

Topical Interpretations of Production Music

Erkki Huovinen,^{*1} Anna-Kaisa Kaila^{#2}

^{*}*School of Music, University of Minnesota, USA*

[#]*University of Turku, FINLAND*

¹huovinen@umn.edu, ²anna-kaisa.kaila@alumni.helsinki.fi.

ABSTRACT

The present empirical study sought to chart the kinds of mood, environment, and agency associated with commercially targeted production music. An experiment with production music representing a “motivational” category involved questions about mood variables, free associative imagery, and questions about selected semantic properties of the associative images. The results suggested that producers demonstrate considerable success in engineering mood characters generally recognizable for listeners. Moreover, it was found that the associative imagery elicited by production music may show even more concrete commonalities between listeners in the kinds of agency and environments imagined. Associationally cohesive clusters of musical excerpts were then interpreted with reference to musical *topos* theory. Based on a hierarchical clustering of the results, tentative topical labels *IDYLL* and *DYNAMISM* with respective associational qualities were identified, along with a subdivision of the latter into two sub-topoi, *BRILLIANCE* and *NIGHTLIFE*. Notably, the topical clustering did not simply reproduce distinctions between musical genres, suggesting that similar semantic associations may be mapped onto different musical genres even within one and the same musical culture. Overall, the study confirms the ability of commercial music to function as an agent of rich meaning formation independently of the multimedia contexts it is typically conjoined with.

I. INTRODUCTION

Production music, also known as library music or catalogue music, is one of the most prevalent forms of functionally targeted music in contemporary culture. It is used in TV commercials, low-budget documentaries, corporate videos and other commercial multimedia productions. It may also be heard as telephone waiting music, as background music in commercial spaces, or as brief interludes in radio talk shows. It is crafted with specific purposes in mind and sold through production music libraries, allowing media professionals an affordable and easy access to copyright-cleared music. The libraries are typically owned by major publishing and record companies (e.g., EMI, Sony/ATV Music Publishing, Universal Publishing Group, Warner/Chappell), and contain thousands of audio tracks, catalogued by style, genre, function, and mood. Curiously, this type of music has received barely any attention from music researchers.

The content descriptions of production music libraries suggest that the commercial functions of such music are not limited to serving as mnemonic devices that facilitate the recall of slogans (Yalch 1991), nor does this music simply reinforce positive attitudes toward a brand or a product (Park & Young 1986; Zander 2006). Production music frequently appears to be crafted in the purpose of evoking cultural associations and emotional contexts of sometimes amazing specificity in listeners who may have never heard those

particular pieces before. The commercial success of production music libraries implies that their practices embody information that would be relevant for the questions of expressivity, emotion, and meaning in music. David Huron’s (1989, 559) exhortation to recognize advertisement agencies for their “empirically tested heuristics concerning social facets of music” seems, indeed, highly appropriate in this context.

Some aspects of musical signification that may be relevant to production music have been previously studied in film and television music research, which typically identifies the roots of the relevant signification conventions in western art music, later mediated for example by the early collections of music for silent films (e.g., Tagg & Clarida 2003; Rodman 2010). Most film music research, however, begins with an audiovisual artifact with pre-existing networks of visual, musical, and semantic connections. In such contexts, research on musical meaning quite naturally tends to focus on questions of structural congruence between the visual and auditory domains (see Cook 1998; Marshall & Cohen 1988; Cohen 2000). In contrast, the cultural practices around production music would encourage research to address such aspects of musical meaning formation that are already conveyed by the music itself before it is attached to a visual or functional context. Indeed, the fact that production music libraries largely build their success on labeling music according to intended moods and functional implications suggests that we are dealing with an important contemporary context of identifying musical *topoi*, or topics.

The rhetorical concept of *topos* was introduced to contemporary music scholarship by Leonard Ratner (1980) who observed the tendency of 18th century composers to organize their music around musical figures and styles with conventionalized associations, such as dances associated with specific socio-cultural backgrounds, characteristic musical figures or broader stylistic complexes. Following Ratner’s lead, most research on musical topics has concentrated on music of the classical period, discussing the interplay between musical structure and the cultural and social significance of music in the works of composers such as Mozart and Haydn (e.g., Allanbrook 1983; 1992; Agawu 1991; Hatten 1994; 2004; Monelle 2000; 2006).

In musicological literature, the term “*topos*” sometimes loosely refers either to the music-stylistic entities, their non-musical associations or to the whole complex of both aspects (see, e.g., Rodman 2010, 41 vs. 117). Particularly in psychological research the distinction is crucial, as it determines whether *topoi* may be operationally managed in terms of musical stimuli, or whether the emergence of *topoi* requires live human response. In the present study, we opt for the latter, in line with musical semiotics’ definition of *topoi* as signs that encompass both a musical signifier and an associated signified (e.g., Agawu 1991, 49). Hence, a musical *topos* is understood here as a set of musical phenomena,

delimited and furnished with meaning by relatively consistent trends of extramusical associations in a given listener population. In this general sense, musical topoi do not necessarily present a separate category of musical meaning alongside emotional, kinetic, narrative, social, cultural and other kinds of meaning (as in Patel 2008, 305-326), but rather provide a framework for communicating broad musical meanings transgressing such taxonomical boundaries.

While topical theory naturally assumes the possibility of representational meaning in music, empirical research on the phenomena has been lagging behind. Beyond the role of emotional expression as a pathway to musical meaning (see Juslin & Sloboda 2001) and the possible role of motor and dynamic qualities of music in making it meaningful (e.g., Cowles 1935; Mote 2011), research on experienced semantic meaning in music has been scattered and sparse (see Painter and Koelsch 2011). To date, the most extensive empirical study on the cultural aspects of musical signification is Tagg and Clarida's (2003) research on listeners' written associations elicited by television music. Deriving simple conceptual units from listeners' free responses, Tagg and Clarida grouped these "visual-verbal associations" (VVAs; *ibid.*, 121–123) into larger semantic fields that encompass more general categories of associations (*ibid.*, 124–131). While the resulting massive databases of associational correlations between individual visual items and examples of music allowed Tagg and Clarida to draw certain statistical conclusions on the individual musical excerpts employed, the strict adherence to a highly detailed bottom-up perspective makes it difficult to assess the relative significance of their results. Another problem in their approach is that the taxonomy of the VVAs is heavily language based, although Tagg (2006, 177) himself points out that some semantic complexes might also be held together by musical relationships. Finally, the heterogeneity of their participant groups and the fact that the participants' prior familiarity with the musical excerpts was not controlled, pose limitations for well-founded generalizations based on Tagg and Clarida's results. Tagg and Clarida's pioneering work thus opens a host of further questions to be addressed in future research.

The starting point for the present research is our earlier study of visual imagery elicited by production music (Uusipaikka & Huovinen 2007) in which ten excerpts of production music were played to adult college students, asking them: "This music could be used in television or cinema. What do you think could be happening on the screen while the music is heard?" (cf. Tagg & Clarida 2003, 118). An analysis of the participants' imagery indicated that our sample excerpts were heard as exhibiting a number of semantic properties that might be seen as mutually complementary. The listeners clearly differentiated the excerpts in terms of the number of characters imagined in the scenarios (intimate or individualistic vs. collective imagery) and the relative "urbanity" of the environments imagined (urban or rural environments, uncultivated nature). Yet, some of the excerpts received significant numbers of responses mentioning qualities for which the obvious "opposite" terms were lacking in our set of responses. In particular, both images of *warmth* and images of *beginning* were found to concentrate at certain excerpts, but hardly any of the responses would use complementary concepts such as *coldness* or *ending*.

Such findings could not definitively be explained by the experienced nature of production music, since they might also have been due to differences in the ease of spontaneous attribution, as explained by the prototypicality or cultural salience of the favored concepts themselves. The present study thus aims to probe the experienced suitability of such concepts to the same stimulus material more systematically, incorporating the concepts that emerged in the previous study into forced-choice questions that also involve possible complementary concepts. This methodology differs from some musical applications of the semantic differential (Osgood, Suci, & Tannenbaum 1957) in that our main semantic questions do not concern the "music itself," but rather the participants' extramusical associations elicited by the music. On this basis, our first research question pertains to the relationship between listeners' extramusical imagery and the producers' descriptions of the music: is there a relative fit between the two, or will the listeners' imagery also reveal some recurring semantic aspects of production music that are not evident in the producers' descriptions?

Furthermore, our methodological working hypothesis is that the concept of musical topos might offer a means for distinguishing broader patterns of musical signification emerging from listeners' free associations in response to music they have not previously heard. Instead of describing statistic correlations between VVAs co-occurring within previously limited sets of musical phenomena, we suggest that the lines between musical categories themselves be drawn on the basis of semantic associations. Consequently, our aim is to subject our sample of production music to hierarchical clustering on the basis of the responses to the semantic forced-choice questions. Treating the resulting clusters tentatively as musical topoi—semantically differentiated sets of musical phenomena—should help us discuss the relationships between musical genres and topical imagery in a present-day commercial context. Accordingly, our second research question is whether the topical areas discerned in the music on the basis of listeners' imagery would correspond to the distinctions that could be simply made on the basis of genre labels or overall music-stylistic features.

II. METHOD

A. Stimuli

We used the same set of ten commercially available pieces of production as in Uusipaikka & Huovinen (2007). These one-minute pieces were selected to represent the breadth of musical styles available on a series of albums labeled "Motivational" in the catalogue of the large production music company *Killer Tracks* (www.killertracks.com; accessed April 2, 2012). Table 1 lists the excerpts together with the production company's descriptions; all of the information in the table except for the tempi and the genre classifications in the leftmost column stems directly from the producers. The ten excerpts were chosen to satisfy a tentative classification in which two excerpts would always fit one of five different musical genres: *orchestral fanfare* (1, 2); *light classical* (3, 4); *middle-of-the-road* (5, 6); *rock* (7, 8); and *techno* (9, 10). These categories were induced relying both on the producer's descriptions as well as on observed commonalities in tempo, instrumentation, and overall musical texture.

Table 1. Production music used as stimuli.

	Piece			Producer's description			
	Piece	Composer	Tempo (bpm)	Primary description	Moods	Music For (M = motivational)	Musical styles
orchestral fanfare	1. Spot On Target ²	Larry Wolff, Killer Tracks [BMI]	80-84	Full orchestra in constant motion, with many dynamic colours and textures.	Confident, Bold, Bright, Optimistic/Positive, Proud, Inspirational	Corporate Video, Industry, M, Newsreel/ Vintage, Documentary, Modern, News	Corporate
	2. Turning Point ³	Larry Wolff, Killer Tracks [BMI]	69	Inspirational and confident, with orchestra playing contrapuntal passages.	Bright, Optimistic/Positive, Grand/ Majestic, Achievement, Proud, Motivational	Corporate Video, Documentary, M, Progress, Prestige & Achievement	Corporate
light classical	3. Design Your Dream ¹	Larry Wolff, Killer Tracks [BMI]	66	Expressive piano over strings and brass.	Optimistic/Positive, Warm, Relaxed, Achievement, Inspirational	Communications, Corporate Video, M, Western, Orchestral,	Neo Classical
	4. Reaching Out ²	Larry Wolff, Killer Tracks [BMI]	60	Soft piano and flute intro, joined by strings and gentle brass.	Delicate/ Gentle, Bright Building, In a Classical style, Melodic	Communications, M, Newsreel/ Vintage, Documentary, Heritage	New Age, Influence
country pop	5. Down Home Dream ³	Dan Ferguson, Killer Tracks [BMI]	80-84	Easygoing and relaxed, featuring acoustic guitar accompanied by orchestra.	Confident, Cheerful/Happy, Optimistic/Positive, Relaxed, Melodic	Corporate Pop, Industry, M, Daytime/Magazine	MOR/ Melodic
	6. Building Tomorrow ²	Brad Smith, Killer Tracks [BMI]	92-96	Gentle piano over strings, French horns and light rhythmic section.	Delicate/ Gentle, Optimistic/Positive, Relaxed, Flowing, Melodic	M, Emotional, Family/Light Comedy, Daytime/ Magazine, Romantic	New Age, MOR/ Melodic
medium fast rock	7. Take Control ⁴	Dick Winzeler, Soundcast Music [ASCAP]	120	Dance beat, with soulful male vocal accents and melodic guitar.	Bright, Cheerful/ Happy, Optimistic/Positive, Driving, Energetic/ Lively, Soulful	Corporate Pop, M, Progress, Daytime/ Magazine	Pop, Rock
	8. Unlimited Horizons ⁴	Jonathan Merrill, Killer Tracks [BMI]	100	Strong and positive rhythm section with guitar lead.	Confident, Strong/ Powerful, Bright, Percussive, Inspirational	Corporate Pop, M, Daytime/ Magazine, Activities/ Adventure	Pop, Rock
fast techno	9. Crystal Clear ⁵	Chuck Kentis, Killer Tracks [BMI]	168	Refreshing and bright, this fast paced track bubbles along.	Bright, Optimistic/Positive, Busy, Driving, Energetic/ Lively, Percussive	Communications, M, Animation, Current Affairs, Action/ Adventure	Drum & Bass
	10. Invigorating ⁵	Chuck Kentis, Killer Tracks [BMI]	138	Peppy, bouncy, happy techno keeps our toes tapping	Cheerful/Happy, Bouncy, Busy, Percussive, Inspirational, Quirky	Creative/ Quirky, M, B-Movie, Art House & International Films	Electronica, Techno

B. Participants

The participants were 31 Finnish university students of musicology (5 female, 16 male), with a mean age of 25.4 (sd = 5.6). Their self-reported average experience in taking music lessons or playing a musical instrument was 13.3 years (sd = 6.9, min. 2 years), and their self-judged activity of musical engagement had a mean of 4.2, on a 1–5 scale. 87% of the participants reported listening to music daily (100% at least once a week), and the corresponding percentages for watching TV, watching MTV, and watching movies were 42% (81%), 3% (26%), 6% (26%), respectively.

C. Procedure

The ten musical excerpts used in the experiment were arranged so that no two consecutive excerpts represented the same genre (cf. the leftmost column in Table 1), and so that each of these genres would be once represented among the first 5 as well as the last 5 trials. This order of presentation and its retrograde were used for testing two similar-sized groups of participants (n1 = 16, n2 = 15). The presentation of the stimuli was done in a classroom setting, playing the excerpts back on a computer through a stereo system. Each musical excerpt was presented once, followed by a one-minute pause for filling out response forms.

For each musical excerpt, the participants responded to the following questions:

1. "What is the mood of the music like?" (choice between opposites for four bipolar adjective pairs: *warm/cold*; *bright/dark*; *relaxed/tense*; *mobile/static*);
2. "What sort of event or situation do you think the music could most suitably describe?" (free written descriptions);
3. "How many characters are there in the event or situation that you described?" (five alternatives: 0, 1, 2, 3-10, more than 10).
4. "Where is this happening?" (two forced-choice questions: first, *inside/outside*; second, *in a big city/in a small town/in the countryside/in the wilderness*).
5. "Do you think that this music would best describe (a) *beginning action*, (b) *continuing action*, or (c) *concluding action*?"
6. "Did you recognize the piece of music?" (three alternatives: "Yes I did, it was _____," "I have heard it before, but did not recognize it," and "I haven't heard it before").

Listeners' free written descriptions in response to question No. 2 will be discussed in a later publication.

III. RESULTS

A. Recognition of the excerpts

Only four of the participants reported recognizing one of the 10 excerpts they heard and none of them could name these excerpts correctly. On the other hand, 45% of the participants reported that they had heard, but could not recognize, one or more of the excerpts. Nevertheless, since very few attempted to name the pieces and none did so successfully, it is reasonable to assume the respondents simply recognized the general mood or style of the music rather than being previously familiar with the individual excerpts themselves.

B. Mood of the music

The responses to question No. 1 showed a general relative preference for the "positive" terms of the bipolar adjective pairs. Taking the ten musical excerpts together, a series of two-sided binomial tests revealed that the excerpts were more often judged to be WARM rather than COLD, BRIGHT rather than DARK, RELAXED rather than TENSE, and MOBILE rather than STATIC (for relaxed, $p = 0.005$; every other $p < 0.001$). However, a series of Friedman tests showed that the musical excerpts also differed highly significantly from one another in their associated moods ($\chi^2(9) > 29, p < .001$).

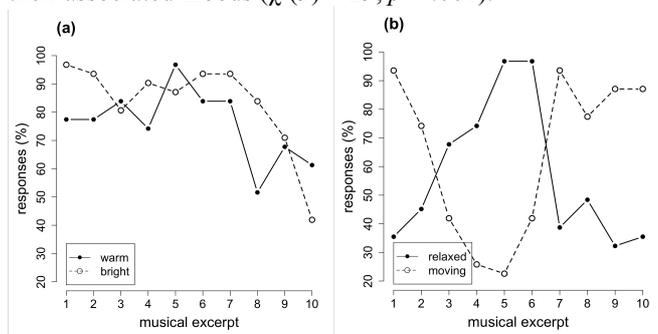


Figure 1. Mood judgments, means for the "positive" terms of the four bipolar adjective pairs: (a) warm/cold, bright/dark; (b) relaxed/tense, moving/static.

As shown in Figure 1, the clearest differences between the musical excerpts occurred in the RELAXEDNESS and MOBILITY judgments, such that the *light classical* and *middle-of-the-road* excerpts were judged as relatively more RELAXED and STATIC (i.e. less MOBILE) in comparison to the rest of the excerpts. In WARMTH and BRIGHTNESS, however, the *light classical* and *middle-of-the-road* excerpts did not stand out as clearly from the rest, suggesting that judgments concerning these moods were more influenced by the individual characteristics of the excerpts than directed by genre boundaries. For instance, both participant groups awarded the highest WARMTH judgments to the countryish *middle-of-the-road* piece No. 5 which had received similar spontaneous responses for Uusipaikka & Huovinen (2007). Likewise, the techno excerpt No. 10 differed in its exceptional DARKNESS more from the other techno piece than the latter differed from the rest of the excerpts. In general, it appears that the RELAXEDNESS and MOBILITY judgments reflected each other in a close inverse relationship, while the WARMTH and BRIGHTNESS judgments expressed profiles distinct from these.

C. The number of characters

The responses to question No. 3 concerning the number of characters imagined ("0," "1," "2," "3-10," or "more than 10") are here treated as falling on a five-point COLLECTIVITY scale between 0 and 4 (see Fig. 2(a)). Friedman tests showed these responses to differ significantly between the 10 musical excerpts ($\chi^2(9) = 41.72, p < .001$). Much of the differences in relative COLLECTIVITY may already be grasped by comparing the percentages of responses in favor "two" or "more than 10" imagined characters between the ten musical excerpts (see Fig. 2(b)). Here, it is seen that imagery involving large numbers of characters occurred especially for the *orchestral fanfares* (1, 2) and some of the *rock* and *techno* excerpts (7, 9, 10), whereas the *light classical* and *middle-of-the-road* excerpts (3-6) only rarely elicited such COLLECTIVE imagery. Furthermore, it seems that the listeners have not only been making rough distinctions between "few" and "many" characters in interpreting their imagined scenarios. This is shown in how the countryish *middle-of-the-road* excerpt No. 5 (quite appropriately titled "Down Home Dream") acquired a much higher percentage of "intimate," two-character interpretations than the other excerpts with equally few collective responses.

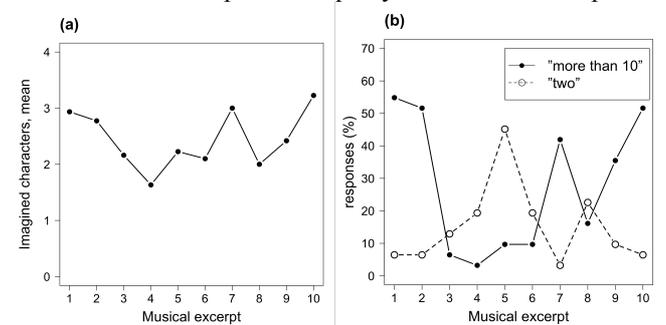


Figure 2. The number of imagined characters: (a) means on a five-point scale (0 = "0"; 1 = "1"; 2 = "2"; 3 = "3-10"; 4 = "more than 10"); (b) percentages of responses in categories "two" and "more than 10."

D. Imagined location

The first question concerning imagined location asked whether the scene took place indoors or outdoors. Altogether 63.9% of the responses indicated the outdoor alternative, but Friedman tests indicated that the responses significantly differed between the 10 excerpts ($\chi^2(9) = 51.12, p < .001$). Binomial tests showed highly significant bias toward EXTERIOR images (outdoor responses) in the *orchestral fanfares* (Nos. 1 and 2: $p < .001$) and milder outdoor bias in some of the other excerpts (Nos. 4 and 8: $p < .01$), but also a highly significant tendency toward INTERIOR images (indoor responses) in the *techno* excerpt No. 10 ($p < .001$).

The second question specifying the location of the imagined scene asked the participants to indicate whether the scene took place in a big city, in a small town, in the countryside, or in the wilderness. The response alternatives thus graduate from urban to less populated spaces, allowing a tentative treatment of the responses as if falling on a four-point scale according to increasing degrees of URBANITY (1 = wilderness, 2 = countryside, 3 = small town, 4 = big city). Given this, a Friedman test would indicate highly significant differences in the mean URBANITY between the responses of the 10 musical excerpts ($\chi^2(9) = 81.23, p < .001$), the means ranging between 1.43 (excerpt No. 4) and 2.87 (excerpt No. 10). According to khi square goodness of fit tests for proportions, the most significant divergences from chance distribution among the four response alternatives occurred in the *rock* and *techno* excerpts (No. 7: $\chi^2(3) = 85.8, p < .001$; No. 8: $\chi^2(3) = 15.6, p = .004$; No. 9: $\chi^2(3) = 22.6, p < .001$; No. 10: $\chi^2(3) = 94.4, p < .001$), all of which had the “big city” as their response mode (87.1%, 51.6%, 54.8%, and 90.3% of the responses, respectively). The only other significant divergence from chance occurred for the *light classical* excerpt No. 4 ($\chi^2(3) = 15.4, p < .004$) where the response mode was “countryside” (45.2%).

E. Type of action

The participants also specified the type of action in their imagined scenarios as either “beginning action,” “continuing action,” or “ending action.” Overall, most of the responses fell either on “continuing action” (56.1%) or “beginning action” (31.3%), while “ending action” was relatively infrequently chosen (12.6%). For the ten musical excerpts, the response modes differed between the *orchestral fanfares* which were predominantly heard as indicating “beginning action” (No. 1: 71%, No. 2: 51.6%) and the rest of the excerpts, each of which was most often chosen as indicating “continuing action” (Nos. 3–10: 51.6%, 41.9%, 58.1%, 54.8%, 58.1%, 61.3%, 96.8%, and 90.3%, respectively). According to khi-square goodness of fit tests for proportions, the response distributions indeed significantly differed from chance in most cases (Nos. 1, 7–10: $p < .001$; Nos. 5–6: $p < .01$; No. 3: $p < .05$).

F. Correlations between variables

To simplify a correlation analysis between the eight variables discussed above, each variable was arbitrarily labelled by a “positive” quality it indicates. Besides the four dichotomous mood variables, the inside/outside question was here treated as an EXTERIORITY variable (indicating the “outside” choices). As above, the imagined number of

characters was treated as a five-point COLLECTIVITY variable, and the imagined environments as a four-point URBANITY variable. Finally, it was acknowledged that the three response alternatives for the type of action (beginning/continuing/ending action) might not have an unambiguous order on a single dimension. Hence, the responses to this question were recoded as a dichotomous CONTINUITY variable in which both beginning and ending action correspond to the absence of continuity. Table 2 gives the Pearson correlation coefficients between the eight variables (for the binary variables, Pearson correlation is equivalent to the phi coefficient).

Table 2. Pearson correlations between eight variables. * $p < .001$; ** $p < .01$; * $p < .05$ (khi-square goodness of fit test for proportions)**

	BRIGHTNESS	RELAXEDNESS	MOBILITY	COLLECTIVITY	EXTERIORITY	URBANITY	CONTINUITY
WARMTH	0.25***	0.30***	0.06	-0.04	0.03	-0.05	-0.08
BRIGHTNESS		0.18**	0.05	-0.00	0.25***	-0.09	-0.22***
RELAXEDNESS			-0.28***	-0.19**	0.03	-0.19***	-0.03
MOBILITY				0.23***	0.10	0.20***	0.11*
COLLECTIVITY					-0.20***	0.36***	0.03
EXTERIORITY						-0.41***	-0.21***
URBANITY							0.05

The central characteristics of Table 2 could be summarized by referring to two somewhat distinct groups of variables held together by mutual correlations. For one, some of the highest correlations in Table 2 involve URBANITY, such that URBAN images were also typically judged INTERIOR, COLLECTIVE, MOBILE, and TENSE. The same set of characteristics is likewise held together by the significant correlations with COLLECTIVITY. For another, the variables WARMTH, BRIGHTNESS, and RELAXEDNESS each appear to be closely related to one another. Whereas WARMTH does not significantly correlate with the five remaining variables, the two others appear to find correlations with mutually different sets of variables (BRIGHT situations are also typically judged EXTERIOR and DISCONTINUOUS, while RELAXED ones are usually neither MOBILE, COLLECTIVE, nor URBAN).

G. Topical clustering

In the introduction, we defined a musical topos to be a “set of musical phenomena, delimited and furnished with meaning by relatively consistent trends of extramusical associations in a given listener population.” Given a set of musical entities and a respective set of associative responses, questions of musical topoi could now be operationalized through a hierarchical clustering of the musical entities on the basis of their respective extramusical associations. Accordingly, we addressed the question concerning topical areas in our sample of production music by subjecting the eight standardized quantitative variables discussed in sections III.B-E to Ward’s hierarchical clustering. The resulting dendrogram, shown in Fig. 3, indicates the hierarchical clustering of the ten musical excerpts on the basis of the responses.

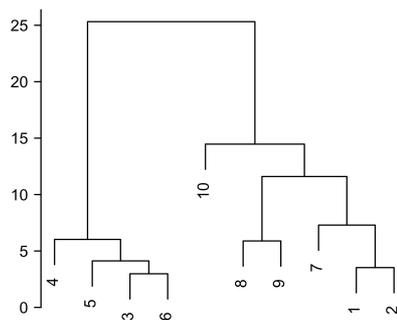


Figure 3. Ward hierarchical clustering of the musical excerpts based on eight standardized semantic variables (WARMTH, BRIGHTNESS, RELAXEDNESS, MOBILITY, COLLECTIVITY, EXTERIORITY, URBANITY, CONTINUITY).

Given the hierarchical method of analysis, selecting a given level of the clustering as indicating a set of musical topoi is ultimately an interpretational question. As an example, we will here take the three hierarchically highest branches as distinct topical areas, which gives the topical structure $\{\{3, 4, 5, 6\}, \{\{1, 2, 7, 8, 9\}, \{10\}\}\}$.

First of all, the highest branching of the tree points to musical excerpts 3–6 as belonging to a distinct musical topos. In the light of the results above, this branch would roughly correspond to common judgments of a RELAXED and STATIC mood as well as to INTIMACY (small number of imagined characters) and a RURAL (NON-URBAN) environment. The combination of rural stasis and relaxed intimacy suggest a contemporary equivalent to a kind of pastoral topos; we will here tentatively label this topical area *IDYLL*. Notably, the two quite distinct musical styles involved, *light classical* (excerpts No. 3 and 4) and *middle-of-the-road* (excerpts No. 5 and 6) cannot be drawn apart on the basis of the clustering: the listeners’ imagery has remained relatively similar despite such overall differences in musical style.

On the highest level of clustering, the remaining right-hand branch of the diagram was overall characterized by MOVING, TENSE, and (mostly) COLLECTIVE imagery. Consequently, this whole branch might be said to represent a kind of broad *DYNAMISM* topos. Limiting the whole analysis to three topical areas as suggested above would further divide the *DYNAMISM* topos into two sub-topoi. First, we would get a topos represented by the single techno excerpt No. 10. With its imagery focused on URBANITY, DARKNESS, COLLECTIVITY, and INTERIOR venues, one might suggest labeling this topical area *NIGHTLIFE*. Such an interpretation is corroborated by the observation that 58% of the free responses for excerpt No. 10 indeed included references to discos, nightclubs, parties, and similar occasions.

For the second sub-topoi of *DYNAMISM*, we would get a larger cluster covering both *orchestral fanfares* 1–2 as well as *rock* and *techno* excerpts 7–9. Apart from the images of MOBILITY, TENSION, and COLLECTIVITY, shared with *NIGHTLIFE*, this larger cluster was differentiated from its neighbor especially by the relative BRIGHTNESS of the images. Hence a label such as *BRILLIANCE* might well convey the overall tenor of the imagery associated with these excerpts. Again, the original genre distinctions are not well respected by the topical clustering: the *orchestral fanfares* (Nos. 1–2)

are only separated from rock and techno excerpts at the hierarchically lowest level in the branch.

With these interpretational decisions in place, the hierarchical clustering of the results from the present experiment suggests the topical structure shown in Fig. 4. In this topical tree for “motivational” production music, all of the nodes except *NIGHTLIFE* cover more than one of the original musical genres. Although the exact number of topoi applied in this analysis is to some extent arbitrary, it should be noted that increasing the number of topoi would not parse the original genres into separate topical areas. For instance, an interpretation of the clustering with reference to five lowest-level topoi would still only preserve one of the five original musical genres (cf. Fig. 3).

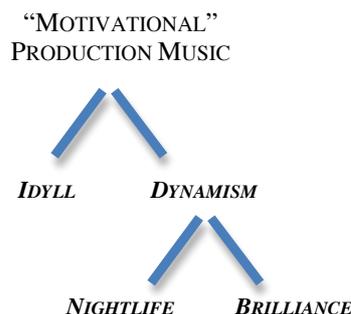


Figure 4. A topical tree of our sample of production music.

IV. CONCLUSIONS

The present study approached contemporary production music of a “motivational” function based on forced-choice data concerning the kinds of mood, environments, and agency that may come to be associated with the type of music in question. Based on salient kinds of free associative responses in an earlier qualitative study (Uusipaikka & Huovinen 2007), a number of semantic questions were selected for charting more systematically the imagery most typically associated with production music. Five different musical genres were used in the experiment, each represented by two musical excerpts. After hearing each musical excerpt, the adult participants first responded to four binary mood questions concerning the WARMTH, BRIGHTNESS, RELAXEDNESS, and MOBILITY of the music. Thereafter, they wrote down free responses concerning an imagined event or situation that the music could suitably describe, followed by another four questions concerning various properties of the imagined situations. To simplify, these questions addressed the relative COLLECTIVITY, EXTERIORITY, and URBANITY of the imagined situations as well as the CONTINUITY of the imagined action. By contrast to the first four *mood variables*, addressing the experienced character of the *music*, these latter *situation variables* thus addressed the properties of the *images* elicited by the music.

The first of the two research questions motivating the study was whether the listeners’ extramusical imagery would simply reflect the producers’ descriptions of the music or also reveal other aspects concerning the music’s signification potential. Given that the producers’ descriptions of the selected musical excerpts largely focused on positive mood terms (e.g., “Optimistic/Positive”, “Cheerful/Happy”, “Powerful”

“Inspirational,” and “Bright”), the question might be rephrased by asking whether the participants’ responses would reveal consistent response tendencies only in the mood variables or also in the situation variables.

First, there was a marked preference for “positive” terms of the mood variables (WARM, BRIGHT, RELAXED, and MOBILE) over their “negative” opposites. This is consistent with the occurrence of the first three of these terms and none of their opposites in the producers’ original descriptions of the excerpts (Table 1). This suggests that producers may indeed demonstrate a considerable success in evoking positive mood imagery.

Second, the situation variables also showed clear deviations from chance. On one hand, across the whole sample of production music, there was an overall emphasis on imagery understood in terms of BEGINNING or CONTINUING ACTION, and correspondingly a lack of images of conclusion, termination, or coming to an end. This, again, bespeaks successful engineering of music of a dynamic, forward-looking character. On the other hand, there were also marked differences between the musical excerpts in terms of their tendency to evoke primarily RURAL or URBAN imagery, and likewise in their tendency to evoke either INTIMATE or COLLECTIVE imagery.

All of this suggests that despite the producers’ detailed and often experientially accurate descriptions of the moods of production music, this type of music may also expertly demonstrate other robust aspects of musical signification which may more rarely get public acknowledgement. One reason for this gap in the producers’ descriptions may be their intention not to restrict potential uses of their music by too concrete and detailed descriptions of the kinds of action and environment that the music might be used to accompany.

The results concerning the mood and action variables were used for a hierarchical clustering of the ten musical excerpts to bring out associationally cohesive clusters of excerpts. As held together by recurring semantic features, such clusters of music-stylistic entities were interpreted as *topoi*. In our approach, therefore, the term “topos” has not been used to refer to local “characteristic figures” (Ratner 1980, 9) but rather to the multidimensional conglomerations of musical and semantic (i.e. “extramusical”) features that show a tendency to co-occur in a given culture. Hence, the second research question was whether the *topoi* extracted from listeners’ imagery would simply correspond to distinctions in musical style or genre, as drawn on the basis of the producers’ descriptions and our own observations concerning stylistic commonalities between the excerpts.

For a topical interpretation of the hierarchical clustering, we chose to use a level of analysis preserving the three hierarchically highest clusters as distinct *topoi*. Based on the typical response strategies within each cluster, the two highest-level branches of the clustering dendrogram were first characterized with the tentative topical labels *IDYLL* and *DYNAMISM*. To simplify, the main *topoi* emerging from our production music sample would thus be an *IDYLL* topos with its salient STATIC, RELAXED, RURAL, and INTIMATE qualities, and a *DYNAMISM* topos characterized by MOVING, TENSE, URBAN, and COLLECTIVE qualities. The latter topical area would then be further subdivided into two sub-*topoi*—here

called *BRILLIANCE* and *NIGHTLIFE*—largely based on the relative BRIGHTNESS of the listeners’ associative imagery.

Notably, neither of our two main topical areas seems to have emerged as a simple reflection of a singular musical genre. First, *IDYLL* covers both our *light classical* excerpts, characterized by airy textures of orchestral instruments and a through-composed feel lacking a constant accompanimental beat, as well as our *middle-of-the-road* excerpts, characterized by studio pop band sounds with a regular 4/4 beat. Second, *DYNAMISM* covers *orchestral fanfares* with their brass-heavy romantic orchestral sounds as well as *rock* and *techno* excerpts replete with stylistic references to late-20th-century pop music. Furthermore, even the sub-topical division of *DYNAMISM* cuts across musical genres, separating out what were heard as the “darkest” techno sounds from a cluster of excerpts still including the whole genre palette of the parent category. As already noted above, most of the genre complexes involved in our topical areas would not be simply resolved into the original musical genres by tinkering with the number of *topoi*.

Our results thus demonstrate how similar semantic associations may be mapped onto different musical genres even within one and the same musical culture. Different musical genres may indeed be capable of eliciting different extramusical associations (cf. Shevy 2008), but our study suggests that the lines between distinct semantic fields do not need to follow musical genre distinctions mechanically. In our conception, musical *topoi* should not therefore be reduced to something like genres-cum-associated-meaning, even though such an approach would make topical discussion easier for the traditional musical analyst. In our present sense, topical distinctions are of course informed by musical genres (and more generally, stylistic features of the music), but only to the extent that the latter differ from one another in extramusical signification within some listener population. This, in its turn, will always remain an empirical issue, and subject to change along with the surrounding culture.

While the idea that music may have an active role in the meaning formation in multimedial contexts is an axiom of film music research, the level at which production music succeeds in conveying intended meanings to listeners confirms the power of music to function as an independent and active agent of meaning formation. Since the goal of production music in its typical commercial contexts has not been to divert attention from the message to the medium, multimedial ironies and other incongruities between the music and other medial elements have perhaps most often been undesirable to its users. Consequently, production music is more likely to be used to reinforce visual and linguistic messages, and so instead of “multimedia,” one might here refer to “lateral media.” For this reason, the semantic contents of the three *topoi* identified above may in fact give a relatively accurate picture of the visual and linguistic meanings that would come to be conjoined with this music in typical contexts of use.

REFERENCES

- Agawu, K. (1991). *Playing with signs: A semiotic interpretation of classic music*. Princeton, NJ: Princeton University Press.

- Allanbrook, W. J. (1983). *Rhythmic gesture in Mozart: Le Nozze di Figaro & Don Giovanni*. Chicago and London: University of Chicago Press.
- Allanbrook, W. J. (1992). Two threads through the labyrinth: Topic and process in the first movements of K. 332 and K. 333. In W. J. Allanbrook, J. M. Levy, & W. P. Mahrt (Eds.), *Convention in eighteenth- and nineteenth-century music: Essays in honor of Leonard G. Ratner* (pp. 125-171). Stuyvesant, NY: Pendragon Press.
- Cohen, A. J. (2000). Film music: Perspective from cognitive psychology. In J. Buhler, C. Flinn, & D. Neumeyer (Eds.), *Music and cinema* (pp. 360-377). Hanover, NH, & London: Wesleyan University Press.
- Cook, N. (1998). *Analysing musical multimedia*. Oxford: Clarendon Press.
- Cowles, J. T. (1935). An experimental study of the pairing of certain auditory and visual stimuli. *Journal of Experimental Psychology*, 18, 461-469.
- Hatten, R. S. (1994). *Musical meaning in Beethoven: Markedness, correlation, and interpretation*. Bloomington & Indianapolis: Indiana University Press.
- Huron, D. (1989). Music in advertising: An analytic paradigm. *The Musical Quarterly*, 73, 557-574.
- Hatten, R. S. (2004). *Interpreting musical gestures, topics, and tropes: Mozart, Beethoven, Schubert*. Bloomington & Indianapolis: Indiana University Press.
- Juslin, P. N. & Sloboda, J. A. (2001). *Music and emotion: Theory and research*. New York: Oxford University Press.
- Marhsall, S. K. & Cohen, A. J. (1988). Effects of musical soundtracks on attitudes toward animated geometric figures. *Music Perception*, 6, 95-112.
- Monelle, R. (2000). *The sense of music: Semiotic essays*. Princeton and Oxford: Princeton University Press.
- Monelle, R. (2006). *Musical topic: Hunt, military, and pastoral*. Bloomington: Indiana University Press.
- Mote, J. (2011). The effects of tempo and familiarity on children's affective interpretation of music. *Emotion*, 11, 618-622.
- Osgood, C. E., Suci, G., & Tannenbaum, P. (1957). *The measurement of meaning*. Urbana, IL: University of Illinois Press.
- Painter, J. G., & Koelsch, S. (2011). Can out-of-context musical sounds convey meaning? An ERP study on the processing of meaning in music. *Psychophysiology*, 48, 645-655.
- 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, 11-24.
- Patel, A. D. (2008). *Music, language, and the brain*. New York: Oxford University Press.
- Ratner, L. G. (1980). *Classic music: Expression, form, and style*. New York: Schirmer Books.
- Rodman, R. (2010). *Tuning in: American narrative television music*. New York: Oxford University Press.
- Shevy, M. (2008). Music genre as cognitive schema: Extramusical associations with country and hip-hop music. *Psychology of Music*, 36, 477-498.
- Tagg, P., & Clarida, B. (2003). *Ten little title tunes: Towards a musicology of the mass media*. New York & Montreal: The Mass Media Music Scholars' Press.
- Tagg, P. (2006). Music, moving images, semiotics, and the democratic right to know. In S. Brown & U. Volgsten (Eds.), *Music and manipulation: On the social uses and social control of music* (pp. 163-186). New York and Oxford: Berghahn Books.
- Uusipaikka, A-K. & Huovinen, E. (2007). Visual images in catalogue music. A paper presented at the conference *Sound, Music, and the Moving Image*, University of London, 9/10-12/2007.
- Yalch, R. F. (1991). Memory in a jingle jungle: Music as a mnemonic device in communicating advertising slogans. *Journal of Applied Psychology*, 76, 268-275.
- Zander, Mark F. (2006). Musical influences in advertising: How music modifies first impressions of product endorsers and brands. *Psychology of music*, 34, 465-480.