor of business management and professor of marketing at North Carolina State University. Prior to his career in academics, Henard worked several years for a large, multi-national consumer products company. His research interests focus on issues at the intersection of innovation, communication, and reputation. Dr. Henard's work has been published in journals such as the *Journal of Marketing Research*, *Journal of the Academy of Marketing Science*, and *Journal of Product Innovation Management*.

....

CHRISTIAN L. ROSSETTI, PhD, is an assistant professor of management at North Carolina State University. He has worked in aerospace, food processing, and retail. His research involves buyer/supplier relationships where government regulation affects supply-chain design and management. Dr. Rossetti has studied supply-chain relationships and purchasing organizations using agency theory, game theory, and social-exchange theory. His work has appeared in *Academy of Management Executive*, *Decision Sciences Journal*, *Journal of Supply Chain Management*, *International Journal of Physical Distribution & Logistics Management*, *Journal of Simulation* and the *European Journal of Purchasing and Supply Management*.

REFERENCES

AITKEN, R., B. GRAY, and R. LAWSON. "Advertising Effectiveness from a Consumer Perspective." *International Journal of Advertising* 27, 2 (2008): 279–297.

ALLAN, D. "Effects of Popular Music in Advertising on Attention and Memory." *Journal of Advertising Research* December (2006): 434–444.

ALLAN, D. "A Content Analysis of Music Placement in Prime-Time Television Advertising." *Journal of Advertising Research* 48, 3 (2008): 404–417.

ALPERT, J. I., and M. I. ALPERT. "Music Influences on Mood and Purchase Intentions." *Psychology & Marketing* 7, 2 (1990): 109–133.

BARONGAN, C., and G. C. HALL. "The Influence of Misogynous Rap Music on Sexual Aggression against Women." *Psychology of Women Quarterly* 19 (1995): 195–207.

BASS, F. M., N. BRUCE, S. MAJUMDAR, and B. P. S. MURTHI. "Wearout Effects of Different Advertising Themes: A Dynamic Bayesian Model of the Advertising-Sales Relationship." *Marketing Science* 2 March-April (2007): 179–195.

BESSON, M., F. FAITA, A.-M. BONNEL, and J. REQUIN. "Singing in the Brain: Independence of Lyrics and Tunes." *Psychological Science* 9, 6 (1998): 494–498.

BETTINGHAUS, E. P. *Persuasive Communication* (2nd ed.). New York: Holt, Reinhart and Winston, 1973.

BINET, L., and P. FIELD. "Empirical Generalizations about Advertising Campaign Success." *Journal of Advertising Research* June (2009): 130–133.

BRUNER, G. C. "Music, Mood and Marketing." *Journal of Marketing* 54, October (1990): 94–104.

CANARY, H., and M. JENNINGS. "Principles and Influence in Codes of Ethics: A Centering Resonance Analysis Comparing pre- and post-Sarbanes-Oxley Codes of Ethics." *Journal of Business Ethics* 80, 2 (2007): 263–278.

CARLEY, K. M., and D. M. KAUFER. "Semantic Connectivity: An Approach for Analyzing Symbols in Semantic Networks." *Communication Theory* 3 (1993): 183–213.

COLE, R. "Top Songs in the Sixties: A Content Analysis of Popular Lyrics." *American Behavioral Scientist* 14, 3 (1971): 389–400.

CONDIT, C. M. "The Functions of Epideictic: The Boston Massacre Orations as Exemplar." *Communications Quarterly* 33 (1985): 284–299.

CORMAN, S., and K. DOOLEY. *Crawdad Text Analysis Software 2.0.* Chandler, AZ: Crawdad Technologies, 2006.

CORMAN, S., T. KUHN, R. D. MCPHEE, and K. DOOLEY. "Studying Complex Discursive Systems: Centering Resonance Analysis of Organizational Communication." *Human Communication Research* 28, 2 (2002): 157–206.

DANOWSKI, J. A. *Network Analysis of Message Content.* Norwood, NJ: Alblex, 1993.

DEWALL, C. N., R. S. POND, W. K. CAMPBELL, and J. M. TWENGE. "Tuning in to Psychological Change: Linguistic Markers of Psychological Traits and Emotions over Time in Popular U.S. Song Lyrics." *Psychology of Aesthetics, Creativity and the Arts* March (2011): 1–8.

DOWLING, W. J., and D. L. HARWOOD. *Music Cognition.* New York: Academic Press, 1986.

DUKES, R. L., T. M. BISEL, K. N. BOREGO, E. A. LOBATA, and M. D. OWENS. "Expressions of Love, Sex, and Hurt in Popular Music: A Content Analysis of All-Time Greatest Hits." *The Social Science Journal* 40, 4 (2003): 643–650.

DUNBAR, D. "Music and Advertising." *International Journal of Advertising* 9, 3 (1990): 197–203.

EDELL, J. A. and M. C. BURKE. "The Power of Feelings Iin Understanding Advertising Effects." *Journal of Consumer Research* 14, December (1987): 421–433.

FERNALD, A. "Prosody in Speech to Children: Prelinguistic and Linguistic Functions." *Annals of Child Development* 8 (1993): 43–80.

FREEMAN, L. C. "Centrality in Social Networks: Conceptual Clarification." *Social Networks*, 1 (1979): 215–243.

FRIESTAD, M., and E. THORSON. "Emotion-Eliciting Advertising: Effects on Long-Term Memory and Judgment." *Advances in Consumer Research.* (1986): 111–116.

GORN, G. J. "The Effects of Music in Advertising on Choice Behavior: A Classical Conditioning Approach." *Journal of Marketing* 46, 1 (1982): 94–101.

GROSZ, B. J., S. WEINSTEIN, and A. K. JOSHI. "Centering: A Framework for Modeling the Local Coherence of a Discourse." *Computational Linguistics* 21 (1995): 203–225.

HECKER, S. "Music for Advertising Effect." *Psychology & Marketing* 1, 3/4 (1984): 3–8.

HIRSCHMAN, E. C. "Men, Dogs, Guns and Cars: The Semiotics of Rugged Individualism." *Journal of Advertising* 32, 1 (2003): 9–22.

HIRSCHMAN, E. C., and C. J. THOMPSON. "Why Media Matter: Toward a Richer Understanding of Consumers' Relationships with Advertising and Mass Media." *Journal of Advertising* 26, 1 (1997): 43–60.

HOLBROOK, M. B., and R. BATRA. "Assessing the Roles of Emotions as Mediators of Consumer Responses to Advertising." *Journal of Consumer Research* 14, December (1987): 404–420.

KENYON, A. J., E. H. WOOD, and A. PARSONS. "Exploring the Audience's Role: A Decoding Model for the 21st Century." *Journal of Advertising Research* 48, 2 (2008): 276–286.

KUHN, E. D. "I Just Want to Make Love to You: Seductive Strategies in Blues Lyrics." *Journal of Pragmatics* 31, 4 (1999): 525–534.

LARSEN, R. J. and E. DIENER. "Affect Intensity as an Individual Difference Characteristic: A Review." *Journal of Research in Personality* 21, March (1987): 1–39.

LEE, P., and E. JAMES. "She'E'Os: Gender Effects and Investor Reactions to the Announcements of Top Executive Appointments." *Strategic Management Journal* 28 (2007): 227–241.

LICHTENSTEIN, B., K. DOOLEY, and T. LUMPKIN. "An Emergence Event in New Venture Creation: Measuring the Dynamics of Nascent Entrepreneurship." *Journal of Business Venturing* 21, 2 (2006): 153–175.

MCCRACKEN, G. "Advertising: Meaning or Information?" *Advances in Consumer Research* (1987): 121–124.

MCPHEE, R., S. CORMAN, and K. DOOLEY. "Organizational Knowledge Expression and Management: Centering Resonance Analysis of Organizational Discourse." *Management Communication Quarterly* 16, 2 (2002): 130–136.

MCQUAIL, D. *Mass Communication Theory: An Introduction* (2nd ed.). London: SAGE Publications, 1987.

MCQUAIL, D. *Audience Analysis.* Thousand Oaks, CA: Sage Publications, 1997.

MEYER, L. B. *Emotion and Meaning in Music.* Chicago: University of Chicago Press, 1956.

MEYROWITZ, J. "Medium theory." In *Communication Theory Today*, D. Crowley and D. Mitchell, eds. Stanford, CA: Stanford University Press, 1994.

MICK, D. G., and C. BUHL. "A Meaning Based Model of Advertising Experiences." *Journal of Consumer Research* 19, December (1992): 317–338.

MOORE, D. J., W. D. HARRIS, and H. C. CHEN. "Affect Intensity: An Individual Difference Response to Advertising Appeals." *Journal of Consumer Research* 22, September (1995): 154–164.

MORIARTY, S. E. *The Circle of Synergy: Theoretical Perspectives and an Evolving IMC Research Agenda*, E. Thorson and J. Moore, eds. Mahwah, NJ: Lawrence Erlbaum, 1996.

NORTH, A. C., and D. J. MARGREAVES. "Lifestyle Correlates of Musical Preferences: Relationships, Living Arrangements, Beliefs and Crimes." *Psychology of Music* 35, 1 (2007): 58–87.

OAKES, S., and A. C. NORTH. "Using Music to Influence Cognitive and Affective Responses in Queues of Low and High Crowd Density." *Journal of Marketing Management* 24, 5-6 (2008): 589–602.

PECHMANN, C., and D. W. STEWART. "Advertising Repetition: A Critical Review of Wearin And Wearout." In *Current Issues and Research in Advertising 1988*, J. H. Leigh and C. R. Martin, eds. Ann Arbor, MI: University of Michigan Press, 1989.

PERETZ, I., *ET AL*. "Functional Dissociations Following Bilateral Lesions of Auditory Cortex." *Brain* 117, 1 (1994): 344–356.

PETTIJOHN, T. F., and D. F. SACCO. "The Language of Lyrics." *Journal of Language and Social Psychology* 28, 3 (2009): 297–311.

PINGREE, R. J. "How Messages Affect Their Senders: A More General Model of Message Effects and Implications for Deliberation." *Communication Theory* 17 (2007): 439–461.

RENTFROW, P. J., and S. D. GOSLING. "The Do Re Mi's of Everyday Life: The Structure and Personality Correlates of Music Preferences." *Journal of Personality and Social Psychology* 84, 6 (2003): 1236–1256.

ROCK, A. M. L., L. J. TRAINOR, and T. L. ADDISON. "Distinctive Messages in Infant-Directed Lullabies and Playsongs." *Developmental Psychology* 35 (1999): 527–534.

ROSSETTI, C. L., and K. J. DOOLEY. "Job Types in the Supply Chain Management Profession." *Journal of Supply Chain Management* 46, 3 (2010): 40–56.

SCHMIDT, L. A., and L. J. TRAINOR. "Frontal Brain Electrical Activity (EEG) Distinguishes Valence and Intensity of Musical Emotions." *Cognition and Emotion* 15, 4 (2001): 487–500.

SCHWARTZ, T. *Media: The Second God*. New York: Random House, 1981.

SCOTT, L. M. "Understanding Jingles and Needledrop: A Rhetorical Approach to Music in Advertising." *Journal of Consumer Research* 17, September (1990): 223–236.

SMITH, M. J. *Persuasion and Human Action: A Review and Critique of Social Influence Theories*. Belmont, CA: Wadsworth Publishing, 1982.

STEWART, D. W., K. M. FARMER, and C. I. STANNARD. "Music as a Recognition Cue in Advertising-Tracking Studies." *Journal of Advertising Research* August/September (1990): 39–48.

TATE, W., L. ELLRAM, and J. KIRCHOFF. "Corporate Social Responsibility Reports: A Thematic Analysis Related to Supply Chain Management." *Journal of Supply Chain Management* 46, 1 (2010): 19–44.

THOMPSON, J. B. "Social Theory and the Media." In *Communication Theory Today*, D. Crowley and D. Mitchell, eds. Stanford, CA: Stanford University Press, 1994.

TRAINOR, L. J., E. D. CLARK , A. HUNTLEY, and B. A. ADAMS. "The Acoustic Basis of Preferences for Infant-Directed Singing." *Infant Behavior and Development* 20 (1997): 383–396.

WALLIN, N. L., B. MERKER, and S. BROWN. *The Origins of Music*. Cambridge, MA: The MIT Press, 2000.

WESTER, S. R., C. L. CROWN, G. L. QUATMAN, and M. HEESACKER. "The Influence of Sexually Violent Rap Music on Attitudes of Men with Little Prior Exposure." *Psychology of Women Quarterly* 21 (1997): 497–508.

WHISSELL, C. "Emotional Fluctuations in Bob Dylan's Lyrics Measured by the Dictionary of Affect Accompanying Events and Phases in His Life." *Psychological Reports* 102, 2 (2008): 469–483.

ZHU, R., and J. MEYERS-LEVY. "Distinguishing between the Meanings of Music: When Background Music Affects Product Perceptions." *Journal of Marketing Research* 42, August (2005): 333–345.