

Reflections on the Authenticity of Natural Soundscapes

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Abstract: Natural soundscape is an important component of nature as well as of soundscape and has attracted interesting in academic study. Nevertheless, research to date offers little insight into the issue of authenticity of natural soundscape. On the basis of a study of the literature on soundscapes, natural soundscapes and authenticity, this paper aims to overcome past research negligence by exploring the need of research, the types of authenticity of natural soundscape and factors influencing authentication of natural soundscape. It suggests that authenticity of natural soundscape is necessary to explore, the two types of authenticity, namely, object-related and existential authenticity may coexist in natural soundscapes, expectation from inside and information from outside, especially visual cues in environmental conditions should be taken into account in future research.

Keywords: Soundscape; Natural Soundscape; Authenticity; Tourism Resource; Landscape

1. Introduction

Soundscape resources have become an important component of landscape resources, offering a useful auditory complement to the traditionally visual orientation of landscape studies. Natural soundscapes, in turn, constitute a significant part of soundscape resources and are composed of various sounds from the natural world [1], such as babbling brooks, rustling breezes, and birdsong. Research has shown that natural sounds are the most pleasant among all sound categories, often dominating the soundscape of a given setting and ranking as the sounds people most desire to hear [2-4]. Natural soundscapes have been shown to contribute to positive emotions, enhance landscape quality, facilitate relaxation, and promote well-being [2,5].

To date, research on natural soundscapes has centered primarily on perception, evaluation, preference, and effects, while the question of their authenticity has received scant attention.

2. The Need to Explore the Authenticity of Natural Soundscapes

In soundscape research, soundscape quality (or experience) has been a central concern, with many studies developing perception and evaluation models [3,4] aimed at improving the quality of soundscape experience. Although some of these models incorporate attribute terms such as "natural," "real," and "artificial," which bear directly on authenticity in the natural domain [3,5,6], and some researchers have argued that distinguishing natural from artificial sounds is a prerequisite for describing their psychosocial characteristics [7], authenticity has not yet been treated as an independent and complete dimension within soundscape evaluation systems. In traditional visual landscape research, by contrast, authenticity is a core element that determines the quality of landscape experience [8,9]. It follows that authenticity should likewise be incorporated into soundscape perception and evaluation systems as a core element. Moreover, sound provides information beyond the visual [10]; when people form overall authenticity judgments primarily on the basis of visual information, the authenticity of the soundscape offers a valuable supplement, and the integration of visual and auditory information can significantly enhance the authenticity experience. In soundscape classification systems, natural soundscapes are generally treated as a subcategory of soundscape, such as the "natural sounds" in Schafer's classification [11]. Krause's classification further divides natural sounds into geophony (non-biological natural sounds such as water sounds) and biophony (sounds produced by living organisms such as birdsong) [12]. Clearly, sound source is the primary consideration in soundscape classification. Yet classifying natural soundscapes by sound source overlooks a crucial question: is the source natural or artificial? Fisher once argued that "once we perceive a sound as natural, it acquires a positive aesthetic effect" [12], suggesting that authenticity may underlie the positive effects of natural soundscapes. But do people perceive, for example, the sound of water from an artificial source as authentically natural?

Or do they distinguish between the sounds of natural and artificial water sources? Such questions have not been seriously considered. At present, both the gentle flow of a natural stream and the spray of a man-made fountain are classified as water sounds under natural or geophonic sounds. This simplistic classification blurs the distinction between natural and artificial water sources, and in doing so, the question of natural soundscape authenticity is neglected.

The authenticity of natural soundscapes therefore merits scholarly attention and exploration. Theoretically, such inquiry would enrich the underexplored study of natural authenticity, deepen and broaden soundscape perception and evaluation systems, and advance the classification of natural soundscapes. Practically, it would contribute to the effective protection of natural soundscapes. Just as "restoring the old as it was" represents a practical application of authenticity in landscape conservation, soundscape design can likewise draw on authenticity derived from nature to create "natural" soundscapes that surpass nature itself.

3. Some Reflections on the Authenticity of Natural Soundscapes

Authenticity in tourism can be divided into two aspects: the authenticity of the tourism object and the authenticity of the subject's experience. The former includes objective authenticity and constructive authenticity, which Wang Ning collectively termed object-related authenticity [13] and Lau later merged into object authenticity [14]. The latter is existential authenticity [13]. Although objective and constructive authenticity differ markedly in who holds the power to identify authenticity, in the process of identification, and in its characteristics, both acknowledge that object-related authenticity exists and is pursued by people [8,14]. Existential authenticity, by contrast, holds that people do not seek the original object of authenticity but rather seek the authentic self suppressed by modern life, attaining "peak experiences" or "flow experiences" that transcend or escape everyday life—experiences that are unrelated to the tourism object [13].

3.1 The Question of Existential Authenticity in Natural Soundscapes

To date, the vast majority of research has confined authenticity to ethno-socio-cultural-historical objects. What, then, of the authenticity

of natural objects? Wang Ning (1999) argued that objects outside the ethno-socio-cultural-historical domain—such as nature—are unrelated to object authenticity and instead pertain to existential experiential authenticity, whereby natural objects such as mountains, rivers, and birdsong, or nature-based activities such as hiking and trekking, evoke a state of self-existence. Nature is a typical extra-institutional space in which the authentic self is more readily realized [13]. Yang and Kang's (2005) case study of soundscapes provides some indirect evidence: when explaining why they preferred natural soundscapes such as water sounds and birdsong, interviewees mentioned reasons such as "being able to completely escape the noise and bustle of the mundane world," "escaping daily life and relaxing the mind," and "fleeing from modern life and pressure" [2], suggesting that natural soundscapes can evoke and enhance experiences of existential authenticity.

Compared with object-related authenticity, existential authenticity is more emotionally charged; through emotional engagement, people can achieve a "purification" of the mind [15]. Soundscapes, too, are rich in emotion [2,5], and natural soundscapes—especially water sounds—are particularly effective at masking urban noise and inducing calm and relaxation [5], benefiting both physical and mental health. In other words, by listening to the babbling of water and the whispering of wind, people can attain spiritual liberation and experience their authentic selves.

3.2 The Question of Object-Related Authenticity in Natural Soundscapes

Although Wang Ning did not consider natural landscapes to involve object authenticity, some scholars argue that natural landscapes do possess object authenticity. Gilmore and Pine's five categories of authenticity, for instance, include natural authenticity—a state of "not being touched by humans, not artificial or synthetic" [16]. In other words, object authenticity is indeed a property of natural tourism objects. Lau also argued that, semantically, authenticity carries many meanings that belong to object authenticity, some of which are applicable to natural tourism objects. For ethno-socio-cultural-historical objects, object authenticity means "original," "real," "genuine," or "credible"; for natural objects, it means "untouched," "natural," or "pristine." In this sense, a natural beach can be evaluated as object-authentic because it is "wild

nature" rather than a man-made environment [14]. Tourists also deliberately seek out authentic nature untouched by modernization [17]. A few studies offer indirect evidence: pilgrims, for example, seek natural authenticity in the natural beauty surrounding architectural heritage, and the fact that people want to photograph pure nature without other tourists can be seen as evidence of their pursuit of natural authenticity [16].

At present, the question of object-related authenticity in natural landscapes has received little attention, and the object-related authenticity of natural soundscapes—an important component of natural landscapes—has been even more neglected. Nevertheless, drawing on the above understandings of object-related authenticity in natural landscapes, we can infer that natural soundscapes likewise possess object authenticity. One can imagine that the sound of a natural stream and the sound of an artificial fountain in a plaza, though both are water sounds, should elicit different authenticity experiences. Indeed, it was found that, among animal sounds, people rate the calls of wild animals as far more pleasant than those of farm animals (domesticated) [12]. This difference may well reflect the role of natural authenticity—that is, people do care whether the sound source originates from pure nature, and they evaluate sounds from natural sources more positively. Of course, the authenticity of natural soundscapes is more complex and abstract than that of natural landscapes, requiring empirical investigation through qualitative, experimental, and other methods. Because evaluation is based on identification, the question of how people identify the authenticity of natural sounds—that is, the process of authenticity identification—poses an even greater research challenge.

4. Factors Influencing the Identification of Natural Soundscape Authenticity

There is currently no direct evidence to explain how people identify a soundscape as authentic or inauthentic. However, drawing on prior authenticity research in the ethno-socio-cultural-historical domain, we can speculate about some factors that may play a role.

4.1 The Role of External Information

Learning more external information about an object helps people identify its authenticity and enhances the authenticity experience [14,18]. Just as many renowned cultural heritage sites abroad convince visitors of their authenticity by

presenting rich external information—architectural, historical, and otherwise—through authorities and experts [15], so too does external information function as a bottom-up processing mechanism.

In soundscape perception and evaluation, sound itself, the environment, and the listener are the main factors influencing perception and evaluation [2]. Among these, the acoustic parameters of the sound itself and environmental conditions provide bottom-up information for identifying soundscape authenticity. However, the parameters of the sound itself—particularly acoustic parameters such as frequency and amplitude, and psychoacoustic parameters such as loudness and sharpness—have little influence on higher-level, especially cognitive and emotional, soundscape processing [19]. This is because, on the one hand, soundscapes with the same sound pressure level can be perceived very differently [19], and on the other hand, even when the sound pressure level is very high, a soundscape dominated by pleasant sounds is still perceived as very comfortable [4]. After all, soundscape processing does not simply stop at the basic level of treating sound as mere sound [20]. It can therefore be inferred that, in identifying natural soundscape authenticity, environmental conditions may play a more critical role than the parameters of the sound itself.

In people's perception of the environment, visual and auditory modalities are often tightly coupled, so soundscapes cannot function independently of the visual landscape [20,21]. Evaluations of the visual landscape influence evaluations of the soundscape in the same direction [5,7], and visual cues exert a stronger influence on natural soundscapes [7]. Kou and Xu's (2024) research found that, during the daytime, the attractiveness of visual cues "masks" rural natural soundscapes, providing reverse evidence of the important role of visual cues in natural soundscapes [22]. The role of visual cues in people's identification of natural soundscape authenticity should therefore not be underestimated.

4.2 The Role of Internal Expectations

In the process of identifying authenticity, the various pieces of information seen, heard, and felt must conform to people's expectations of the object [18,23], which also reflects the important influence of the listener on soundscape perception and evaluation. For example, people typically expect the sound of a waterfall to resemble a roar;

if a large waterfall before one's eyes produces only the trickle of a small stream, this would conflict with expectations and impede authenticity judgments. This reflects expectations grounded in the objective realities and regularities of the natural world. Similarly, people form expectations based on culture—for instance, expecting a temple to play Buddhist music rather than jazz. Whether information conforms to expectations reflects a top-down processing mechanism, which likewise influences judgments of natural soundscape authenticity. These two types of processing occur simultaneously and interact with each other.

5. Conclusion

In summary, although the authenticity of natural soundscapes has been neglected in existing research and the boundary between authentic and inauthentic remains blurred in soundscape classification, exploring the authenticity of natural soundscapes is nonetheless necessary. Such inquiry can proceed along two lines simultaneously—object-related authenticity and existential authenticity—and empirically test the roles of external information and internal expectations in the identification of natural soundscape authenticity.

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