I have described this aural epistemology as involving two processes, but clearly they are deeply intertwined and simultaneously interacting. They also have highly specialized domains specific to language and music, as well as to the everyday sounds of the environment, but I suspect that the processes involved in each domain have much in common. For instance, both analytical and holistic pattern recognition strategies can be identified within each domain. Furthermore, contemporary electroacoustic experience blurs these domains [when amplified music (or speech)] is embedded within a soundscape and becomes its ambience. New technologies pose conceptual challenges of how to interpret new sounds as well as new functions for them in daily life, and perhaps the most striking aspect of this process is how quickly the initial cognitive disruption is resolved for the individual, even to the point of banality, and how social norms are re-negotiated (e.g. socially acceptable uses of cellphones in public spaces).

Soundscape Compositions

My creative practice is based in electroacoustic technology which has allowed me to design sounds and soundscapes in new ways, as well as to design the process of composition itself. An interesting case in point is the "soundscape composition" which unites both the inner and outer complexity of sound and the world at large. I regard soundscape composition as part of what might be called context-based composition where knowledge [of specific contexts] shapes the composer/designer's work and invokes the listener's knowledge of those contexts. I refer to both inner and outer complexity because both of the processes I described above are involved – the perception of inner acoustic structure and its interpretation through our knowledge of the world. Perhaps the most creative aspect involved is how the two may become related.

Digital technology allows us to address the inner complexity of sound right down to the micro level of the frequency-time domain, what is essentially the quantum level of sound using techniques such as granular synthesis and convolution; it also allows us to create virtual soundscapes in three dimensions using surround sound techniques in multi-speaker environments. The "space" or volume within the sound is projected into the listener's perceived space using much the same digital technology. But it remains up to the composer's skill to reference and invoke the soundscape competence of the listener; otherwise the tendency is for the work to become abstract, in the sense of sounds related only to each other. Listeners may acquire the ability to understand abstract sound constructions, but with the soundscape composition they appear to participate more while listening because their own life experience is constantly being invoked.

A few examples may suggest some of the directions that emerge from this work. My composition *Pendlerdrøm* is loosely based on the narrative of a commuter arriving at Copenhagen train station at the end of the day, waiting for a local train, and drifting into daydreams before and after getting on that train; the hyper-realism of the busy station is contrasted with the blurred and stretched sounds suggesting the daydream, thus connecting the inner and outer worlds of perception. *Island* creates a visit to an idealized and rather magical island by combining realistic environmental sounds one might encounter with abstracted versions of the same sounds that suggest an underlying symbolic dimension. In *Basilica*, the stretched sounds of three church bells have their resonances expanded until they suggest the

interior of a large cathedral, with the structure of the piece modelled after the experience of walking through the edifice.

_____ (1992). "Electroacoustic Music and the Soundscape: The Inner and Outer World." In J. Paynter, R. Orton, P. Seymour and T. Howell (eds.) *Companion to Contemporary Musical Thought* (pp. 374-398). London: Routledge.