THE VALUE OF MUSIC – INTRODUCING THE SOUND SCULPTING METHODOLOGY

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ABSTRACT

Consuming music is a bodily experience. Building on the perspective of embodied cognition theory we present a pilot study on the topic “value of music” where we introduce a new method – sound sculpting – which involves performing sound by experienced activity. We present the results to our research in four different ways. First, we show how the respondents used the sound sculpting methodology to answer the stimulus question “What personal value do you derive from music?” Second, we describe the resulting sound sculptures and potential starting points for further analyses. Third, we give an overview of the basic concepts that were repeatedly used in the interviews. Fourth, we give insights into the respondents’ verbal reaction to the method. We end the article with an evaluation of sound sculpting as a new method, including possible advantages and limitations, and with an outlook for future research.

Keywords: music; value; methodology; sound sculptures;

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BACKGROUND

The business world surrounding music as a creative product has undergone major changes in the last decades. The last wave of innovation in the music business has been triggered and driven by new ways of producing, distributing and consuming music digitally (see Tschmuck, 2012). Ever since, the music industry is striving to develop sustainable business models which solve issues of value attribution throughout the value chain (i.e., including artists). Understanding how consumers derive value from music consumption—or the "consumer benefit experienced" (Priem, 2007)—is essential for consequent value creation, which lies at the heart of successful business models. Being an information and trust good, the overall value derived from music (before/during/after the experience) is only revealed after its consumption (Larsen, Lawson and Todd, 2010, Nelson, 1970).

Music is a hedonic service, providing more experiential and emotional than utilitarian value (Holbrook, 1995). Music's hedonic qualities play a key role in consumer decision-making, which is based on a mix of cognitive and affective processes (Chesbrough and Rosenbloom, 2002) and strongly influenced by consumer taste (Hoyer and Stokburger-Sauer, 2012) and consumer expertise as well as specific uses of media. Functions of listening to music can be conscious as well as unconscious, are connected to individual and social processes and strongly depend on context (North, Hargreaves and Hargreaves, 2004). Consequently, consumption decisions are not based on the fulfilment of an objectively defined need but rather built on subjective needs and assessments. The underlying motives to consume music can be split into cognitive, emotional and social domains (Hargreaves and North, 1999).

Consuming music is a bodily experience. For example, music can induce physiological and neurophysiological parameters. Measurement of bodily reactions to music include studies by Camurri and colleagues who displayed body motor activation induced by classical music in terms of smoothness/angularity with laser pointer trajectories (Camurri et al. 2006) or by De Bruyn and colleagues who quantified children's embodiment of musical rhythm using wireless motion capturing via Wii (De Bruyn et al. 2010).

Also, from the perspective of embodied cognition theory, much of the knowledge underlying individual decision processes is gained through "our bodily negotiations" with the world. Researchers, therefore, call for epistemic openness for the retrieval of this knowledge (O'Donovan-Anderson, 1997). However, there is a limited offer of methods to choose from. The quest to understand the value of music in consumers' everyday lives, therefore, is confronted with a range of methodological obstacles such as any kind of unconscious bias and difficulties to verbalize emotional and strongly embodied knowledge. With our study we want to answer the research question how consumers value music, while also investigating research methods to overcome these obstacles.

METHODOLOGY

Following the aforementioned research questions we use a projective method. We build on theories and empirical evidence on the connection of sound and body-movement (Clynes, 1980, 1977, Jauk, 2007) and on interviewing as embodied emotional performances (Ezzy, 2010). Sound is part of physical and emotional movement. Regarding to anthropological theories and empirical evidences the quality of sound informs about the physical occurrence in the environment and its relevance (for the survival) of the body; it informs about the emotional state of the environment. Indicating physical distances, intensity and "sharpness" of sounds motivate behaviour. Within a dimensional concept of emotion "sharpness" is associated with perceived "activity" (Jauk 2007: 367).

Douglas Ezzy argues that the emotional framing of interviews largely shapes the content of these interviews and that qualitative researchers typically focus on cognitively articulated aspects of the interview while neglecting the emotional aspects of the interview which leaves important aspects of the research process unexplored. He suggests to further engage with the emotional, embodied and performed dimensions of the interview as emotions "provide important information about how people understand, experience and evaluate the world" (Ezzy 2010: 163). Ezzy further builds on psychoanalytic research by Jessica Benjamin (1988) and Luce Irigaray (2001) who show that people are frequently not or not fully aware to what extent emotions shape their behavior.

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In order to address an emotionally loaded topic like the value of music, we decided to follow the method of multi-sensory sculpting (MSS). This method is used to retrieve embodied brand knowledge through stimulation of "various senses that have been involved in brand knowledge creation" and giving "consumers the opportunity to express themselves metaphorically in a format similar to their cognitive representations (von Wallpach and Kreuzer, in press). Participants choose multi-sensory materials from a prepared toolkit, build their own brand sculpture and then co-construct meaning via open-ended interviews.

We employ an interview stimulus that is consistent with the research topic – the (personal) value of music –, as "the interview is not simply concerned with collecting data about life: it is part of life itself, its human embeddedness is inescapable" (Cohen and Manion, 2000). Instead of the multi- sensory toolkit, we consequently use sound, the acoustic material of music which is not only regulated in the process of its structuring by the basic emotional dimension "activity" but also regulates the perception of the basic emotional dimension "activity". After being confronted with the stimulus question, participants shape sounds with the vertical movement of one hand within a predefined range of the sensation "sharpness" operationalized by the frequency, the number, the amplitude and the ratio of partials[1] (Bismarck 1974; Zwicker/Fastl 1999: 239). We integrate this sound-sculpting into a multi- method research framework that allows for semantic content analysis of intuitive behavior as interaction with aesthetic material.

In this article, we present study design and results from an exploratory study on the value of music. The stimulus question was "What personal value do you derive from music?"

Sample

For the purpose of the pilot study a convenience sample of 16 participants aged 21 to 35 years with different degrees of education and involvement in music was invited to the Department of Musicology at the University of Graz in May 2012. Participants also differed in musical experience and gender (see table 1). One participant was a visually impaired person.

1 Partials are oscillators in a multiple of the frequency of the basic oscillation. They determine in psychoacoustic terms the timbre of a „sound". The sensation of „sharpness" is based on the frequency, the number, the amplitude and the ratio of partials. (Bismarck 1974; Zwicker/Fastl 1999: 239)

NICKNAME	SEX	AGE	STUDIES/ OCCUPATION	EXPERIENCE	INSTRUMENT
Löwenzahn	m	21	Student (Physics)	Non-musician	No
Kernöl	f	30	University assistant	Non-musician	No
HannahNoelle	f	23	Student (Philosophy)	Non-musician	Piano/Singing
Froggy	f	27	Professional musician	Musician	Violin/Piano
Kathi84	f	27	Student (Philology)	Non-musician	Singing
Patrick	m	24	Student (Musicology)	Musician	Piano
Lilly	f	26	Student (Musicology)	Musician	Piano/Guitar
Radio	m	24	Student (Musicology)	Musician	Piano/Guitar/Sax
Barbara	f	23	Student (English)	Non-musician	Piano/Singing
July	f	23	Student (Pedagogy)	Non-musician	Piano/Flute
Jan	m	27	Project assistant	Non-musician	No
Nat	f	35	Professional musician	Musician	Guitar
Birgit	f	25	Social worker	Non-musician	Flute/guitar
Alexander	m	29	Postdoc (Physics)	Non-musician	No
Bussi Bär	f	25	Student (Musicology)	Musician	Keyboard
Sonnenblume	m	22	Student (Musicology)	Musician	Guitar/Piano/ Drums

TABLE 1: DESCRIPTION OF INTERVIEW SAMPLE

STUDY DESIGN

Participants were welcomed and introduced to the study design. Next, participants answered a short standardized online questionnaire on their socio-demographic characteristics, their music consumption behavior and their actual mood state. Then, the participants were introduced to the technology and the stimulus question "What personal value do you derive from music?" and given a timeframe of about three minutes. When they felt confident about the activity, they started sound sculpting by selecting a sound within a predefined range of sound and then shaping the previously selected sound with vertical hand-movements.[2]

After this performative part of investigation the connotative impression of the sound sculpture was tested with a semantic differential using 15 seven-step-scales. These are marker-scales representing empirically the basic dimensions of connotative impressions of sound (Flath 2012). In the consequent interviews, the subjects verbally interpreted what they have done, answered the stimulus question verbally and, in a last step, they reflected on the study design and the new method. Further data was generated by means of triangulation from a standardized questionnaire before and after the sound sculpting activity; the sound sculptures; and the narrative interviews.

2 Software Programing and Hardware Development by Professor Werner Jauk

This set of methods – questionnaire, sculpting activity and interview – thus allowed us to retrieve information on the respondents' valuation of music, their use and consumption behavior of music, their affective states before and after sculpting activity and their subjective experience of the method.

RESULTS & INTERPRETATION

We present the results to our research question in four different ways. First, we show how the respondents used the sound sculpting methodology to answer the stimulus question "What personal value do you derive from music?" Second, we describe the resulting sound sculptures and potential starting points for further analyses. Third, we give an overview of the basic concepts that were repeatedly used in the interviews. Fourth, we give insights into the respondents' verbal reaction to the method.

Sculpting activity

General observations include that most respondents closed their eyes and stayed fixed, thus occupying only very limited space (see Figure 1). This indicates a strong focus of the participants on the activity. Also, most respondents lost sense of time, extending the activity to up to 20 minutes without noticing. In combination with immersion, this can be a sign for flow experiences or "unified flowing from one moment to the next, in which [the individual] is in control of his actions, and in which there is little distinction between self and environment, between stimulus and response, or between past, present, and future" (Csikszentmihalyi 1977: 36). Respondents are captured by the specificity of the immersive auditory space (Jauk 2013), some kind of emotional impression of "all-at-onceness" (McLuhan 1995) surrounding the participants. Furthermore, some participants who seemed quite agitated when they entered the room got very calm and concentrated during the exercise. Most participants showed a smile, indicating well-being during the activity. Although they had been told about the camera, no participant looked into the direction of the camera. The visually impaired participant had slight difficulties in handling the selection of sound, but showed no other difference in conducting the sculpting activity.

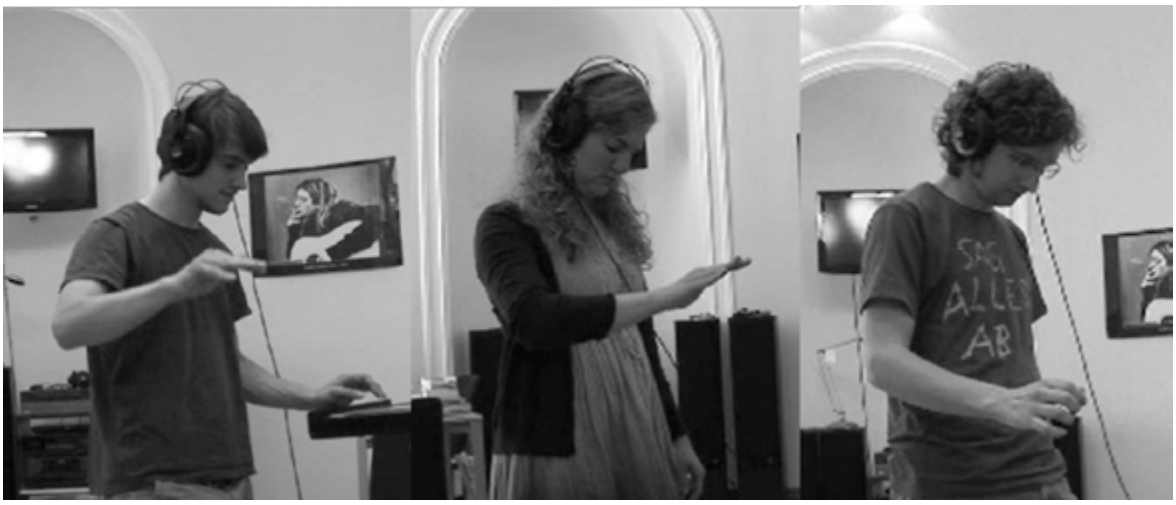

FIGURE 1: PARTICIPANTS DURING THE SOUND SCULPTING ACTIVITY (IMMERSION)

In the interviews, some respondents were quite astonished about their level of activity. For example, Löwenzahn saw himself as „(v)ery dynamic - I moved a lot. This astonishes me, I had the impression to be calm. I didn't realized I moved so much", while Froggy found herself „(q)uite calm. And quite controlled. I'm happy about this, usually I'm a bit uncontrolled." Further evidence for flow is expressed by Kathi 84: "I first stabilized myself, but then I let myself fall and closed my eyes... I fell very contemplatively into all... I got relaxed over time and I did not realize I took so much time, I really got caught up in the task."

Sound sculptures

In general, the duration of the sound-sculpture varied from approximately 2 minutes to 20 minutes. They are analyzed on the basis of a) the performative behavior shaping the sound by video (see figure 2) b) the movement in terms of variability in time and height (of motion of the hand as well as the sound) visualized in a frequency- and amplitude-plot (see figure 3) c) the selected sound according to the preference of sharpness when the procedure was started.

The sound selected because of the preference of sharpness and its modulation because of intensity and variabilities of the hand's movement indicate perceived perceived/expressed "activity".

First results seem to confirm theoretical assumptions. The intensity of movements seems to be related to "activity". Within a concept of structural-equation-modeling we will search for empirical based theoretical assumptions, which allow generating an algorithm describing some kind of relationship of behavioral and verbal data.

FIGURE 2: PARTICIPANTS DURING THE SOUND SCULPTING ACTIVITY

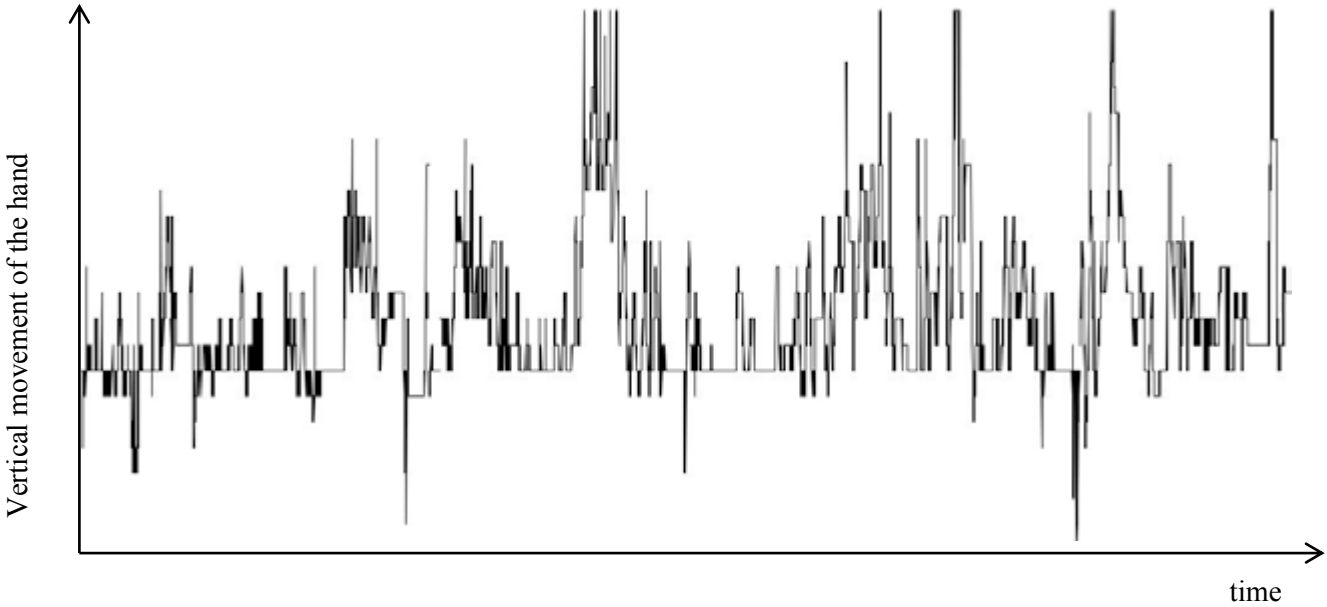

FIGURE 3: GRAPHICAL DISPLAY OF VERTICAL HAND MOVEMENTS (VARIABILITY IN TIME AND HEIGHT)

Interview Themes

During the interviews following the sculpting activities, respondents showed to be very curious about their sound sculptures and entered the interviewing situation easily. Upon questioning, most respondents spontaneously found a name for their sculpture, e.g., "Wandering in the illusion of everyday life", "Multitude", "Multicolored", as Lilly associated "low pitches with dark colours, and higher pitches with lighter, more flashy colours." but also "Grey", the latter being referred to a "matt color" (Sonnenblume). In analogy to the Multisensory Sculpting methodology, where toolkit materials can stimulate the senses and support consumers in metaphorically expressing mental brand images (von Wallpach and Kreuzer, in press), the figurative nature of descriptions seems to indicate that the sound assisted respondents in metaphorically expressing the answer to the stimulus.

Common themes describing the personal value of music were music as a steady companion in a wide diversity of areas of life, such as morning hygiene, household activities, commuting, relaxing and many more. For some respondents, music stayed in the background, e.g., "Music is not so important to me; it's rather in the background. I listen to music when I walk or take the tramway... Since I'm a student, I'm much more active and have less time to listen to music." (Löwenzahn) or „I listen to music in the morning, in the car, when I'm going for a run, actually for activities where I don't need to concentrate" (Kernöl). Others stress the importance of music, positioning it as absolutely important for their lives: "I listen to music when I get up in the morning. I need it to wake up; I need it to sleep... I like listening to music when I'm working, at the computer, it is steady company. I always take my mp3-player with me." (Patrick). For Nat "(m)usic does not play a role, it is integrated into my life. It's not separated.... I can't be in a room without music." Froggy, a musician, adds: "I'm playing the piano, also orchestra concerts. The orchestra also influences a lot of my social life. It makes me happy and I use a lot of time for it."

Evaluation of the method by participants

Participants generally evaluated the method as something new and interesting. BussiBär linked her experience to the stimulus question: "Music is exciting and emotional to me – this makes my movements faster and higher ... and my heart beat accelerates. You really heard my heart beat at the low pitch." Although some participants had been skeptical when being introduced to the method, many participants showed a playful approach to the task that combined cognition and emotion: "Actually I've tried, thought a lot and discovered a lot of new things that worked, so I experimented, repeated and looked how it sounds... I was rather led by my feelings." (July) or "in the beginning I just tried what happens, then I tried to re-enact something, and then up and down, back and forth. When I intuitively think about what music means to me, fast and slow, loud and calm, dynamic." (Lilly). While the task was perceived as easy and intuitive by many, e.g., "The task was easy – what you have to do or can do... it's a bit of a challenge, you have to think what you want to create...but then I don't think but just do, I'm a spontaneous person and decide spontaneously..." (Patrick), one participant also "felt slightly overburdened with the task – it's the first time I did something like that. I'm not a very musical person." (July).

CONCLUSION AND FURTHER OUTLOOK

In this article we introduced sound sculpting as a new method to retrieve embodied knowledge. Evaluating the method from our pilot study we have reason to believe that sound sculpting can be a promising alternative to other projective methods, especially when interviewees need to strongly focus on the topic and retrieve embodied knowledge. Future studies will further investigate how to maximize quality of the research output concerning the interplay of methods and to apply the method to different settings and topics. A disadvantage of the method is that it is labor, time and cost intensive. While the method seemed accurate for a wide audience, some persons might be resistant to methods that ask for involvement and participation, which is another potential drawback. Such reasons for resistance should also be investigated. In sum, further studies are needed to develop the method and test its applicability in different settings.

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