Listening in the Rose Garden

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As sound art finds its presence in public space, sound art in outdoor space is analyzed for potential modalities of new listening experience. In this paper the author proposes an energy map for understanding trajectory of experience and musical form. The author references theories of garden motility, temporality and site from landscape design, with ideas of how introduced sound shapes experience.

PUBLIC SOUND
As sound art becomes increasingly present in public space, specific listening situations have emerged. Technology enables creative integration of sonic arts in the public realm, and the particular intersection of landscape and soundscape is worth examining. The curated, or introduced, soundscape may well compete with an existing, native soundscape [1]. The existing soundscape may include desirable and undesirable sound. Traffic noise mixes with birdsong, wind and rain, in sonic cycles reflecting diurnal and seasonal rhythms.

The introduced soundscape gives the designer opportunity to shape experience and perception, regaining control over noise pollution. This may originate with an artist reflecting architectural and visual structures with a sonic ambience or a commercial sound designer engineering emotions. Hellström offers a taxonomy of the defensive, the offensive and the creative in introduced soundscapes [2]. In a recent analysis targeting landscape designers, I propose the application of bioacoustic partitioning, mimicking natural world phenomena whereby animals have evolved sonic niches to avoid frequency-band saturation or temporal overlap [3]. Botteldooren et al. propose three potential design imperatives for a new soundscape: backgrounded (the visitor does not notice the introduction of sounds), supportive (the existing experience is enhanced and complemented) and focused (the composition becomes a point of interest) [4]. The use of oppositional terminology such as foreground/background is happily borrowed from theorists of landscape, painting and concert music, though doing so may considerably simplify experience, and ideally a composer might seek methods of boundary blurring. Other dichotomous terms descriptive of listening modalities include attentive/holistic and musical/everyday [5].

In the garden space, exploitation of technology for a grand result has a long tradition, as when fountains and automata reigned in Renaissance Italian gardens [6]. Computer technology and real-time digital signal processing have made possible new approaches to augmented experience, supplementing the garden with controlled sonic intervention. Whether gently integrated or overtly occupying the space, unexpected presence of sound art in public space leads to a variety of visitor engagements with listening. In addition to my exclusive artistic focus on outdoor experience, Lorenzo Brusci in Italy has situated his compositional career in landscape sound; the works of Stephen Vitiello and O+A (Bruce Odland and Sam Auinger) often offer a situational response in an outdoor setting; and increasingly we are seeing temporary projects with multiple invited artists, as in the engaging and popular experiences curated for Caramoor by Stephan Moore [7].

Technology has opened frontiers, adding to the garden’s immediate visual experience with sound. Key tools of today’s multisensory garden are multichannel spatialization and generative software. The spatialization allows the garden soundscape to be immersive and suggest methods of motion. Generative software allows long unfolding multitemporal forms, unifying visitor experience. Sensor systems allow the soundscapes to reflect aspects of outdoor experience—for example, the weather. Interaction enables the sound component of a multisensory garden to be the strongest contributor to a sense of dynamism. While landscape changes visual experience slowly, electronic sound and lighting might instantly inject a new mood.

The landscape provides context for a new style of composition and framework for listening, departing from the concert hall. Installations encourage in the visitor a high degree of
motility, providing contrasting experiential zones, with sonic-architectural features to navigate. The new context allows for more than a linear temporal or physical trajectory through a tunnel of sound; instead, it provides the listener with multiple paths, no clear onset and conclusion and a strong element of discovery integrating sonic and visual. Noted landscape architect Laurie Olin writes: “I have for years thought that there are affinities between music and gardens, at least in certain aspects of their abstraction, sensuality, and their necessary perception in real time and, to varying degrees, in space” [8]. The garden becomes an ideal framework for a composer to create entirely different listening [9]. The user’s path and the time frame under which sensory input is resolved have been shown to be critical perceptually, suggesting that sonic transitions become important experiential features, rather than the continuous stimulation of conventional musical textures [10].

The soundscape and alternative terms such as acoustic environment are undergoing a new and timely post-Schaeferian examination. Auditory Scene Analysis (ASA) addresses the perceptual organization of sound, considering listening attentiveness [11]. In Brown et al., soundscape is carefully defined as the twin filters of human perception and interpretation applied to sound experiences associated with a specific environment. The analysis turns a careful ear toward the context of presentation of those sounds, and it is with this approach in mind that one might examine a new genre of garden composition [12].

The nature of music heard outdoors has key differences relevant to audience expectations for a concert hall experience, and musical approaches have changed as a result. Attending a concert has a trajectory with ebbs and flows of energy, some extramusical (Fig. 1).

This listening has a strong advantage. The ritual surrounding concert experience drives audience behavior toward a reasonable engagement with listening. There is an implicit attention that the composer can rely on for the predictable timeframe of concert presentation. In the outdoor experience the listener has no cues to expected rituals and will likely approach it with informality. External inputs—wind, birdsong, climbing stairs, dramatic vistas—are more likely to shape the experiential trajectory than the musical composition itself (Fig. 2).

By breaking down the barriers between the audience and the performance, in a rejection of the concert hall, composers have removed expectations of the performance as sacred space and must look for new methods to re-establish engaged listening. In designing my work, I have considered benches for removing shoes (suggesting sacred entrance to a Japanese temple) or a giant curtain hung from trees signaling the entrance to traditional performance space. My most successful approach blending purpose and practicality has been to distribute “sonic umbrellas” (just rice paper parasols), which are highly desirable on sunny performance days [13]. The prop reminds the visitor to listen and tends to refocus after a social distraction. Significantly, the visitor is now a performer in the landscape, and we have cooperatively arrived at an ideal.

While I am interested in social behaviors as an interface to appreciating sound art presentation, I also posit the obligation to focus visitor attention, enlisting participation in a mutual ideal of experience. The use of intentional physical performance can focus the visitor in cases where unadorned sound art presents a challenge. One solution is the use of object-interfaces that trigger expected behaviors. Elements from Christopher Alexander’s pattern language may be integrated into the sound experience: innate body interactions that satisfy physically and psychologically [14]. In my work, this includes sound emerging from chairs (sitting is an expected response to the context), a window that hangs from a tree branch (visitors walk up and look through) and ornamental birdcages (whistle to the imaginary bird, and it learns new rhythms) [15]. Finally, by guiding groups of viewers from one observation point to another, they discover themselves as actors in the tradition of outdoor theater, as when members of the court of the Sun King were all given roles in entertainments at Versailles [16]. Offering the listener an opportunity to engage on their own terms addresses the lack of ritual in the modern outdoor listening space.

**MOTILITY IN THE LANDSCAPE**

I characterize interventions within an environmental space as articulating principles of the lingering garden or strolling garden. A lingering garden offers an overlook, a vista, the locating of a bench or stone that causes cessation of motion. It intersects with stillness in the soundscape, the creation of a focal point. Visually, it is a brilliant botanical display, a framed view, a clearing along a path. Sonically, it is a point source, a
hidden sound, a repeating sound. Sounds offer depth of color and texture: a drip of water or a swish of bamboo.

The strolling garden leads the visitor to a far corner, up a grade, around a hedge to unveil a new vista, inviting motion. A flowing creek promises discovery; stepping stones match a contemplative gait. Sonically, a distant ping, running water, a breeze, a flitting bird leads the narrator through the rose garden in T.S. Eliot's *Burnt Norton* [17]. An unfolding of experience is the goal of the garden seen as a space for motion [18].

A relevant taxonomy comes from Chinese Ming Dynasty (1368–1644) thoughts on gardens, suggesting the poetics of experience: stillness, movement, static viewing, viewing in motion [19]. This range of experiential viewpoints accounts for viewer motion relative to a static or animated scene as the viewer is still: viewing a boat floating on a canal, or strolling while the landscape is the static component. We can use this analysis of garden experience to invent sonic equivalents, encouraging mobile, engaged and complex garden experiences.

John Dixon Hunt offers for consideration three kinds of movement in gardens: the procession, the stroll and the ramble. For the procession, reiteration is expected. It is a path of collective, not individualized, usage, with purpose and destination. The ramble is individual, disconnected, wandering [20].

Sound can engender similar impulses to personal action within the landscape, although there is a major difference between “sound lines” and sightlines. Sound will reach the visitor first, circumventing visual obstacles, and might incongruently betray the climax the visual hopes to deliver, but it can also entice. Sound traveling over walls, through thickets, diffracted by leafy trees, implies a destination, inspires the listener.

Sonic attractors in a garden space can function like a visual feature framed in the landscape. A visitor’s translocation through a designed landscape may alternate between the directed/programmatic and the random/itinerant, but the designer of environments can alter behaviors. With computer control, attractors can be repositioned, changing the dynamics of the garden, expanding interest in exploration, constructing a high level of attentive listening.

**TIMESCALES IN THE LANDSCAPE**

A significant diversification of the outdoor composition and listener engagement is the ability to construct experience with a duration far beyond what might be acceptable for the concert hall. The outdoor composer can create long timeframes for the structure of a work to stimulate individual engagement. The landscape sets up an awareness of many timescales. Perceptually, listeners divide streams of sounds into temporal groupings of multiple durations [21]. Allen Weiss writes: “gardens are polychronistic. Their temporality is attuned to season and climate, history and catastrophe. . . . Temporality of gardens operates on several levels: natural, phenomenological, iconographic, historical” [22]. Pijanowski refers to a variety of spatial and temporal scales simultaneously at work in the outdoor sound experience [23].

Visual gestures in the landscape change over time, mostly unidirectionally, toward decay. Plants offer a rebirth each spring, but this is a timescale far beyond the way we experience music. An outdoor sculpture has its own timescale, showing age, marking time, developing a patina, its colors softening. Redwood turns gray, copper loses its brilliance, shiny transmutes to weathered, fountains freeze, hedges turn sinuous with snow. Even the diurnal cycle of sunlight changes the appearance of an object and its presence in the landscape. It only seems appropriate that introduced soundscapes follow these same patterns, offering the return visitor a rhyme that remembers. The bright digital nature of today’s sound technology undermines the natural meshing of sonic components; music must appear transformed by its own similar filtering processes to integrate into the garden.

**SITE AND SOUND**

For the successful interjection of a soundscape, the outdoor composer must be site-responsive, reflecting nature. Introduction of alien elements must be conscious, with intent to contrast aesthetic approach. The introduced soundscapes might have two further taxonomic divisions: integrated/site-specific/background versus oppositional/borrowed/foreground. These approaches apply not only to sound elements but to other aspects of sound design. Reverberation is a particularly salient example, as we quickly construct a mental picture of a soundspace based on cues that filter the sound. As the outdoor environment has a scant identifiable reverberation profile, the designed characteristics can be presented as poetic or disjointed as they represent an indoor space in the listener’s mind, evoking cathedral, cave, tower, chamber music hall.

Sound in the landscape engenders some particular problems in terms of perception across distance, as compared to light and visual stimuli. For my own work, the ideal installation experience is gently perceptible at specific locales, integrating cleanly with the preexisting soundscape. Sound wafting across the landscape, enmeshed with the wind, is my ideal. However, there are many perceptual issues to contend with in planning sound integration. These include the frequency-dependent perceived directionality of sound waves and acoustic effects from physical components (hillsides, brick walls, absorptive greenery) or atmospheric conditions (humidity, temperature gradients, wind).

A second set of issues comes from the listener distance. One of the most interesting aspects of the work of a land artist like Christo or Smithson is the invitation that the visual gesture makes from a distance, inviting travel across space for further exploration [24]. Peter Walker writes that the land art “can be described as a linear statement in the landscape that becomes an organizing element for perceiving the whole” and indeed credits André Le Nôtre, designer of the gardens at Versailles, with setting the standard for the powerful gesture that invites exploration [25].

The only way to entice a distant visitor with sound is to project loudly across intervening space, and the reward upon getting closer is only a potentially overpowering sound. A further area of exploration might be sound design that has
near-field subtlety, detail analogous to seeing the brushstrokes on a painting, but dissolves into a less-discernible mass when heard across a landscape’s acoustic filters. The challenge remains to ensure that the distant sound is suitably enticing and the close-range sound sufficiently rewarding.

The dynamic perceptual shaping of a space with sound becomes an art form, as does the shaping of emotional dynamics. Bernard Leitner has explored definition of an architectural space purely with sound, or with the intervention of minimal visual forms, with sound sources providing cues for a body experience [26]. There are very few landscape installations deliberately planned for neutral spaces, the way a white cube gallery allows for a high degree of independence of form. It might be instructive to experience multichannel sound spatialization in the vastness of the Bonneville Salt Flats, but the tendency is to use defined and ornamented spaces. This is created with paths, steps, topography, walls, green barriers and other natural and built physicalities, all contributing to acoustic processing of the sonic output and to potentialities of visitor behavior. Thoughtful sound design can create new modes of listening in these formerly visually dominant spaces, successfully taking sonic composition, which has moved from the black box to the white cube, ultimately out into the rose garden.

References and Notes


9 Livingston [3].


20 Hunt [18] p. 188.


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