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A CONCEPTUAL FRAMEWORK FOR THE PERCEPTION OF LEISURE SOUNDSCAPES WITH MUSIC

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Leisure soundscapes refer to sound environments with recreational activities and entertainment. These soundscapes are primarily composed of featured and organised sounds of speech and/or music as the main product of aural consumption. Participation in leisure soundscapes is usually voluntary and casual. In-depth soundscape studies have yet to be extended to leisure soundscapes with music due to the significant weight of socio-cultural meanings that necessitate a different approach beyond functional purposes, aural comfort and health. This conceptual paper presents a framework for the study of perception in leisure soundscapes, developed through literature review and a qualitative study of an international open-air music festival. In leisure soundscapes, the music is usually mediated through sound engineering which expands the auditory space and re-characterises the sound properties. The engineered musical sounds, combined with sounds from the participants and environment, form the totality of the sound environment. The discretionary setting of a leisure soundscape creates different modes of experience namely, recreational, diversionary, experiential, experimental or existential; and different types of soundscape listening, including presentational, participatory, spectatorial or backdrop. The perception of soundscape can be divided into the four dimensions of structural (sound identification), contextual (time, place), denotative (function) and connotative (affective-ness, values). By incorporating the contextual factors relevant to leisure soundscapes, this framework aims to provide a further understanding of the sound potentials, perception and management in leisure soundscapes while maintaining socio-cultural values.

Keywords: contextual factors, leisure soundscape, listening, music, soundscape perception

1. Introduction

Leisure soundscapes refer to sound environments with recreational activities or entertainment, such as in discotheques, pubs, clubs, theme parks and festivals. Leisure events are often soniferous with massive sound amplification. These soundscapes typically feature prominent foreground sounds of speech and music with social and cultural elements. Some sounds are intentionally crafted for attention and appreciation, with a high level of desirability based on enjoyment and meaning. Exposure to leisure sounds is voluntary and inconsistent. Thus, the perception and jurisdiction on the management of leisure soundscape are usually complicated by tensions between quality, demand and health considerations.

In-depth soundscape studies have yet to be extended to leisure events. The study of leisure soundscapes using existing methodologies that focus on functionality, acoustic comfort and health outcomes

may provide a partial understanding as leisure soundscapes involve a significant degree of cultural meaning. Soundscape research has focused on the noumena (physical properties), the phenomena (experience and perception) and/or epiphenomena (behaviours and outcomes). Recently, investigations on soundscape perception have been focusing on contextual or non-acoustic factors [1-3]. This conceptual paper proposes a framework for studying leisure soundscapes with music events as a phenomenon to provide a deeper understanding of the intrinsic sound-making process, elaborating on the person-related contextual factors of the mode of experience, way of listening and dimension of perception.

2. Methods

The framework for the study of the perception of leisure soundscapes was developed through a two-fold approach: a literature review of existing concepts and frameworks in soundscape research, and qualitative data analysis from the investigation of the Rainforest World Music Festival (RWMF) from the year 2015 to 2017. Data were collected through a questionnaire with 1,216 respondents and semi-structured interviews with 50 participants and 10 members who are part of the event organiser. The questionnaire and interviews featured open-ended questions on sound preferences and ways of participating in the leisure event. During interviews, participants were probed based on their responses. NVivo is used to assist qualitative content analysis that includes a priori codes derived from the literature review and emergent codes that surfaced through the qualitative coding process where categories and themes as well as their relationships were identified. Further details on the methods can be found in [4]. The concepts derived from the data analysis inform the design of the framework that specifically addresses the contextual factors related to sound formation, ways of experience and listening, and the dimensions of perception in leisure soundscapes.

3. Concepts in Leisure Soundscapes With Music

In leisure soundscapes with music events, sound perception can be influenced by its sound formation, medium of production, and the social dynamics around the event; the mode of experience; the ways of listening; and the dimension of perception. As “festival explores and experiments with meaning, in contrast to ritual, which attempts to control meaning” [5], a music festival creates more flexibility in the soundscape experience. This section explains the key concepts within the proposed framework.

3.1 Musical, Social and Environmental Sounds

The music in leisure soundscapes, whether live or recorded, is typically carefully crafted as a foreground sound for main aural consumption. **Musical expressions** have been rather widely studied through the lens of musicology with a detailed examination of history, instrumentations, musical vocabularies, social structures and cultural meaning. However, the sound context plays a crucial role in shaping experience. For example, a musical performance on a constructed stage at a festival is distinctly different from the same performance in a concert hall where the silence of other sounds is sought after.

Considering only the musical objects without including their medium of sound expressions can lead to a fragmented view of sound formation in a leisure soundscape. **Sound engineering** is an essential and integral intermediary where musical sound expressions are manifested with technological sounds. The level of sound intervention is unlike a classical music performance in a concert hall where there is close fidelity to the sounds produced by the musicians. In leisure soundscapes, the sound properties can be modified, either by amplifying or enhancing, which may also include changes in sound qualities such as the timbres, the proportion of loudness between different instruments in an ensemble, enhanced bass

sounds and richer texture. The authority of the sound team is significant as these "other" produced sound parameters of music can be determining factors to positive or negative sound experience.

In a leisure setting, the soundscape is a coalescence of musical expressions, **social sounds** and **environmental sounds** where these various sources form the acoustic environment of the event. When the engineered sounds of music dominate the soundscape, these "other" sounds, particularly those that are incidental, may be viewed as unintended and non-cognitive, and overlooked when studying the leisure event. With the inseparable shared auditory spaces, the local synchronic sounds, as a totality, are crucial in the soundscape experience.

3.2 Mode of Experience

As participants in leisure soundscape are often visitors or travellers, the mode of experience corresponds to [6]: recreational, diversionary, experiential, experimental and existential. These different modes of experience affect the level of participation in sound exposure and sound preferences.

The **recreational** mode is a search for pleasure and entertainment, with enjoyment as the primary purpose, providing a restorative effect. Excitement supersedes understanding of content or questions on authenticity. As one RWMF participant described, "The night is all about the party itself, right? … I would say that the crowd are coming to listen to music that is exciting … so you have to be able to segregate the cultural aspects from the sound aspects".

The **diversionary** mode is seeking escape and an experience of difference. Satisfaction is gained through departing one's usual, daily environment for a change, such as being away from city sounds to nature, or from a quiet life to a crowded festival. It is an experience that "disconnect from their everyday lives, and thus become open to exploring new relationships, new ways of understanding themselves, and new ways of perceiving the world" [7]. Examples of responses from RWMF participants include: "It gets you away from the city, the loudness of cars, vehicles, so you are transported into a venue, into a space where you can appreciate sounds and differentiate from other noise pollution"; "I can [accept the loudness in the festival]. … it's something unique, it's something different. I find it actually a welcome change in a way".

The **experiential** mode is more critical about values, where meanings in experience are searched for, such as responses from RWMF participants: "listening to some of the unique instruments and having learning how to play them as well"; and "people screaming disturbing the natural beauty of music". Nevertheless, the evaluation is done simply to observe, without active involvement. The **experimental** mode involves a more engaged approach, with an attempt to be part of the community and partake in their meanings, but not to be fully connected. The **existential** mode represents a deeper sense of attachment characterised by regular visits and a stronger sense of belonging. The committee members, volunteers or repeated festivalgoers who have participated in RWMF for many years exhibit this mode, showing more scrutiny in their assessment and a greater willingness to contribute significantly to the improvement of the soundscape.

3.3 Types of Listening

The discretionary setting and social dynamics of a leisure soundscape can influence an individual's level of engagement and the way they listen or hear the soundscape, whether voluntary or involuntary, and consequently their perception. Two main types of listening have been identified, namely "descriptive listening" to specific sounds, and "holistic hearing" of the soundscape as a whole, leading to relating sounds to objects or activities, respectively [8-10]. From the literature review and qualitative data analysis, four categories of ways of soundscape involvement through listening emerged: presentational [11], participatory [11], spectatorial and backdrop (Table 1). These types of soundscape involvement are

determined by the individual and are independent of the actual composition of the soundscape, although certain sounds may generally encourage specific ways of listening.

Table 1: The different types of soundscape experience in a leisure soundscape [4].

Type of Listening	Engagement With Sounds	Positionality of Sounds in Perception	Functionality of Sounds	E.g. of Sound Preferences
Presentational	Passive with attentive listening	Centralising the sounds of others	Consumption	High quality
Participatory	Active by contributing sounds	Being in the sounds of self and others	Doing	Interactive
Spectatorial	Passive in observational mode	Observing sounds as a display	Observation	Enjoyable
Backdrop	Passive with no direct connection	Hearing sounds as background	Atmosphere	Comfortable

The **presentational** soundscape experience is characterised by a one-way reception of sound, where the sound is the central focus. This results in a more passive form of participation, with a clear distinction between the sound sources and the listeners [11]. Sounds that are considered more presentational are often, although not limited to, featured sounds that are intentionally made dominant within the soundscape. The presentational experience is closely related to the appreciation of the sound, the display of skill, and its informativeness. These sounds typically have characteristics that attract attention and sustain interest. For example, in the context of music, the sounds have "transparent textures/clarity emphasised; varied textures and density for contrast" [11] so that details can be observed. As one RWMF participant commented, "It (music) has to be big enough to be on stage and give the people something to listen to. … you listen to how good the voice is … It's about the skill and how they sing, and how they present them, how much they are engaged in … And how tight that music is, how tight it is together as a group".

The **participatory** experience is characterised by a joint production of the soundscape, where the main sound sources and the audience/participants actively engage in "doing" and "being" in the sounds simultaneously. This creates a collective sound(scape) making with participants acting as the contributors of sounds as well as the main listeners. This can happen even if the soundscape is initially intended to be presentational through "simultaneous" participation such as singing, cheering and clapping together with the performers, or "sequential" call-and-response [11]. Compared to the presentational mode, the overall sound quality such as its structure and clarity can be less demanding, with relatively less complexity, as "being" in the sound-making process is prioritised for a more immersive and personalised experience. Nevertheless, the sound characteristics still play a role in inspiring greater participation, often featuring an "open form" that "can be repeated", "densely overlapping textures", "buzzy timbre" and "consistently high volume" [11]. Participatory experience involves a two-way flow of communications in sounds, fostering "social bonding" and "diminished self-consciousness" [11]. From this aspect, the preference for sound characteristics in a participatory soundscape experience is based on their interactiveness and the degree to which they inspire and facilitate participation. This is evidenced by the examples of responses from RWMF attendees: "It is the combination of music and the response from the audience. … Being part of the crowd, absorbing the music, and having fun"; and "[On a group percussion instrument playing] It's a very community feel ... Give people instruments, make them play together".

The **spectatorial** soundscape experience involves passively observing and listening to the soundscape as experienced by others, rather than directly participating. It is a secondary, vicarious experience where the way others experience the soundscape becomes a display for "listening". The fascination in the spectatorial experience involves anticipation in observing the process of how others react and engage in the soundscape. While sounds are inseparable from the self in a participatory experience, in the spectatorial mode, sound is an external object for the "aural gaze", creating an alternative way to connect indirectly: "the bystander in a glassed-in world of his own …. He enjoys the safety of physical and emotional

distance, and yet he is enthralled, riveted in place" [12]. Some related comments are, "buzz from people having fun!" and "I enjoy seeing them enjoying".

The **backdrop** soundscape experience involves the peripheral consumption of sounds, where the sounds are not listened to attentively, and the intricacies are omitted. The presence of the soundscape may or may not be acknowledged, even if the soundscape is dominated by foreground sounds. This backdrop experience often occurs when the listener is present with the sound species but not the sound sources, or in a soundscape that has no specific foreground or distinct sounds, either in a quiet or over-crowded auditory space. Ironically, loud sounds may initially catch attention, but they may not result in continuous concentration after prolonged exposure; instead, the listener finds themselves surrounded by the "ambience", "atmosphere", "vibe" or "buzz" in the soundscape. In this experience, one is within but does not, or in a minimal way, associate intentionally or contribute to the soundscape, as sounds are passively consumed, and "enable certain outcomes/activities, without people consciously dissecting why it is that the environment of a place provides so well for that activity" [13-14]. Related responses from RWMF attendees include: "Most people are not going to stay with the ten groups performing there … But they want the sound … see people around, hear the sound from far"; and "It's not really when I focus on the concert actually that I like. It's when I walk around, and I hear this ambience ... even if you just do nothing, you can still hear the music. It's nice". In the backdrop soundscape experience, there can be a higher tolerance for sound quality, as the sounds are not observed in detail, and there is no direct connection. For example, at RWMF, the concurrent workshops in different venues in proximity created sound invasion and masking effects, but some attendees perceived it positively as an "indicator that something is happening now" and "convey a progression of time" [15]. Similarly, a study on the leisure sounds in a three-storey building with different music events reported that "what little leakage may happen is welcome due to its implication of vibrancy and multi-functionality throughout the venue" [16].

In summary, the extent of participation and the ways of listening can affect the soundscape experience. The four categories identified—presentational, participatory, spectatorial and backdrop—represent a range of inclinations when engaging with the soundscape, rather than fixed and exclusive types. This can offer explanations for the different roles, sound preferences and significance that individuals ascribe to their soundscape experiences.

3.4 Dimension of Perception

Perception is defined as "an idea, a belief or an image you have as a result of how you see or understand something" or "the way you notice things, especially with the sense" [17]. Perception can be equivocal and involve multiple realities, as it is anthropocentric, humanly constructed meaning, either individually or collectively, based on interpretations: "Auditory perception is … something which is inextricably tied to the 'self' - i.e. involving the thoughts, feelings and the personal and collective habitus of the individual. In other words, perception can be considered a philosophical construct" [15].

Perception can be predominantly allocentric (object-centred) or autocentric (subject-centred) [18]. The allocentric mode perceives an object with objectification, identifying its content and understanding its meaning: "There is either no relation or a less pronounced or less direct relation between perceived sensory qualities and pleasure-unpleasure feelings … the perceiver usually approaches or turns to the object actively and in doing so either opens himself toward it receptively or, figuratively or literally, takes hold of it, tries to 'grasp' it", such as when "listening to speech in an attitude of wanting to understand what is being said and listening to music in an attitude of grasping its structure" [18]. In contrast, the autocentric mode reacts to the sensuous quality of the perceived object, centring on pleasure-displeasure feelings, such as "being affected by the timbre of the speaking voice or the sensuous quality of a singing voice, the sweetness of a melody, by the emotionally charged intonation of words spoken in

anger or in tenderness, in command or in supplication, in hostility or friendship" [18]. The dimensions of meaning in perception can be grouped into four main categories: structural, contextual, denotative and connotative (Table 2).

Table 2: The mode and dimensions of sound(scape) perception [4, 18].

Mode of Perception	Dimension of Meaning	Type of Perception	Example of Aspects of Study
allocentric	structural	identification of sounds	sound sources, sound properties, soundscape characteristics
	contextual	identification of context	place, time, activity, situation
	denotative	semantics and semiotics	meaning, function
autocentric	connotative	affective-ness	reaction, emotion, behaviour
		preferences and values	evaluation, preferences

The identification and categorisation of sound sources are fundamental to understanding the composition of the soundscape. Developing a nomenclature to translate the intangible sound profiles into textual form is necessary for a more concrete understanding of their characteristics. Numerous studies have explored various aspects of soundscape perception [19-21]. This paper aims to categorise the different dimensions of soundscape perception, particularly expanding on the qualitative descriptors of the structural aspects of sounds (Table 3).

In terms of describing sound characteristics, sounds can be categorised as "passive" or "active" [9]. "Passive" sounds are from nature or mechanical sources that are human-operated but do not have direct and continuous human control, mostly geophony, biophony and mechanophony. "Active" sounds are produced through direct human participation and control and are mostly anthrophony. "Intent" refers to whether the sound is intended to be heard or incidental. "Hierarchy" describes the order of focused attention directed towards the sound. In terms of "form", sounds can be "structured" and organised, or "random" as an unorganised group of sounds. The "location" of sound can be "local" or "foreign" to the listener, indicating its association with the place and the visibility of sound sources. By combining these descriptors [22], a comprehensive overview of the layering and intersection of sounds within a soundscape can be obtained (Table 4). For example, a music workshop at RWMF is intended to have the characteristics of active-intentional-featured-structured-local, but due to sounds from other concurrent workshops, it takes on the qualities of active-incidental-background-random-foreign.

Table 3: Structural descriptors of sound characteristics [4].

Sound Characteristics									
production		intent		hierarchy		form		location	
active	passive	intentional	incidental	featured	background	structured	random	local	foreign

Table 4: Soundscape characteristics of the different venues in RWMF.

Main Function of Venue During Leisure Event	Type of Soundscape	Intended Soundscape Characteristics
Staged performances	cultural, social, entertainment	active-intentional-featured-structured-local
Music workshop	cultural, social, intellectual	active-intentional-featured-structured/random-local
Craft bazaar	commercial, cultural	active-incidental-background-random-local
Food stall	commercial, social	active-incidental-background-random-local
Resting hut (near the forest and a pedestrian path)	natural, transitory	passive-incidental-background-random-foreign

4. Conceptual Framework

The proposed framework reflects the prominence of context and presents some key components of sound formation, mode of experience, ways of participation through listening and dimensions of perception in leisure soundscapes (Figure 1). Specifically, the framework outlines the following main concepts as elaborated in Section 3:

a) Musical, social and environmental sounds: featured musical expressions are shaped through the transmission process mediated by sound engineering. These sounds interact with the sounds of participants and the environment, forming the overall acoustic environment.
b) The mode of experience with different degrees of recreational involvement, meaning finding and attachment that individuals associate with the sound environment.
c) The various ways of soundscape participation through listening, namely attentive listening in presentational experience, participatory sound making, spectatorial through observation or experience as a backdrop.
d) The different dimensions of perception.

The framework is not exhaustive or standalone but rather aims to explain some of the contextual factors related to leisure soundscapes. As non-acoustic factors can significantly affect perception beyond sound parameters, these concepts provide references as alternatives for managing experiences and person-centred interventions. While incorporating changes through relevant contextual factors may lead to improvements in soundscape perception, the management of physical sounds and the creation of a positive sound environment remain highly important, as soundscapes can have both direct, conscious impacts as well as enabled, unconscious effects on people and their activities [14].

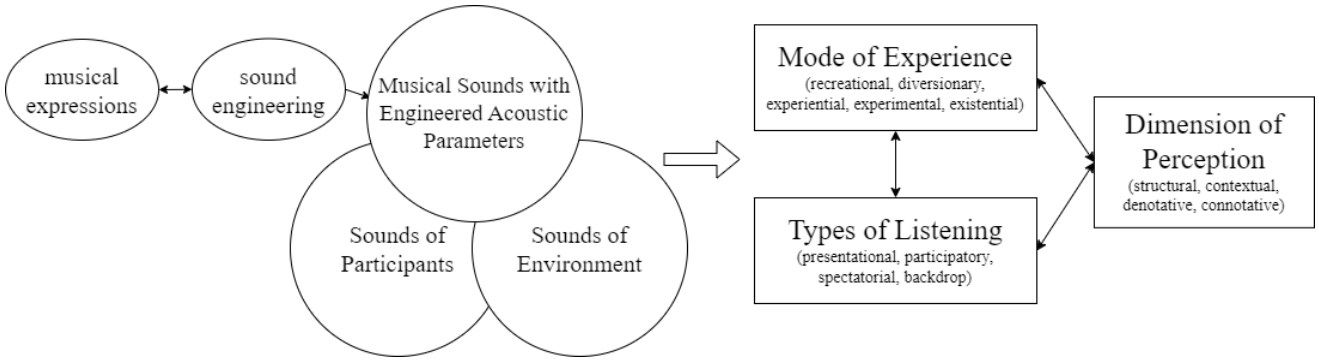

Figure 1: A conceptual framework on the context of soundscape formation, mode of experience [6], types of soundscape engagement in listening [11] and the different dimensions of perception [18] in leisure soundscapes.

5. Conclusion

Leisure soundscape with music events usually contain an interplay of sounds from different sound sources such as musicians, sound engineers, participants and the environment. This framework presents some of the contextual factors on the auditory and perceptual constructs, in addition to existing literature, considering the mode of experience (recreational, diversionary, experiential, experimental or existential), the way of listening (presentational, participatory, spectatorial or backdrop) and the dimensions of perception (structural, contextual, connotative or denotative). These concepts can further the understanding of sound potentials, perception and management in leisure soundscapes while maintaining their sociocultural values. Future studies can examine these concepts individually or their relationships to better understand soundscape appraisal, as well as the transferability of these concepts to other types of soundscapes.

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