

EXPLORING THE DISCIPLINE OF SOUNDSCAPE ARCHITECTURE: LESSONS FROM LANDSCAPE

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Abstract

The etymology and history of landscape and soundscape are explored to identify opportunities for enriching the concepts of architectural soundscape design as it is applied in buildings and environments. Stilgoe [1] and Maxwell [2] developed entire texts to explore the concepts underlying the word landscape and the ways in which landscape has been defined in theory and in practice. Schafer [3], Truax [4] and Southworth [5] described early efforts in parallel studies of the concept of soundscape. There has been much work done in the development of standards and some design applications of soundscape in recent years to the point that there is the potential for a new field of Soundscape Architecture. There is much potential to be gained from exploring the transformation of landscape architecture as a discipline that could shed light on defining a discipline of soundscape architecture particularly as it applies to sounds in cities, towns, urban centers, and buildings. Siebein and Siebein [8] have identified five levels and nineteen elements of soundscape theory that can serve as an initial outline for the conceptual expansion of this field. Case studies from the theory and practice of landscape and soundscape architecture illustrate potentials for enriching the conceptual basis for this evolving field of applied soundscape study and practice.

Keywords: *soundscape, landscape, architecture, urban design, design theory*

1. Introduction

This paper presents an initial exploration of theories, ideas and interventions in the evolution of the field of

landscape architecture that can be used to help define the emerging field of soundscape architecture. They are presented as a series of vignettes or short descriptions of a moment in time or an idea to give impressionistic insight into an idea, person, experience, feeling, or place. Sometimes it is blurred around the edges to bring the central idea into focus to try to clearly express the characteristics of someone or something. The vignettes are intended to provide some inspiration and an outline of possibilities for starting to define the field of soundscape architecture as a design discipline with integrated scientific, aesthetic, social, cultural, geographic, structural, material and theoretical aspects similar to the way that landscape architecture evolved from horticultural, agricultural, gardening, civil engineering, painting, ecological, architectural, planning and other disciplines into a field with its own theories, history, design strategies, professional practitioners and ever expanding and deepening scope of work.

2. Etymology and Evolution of the Field

Stilgoe [1] states that landscape is a noun but then explains how it is also an adjective and a verb giving a dynamic quality to the concept. As a noun it describes the surface of the earth shaped by natural forces and people for specific purposes. As an adjective it names a type of painting with views of the earth as a large background or a field of study such as landscape architecture. As a verb it means to install plants, mulch, etc. He states that essential landscape involves 2 things: walking, noticing, thinking; and putting words to things – precise words derived from local and etymologic sources. The concept of learning landscape by walking and deep experience rooted in thought and dialogue is central to his theory. He returns continually to the idea that the etymology of landscape is rooted in the marge – the ever changing boundary between sea and shore where the shape of the land changes continually as tides move through their daily cycle.

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“The ragged edge contested by wilderness and human order” – . . . “the controlled spatial and structural construct. [1, p.1]” This is very similar in concept to the merging at the margins or acoustical horizons of sounds in space.

He describes the walk in the landscape as a mode of inquiry perhaps similar to soundwalking. “Observation and accumulation of clues in a landscape are of immense value, but the deductions made from them must be tested and cross examined by reference to other light - history, etymology, architecture, agriculture, or knowledge of local conditions” [2]. He also adds consideration of folkloric traditions to the discussion.

Schafer [3] discusses the concept of a soundscape as a composition or orchestration of “anyone and anything that sounds.” He continues that “sounds of a particular locality like its architecture, customs and dress express a community’s identity.” Interestingly, “we try to hear the world as a musical composition and further we are responsible for its composition”. He defines a framework for the study, preservation and composition of sounds in physical and imagined spaces.

Truax [4] defines an acoustic community as a soundscape where information plays an important role in the lives of the inhabitants. An acoustic community with a high fidelity soundscape is one where communication can readily occur and the meanings of sounds within the community are clearly understood. He contrasts the high fidelity environments with low fidelity acoustical environments where one’s aural space is reduced to less than the size of a person because acoustical colors and meaningful sounds are masked by intruding sounds of various types.

Southworth [5, p.2] considered the soundscape as the quality and types of sounds and their arrangements in space and time in relation to visible form, activity, and physical settings, i.e., architecture.

Lesser in a book about the architect Louis Kahn remarks that “An architect is a strange kind of artist” and that “Serendipity plays a role in all art, but in architecture it plays an even greater role” [6, p. 6]. He also states that you cannot tell a Kahn building by the way it looks. However, you can recognize a feeling, one that asks you to go inside, wander around it – a combination of exhilaration and repose, a sense of being intimately contained and given expansive possibilities may be what defines a Kahn work [6, p.7].

3. Language in Design

3.1 Elements, Grammar, Meaning, People, Place

The following statements summarize potentials for soundscape architecture using parallel analogies to Spirn [7, pp.15-17] substituting land(sound)scape for her landscape.

1. The language of land(sound)scape is our native language

2. Land(Sound)scape was the original dwelling; humans evolved among plants and animals, under the sky, upon the earth, near water and immersed in their sounds.
3. The language of land(sound)scape can be spoken, written, read, drawn, built, modeled and imagined.
4. To read and write land(sound)scape is to learn and teach: to know the world, to express ideas and to influence others.
5. Land(Sound)scape has all the features of language. It contains the equivalent of words, parts of speech – patterns of shape, structure, material, formation and function.
6. Like the meanings of words, the meanings of land(sound)scape elements are only potential until context shapes them.
7. Rules of grammar govern and guide how land(sound)scapes are formed, some specific to places and their local dialects, others universal.
8. Land(Sound)scape is the material home. The language of land(sound)scape is a habitat of mind. We dwell within the language of land(sound)scape. It is the house of being.
9. Land(Sound)scape associates people and place. Land(Sound)scape contains a story line that connects a place and its dwellers and their daily lives in an ecological construct.
10. People are not the sole authors or listeners to land(sound)scape.

Land(Sound)scapes have scale, from an intimate conversation between 2 people at a small café or a park bench to a classroom with active dialogue among a teacher and students to an arena filled with cheering fans for a sporting event or a concert to the neighborhood around the arena that participates in the concert whether they would like to or not. Land(Sound)scapes are often within land(sound)scapes which are within land(sound)scapes, etc. Every land(sound)scape is both a whole and a part of one or more larger wholes.

3.2 Metaphor, Rhetoric, Literature

Anomalies in land(sound)scapes may be clues to a wider context. Metaphors grounded in a land(sound)scape can guide how people think, act and interpret the environment. Soundscapes can be rhetorical and raise questions about the context. Land(Sound)scapes can also be a vast library of literature if they are read as such. Individual designers may adopt some of these techniques as the field of soundscape architecture evolves [7].

3.3 Soundscape as Architectural Space: Representational and Physical

Gass [8, p.798] states that there are 2 types of spaces. First are the spaces that people live and work and build in, the physical spaces that the physicist studies, the architect designs, the contractors build and the spaces that people move through to get from one place to another. The second are the spaces of representation. These are spaces on paper or in the

mind where people imagine relations and try to express them. The cartographer's projections, the painter's perspectives, society's hierarchies, the musician's scale and score, the architect's plans, the electrician's diagrams, management's flow charts, every display of information, statistical and otherwise, and, in particular, writing itself.

This representational space is necessary to think, plan or design. A notational system is needed so that the plans or ideas can be expressed and to identify the relations involved. This space allows the transformation of the physical, the philosophical, the theoretical into something that is "architectural." For architecture, as we conceive it, may be the general method of constituting relations in representational spaces in order that they may be materially constructed in phenomenological spaces – in spaces lived in [8 p. 799]. This places the representational space, the conceptual structure of ideas, spaces, sounds and forms as central to soundscape architecture.

Architects work in relations realized in some material, in the connections of objects, in the real materials and spaces necessary to sense. "He should remember, when he is placing stone by stone, that he is shaping a type of sentence; he should remember, when he is drawing this or that line, that he is also outlining a pattern of sounds; for the architect is the master of represented space of every kind, and that means he is the master of the making mind" [8, p. 812]. Gass is describing the essence of soundscape architecture.

A book is a building for what the brain has spun. Literature . . . like music, logic and mathematics – is designed to fill consciousness from within, to contrive inside the mind, arrangements of sound, and structures of sense, which will find their best accommodation in the public places, in the edifices, which will in their principled depths resemble them. When one writes, one is constructing not only a set of sentences, but a complex set of spaces (logical, grammatical, rhetorical, referential, musical, social, and so on) in which and through which the feelings, ideas, and energies of the sentences can express themselves. This is the architecture of the sentence [8, p. 803] and the architecture of sound.

3.4 Layers and Spatial Morphology

Layering has been an essential element of landscape and physical planning since Ian McHarg described sophisticated analysis methods in his landmark text, *Design with Nature* [9]. Girot [10, p 136] states that thinking of a land(sound)scape as a set of discrete analytical layers as opposed to a single body and terrain affects both the way one approaches the physical realm and how one deals with it and decides a course of action. Land(Sound)scape is all about nuances in the reading, writing and creating of a particular ambiance and space. It is about

embodying our relationship with nature and space, reinventing each time a particular posture and sentiment toward the world. Land(Sound)scape operates first and foremost as a strong, imageable and poetic reality as much as scientific assessment. They are consistent reinterpretations that vary and adapt according to figurative or metaphorical interpretations abstracted from context and form [10, p. 141]. Siebein and Siebein [11] discuss the importance of the transformation and abstraction of scientific data and layers of analysis as important parts of the soundscape design process.

Reittke [12] discusses a distinction in urban design between the informal city and the formal city and the ways that an informal city emerges from the spatial morphology of the formal city through the strategic speculative action of the residents who use them. He describes the informal city as "knocked together by the residents for the residents. How do informal soundscapes emerge from the spatial morphology of the city? Reittke explains that land(sound)scapes are ceaseless. "Their inextinguishability is their most relevant quality" . . . which "makes utterly urban places in the absence of plans, planners or professional architectural designers" [12, p. 111]. His discussion raises the question of how does one develop soundscape designs and interventions in this dynamic context?

3.5 Listen to the Place

Jasper Doest says that "If you go to a place with pre-imposed ideas about it, you'll look for something that might not be there. . . I learned to get out of my own way, to explore, and to let the island teach me what it had to say . . . I tried to avoid imposing my own narrative on the island . . . So, I walked its perimeter daily, training myself to listen and watch for small changes in this landscape (soundscape) that was so simple, you could draw it with just a few lines" [13]. Doest refers to the visual/natural/sonic attributes of a small island off the coast of the Netherlands where he walked, observed, listened and documented the ever changing conditions for weeks. This is perhaps the notion of a soundscape architect getting to know the place through soundwalks at different times of day on different days over a period of time, to be able to, as Girot says, "ground a project in a particular place based on . . . the designer recognizing what is topical and unique to the place [10, p. 142]. The same can be said of soundscapes in buildings, and urban settings in addition to natural landscapes.

3.6 Thick and Thin

According to Corner "formulaic uses of layering and imaging as techniques of strategy, composition and communication . . . are driving the production of self-similar, large scale land(sound)scapes and cities around the world" [14, P118]. He proposes 9 points to address the thick and thin of land(sound)scape.

The plan allows one to survey and analyze site conditions, organize space, program, structure, surface, material and to put into play the foundations and physical components of a project. Plan is almost universally thin. – “a gossamer veil”, a comprehensive vista of a site from above. It is also a device for analysis and organization of significant place-form.

Surfaces have depth, accumulation and profile. They are sectional, textural, slow, weighty, highly specific geographically, related to specific contexts, and materially thick – geology, soils, hydrology, layers of foundation and construction. They are also temporally thick because they are shaped by complex ecological processes that change in state and relationship over time. They are also culturally thick. Cultural modes of relation to the land (sound) include cultural histories, stories, uses, values, desires and differences in ecological, temporal, material and cultural contexts. There are often competing viewpoints and agendas among stakeholders shaped with layers of ideological dynamic and discourse. Analyzing these as separate layers of information particular to a place and project in plan aids analysis and understanding of complex situations, helps communicate complexity to others to facilitate broader participation and decision-making, and allows deconstruction of information to enhance understanding and reconstruction of new sets of relationships. The plan becomes an autonomous tool with its own set of rules and possibilities. Layered plans composed of abstract, seemingly thin layers deepen and thicken new possible futures from past histories and objective information. They allow transformation to occur by opening up new possibilities and insights. Layered sections, similar to layered plans but in vertical planes, can be developed to look at vertical relations among material, space, culture, history. Verticality becomes important for soundscape due to the 3 dimensional propagation of sounds sources and receiver located at different levels. Sound operates spatially [11]. Much of urban planning occurs in plan and at grade. Many municipal regulations occur in plan and at grade. However, much urban living occurs in multiple levels at, above and below grade in complex environments. Therefore, thickening of a place through design layering in plan and in section and a precise role of abstract representation are needed to present this complexity.

Traditions of region, terrain, site, locale, place, culture, history can be formatted with a specificity of form, geometry, and material, both operationally and figuratively that ideally resonate or adapt to a specific site. The abstraction can amplify specific site influences, actualize hidden potentials and create new opportunities. The thin layer of plan and section can ultimately thicken and deepen the site in new, productive ways over time.

4. Conclusions

Thick land(sound)scapes have depth, accumulation and profile. They are highly specific geographically, slow to change, related to context, sectional, with layers of foundation and construction, evolving over time due to complex ecological processes, culture, history, uses, values, desires, ideology, competing viewpoints, agendas and stakeholders, and layers of ideological dynamic and discourse.

Thin land(sound)scapes are often layers added to an existing context. Ideally these are allowed to “take root” and grow into thick layers as they move into the future. They can become transformative. Sustainable growth occurs through the manipulation of the thin layer as it reaches into the thick layers of the existing site and then grows the site into something new and richer than it was prior.

Questions arise from these vignettes that can help further identify the field of soundscape architecture as it continues to develop. Specific techniques of thinking and doing that help one to approach the reading and writing of sites to produce new forms of work are especially important to enable soundscape designers to address the nuances of site and locality alongside or within a connected world [14]. Working through sites in layers and images underlies interesting research in the techniques and methods of design. How can one pay attention to the deeper poetic and philosophical meaning of a site and grasp its inherent meaning as well as its actual making? Is this a universal (global) or a site specific application? How can one adapt a design technique that is specifically responsive and adapted to local circumstances? Can the thin layer of design become representational of the thick conditions that underlie it or is it just formal work or “too good a technique”, too well known, too universal, so it becomes the same the world over? The work continues.

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