

City soundscape and sense of place in the planning context

No landscape is mute. Trees rustle, waters splash, the wind is humming, birds sing. Within urban landscape there is noise of traffic, people talking, music playing, horns honking. Some sounds are pleasant, others are irritating and distressing. There are sounds that relax and sounds that pleasantly stimulate. Sound is an integral part of any landscape, whether natural or human-built. The majority of studies on landscape perception have been focusing on perception through the vision. Sight is the most important channel of the incoming information and pictures are easier than sounds to administer to participants. Nevertheless, sound is an integral part of any landscape, whether natural or human-built which adds a new quality to the visual stimuli. Studies show that the effects of interaction between vision and sound depend on additional factors. However there is no systematic theoretical framework that would account for the potential interactive effects of vision and sound on the place meaning.

In this project we will look at landscape through the theory of sense of place (place as a meaningful location) and we will adopt the theoretical perspective that there are two different types of meanings that can convert a physical location into a meaningful place: conservative and progressive. Conservative places encourage sense of insideness and rootedness and have an identifiable *genius loci*. In contrast, the meaning of places that conform to the progressive concept is a product of social construction –places that are open and diverse, both socially and physically, dynamic rather than stable and their identity is created through multiple encounters of their users rather than is drawn from their historical heritage.

Therefore the aim of this project is to demonstrate how sound in an urban landscape affects people's sense of place that is the way a place is experienced and evaluated. Two other aims concern the relationships between features of an urban soundscape and people's optional activities in urban green places, and their willingness to get involved in actions on behalf of urban places (environmental stewardship), as mediated by sense of place. We plan three work packages (WP), covering different aspects of the studied phenomena and will use the cities of Wrocław and Toruń as two illustrative case studies.

In the WP1 we will test how different sounds (relaxing vs. exciting) when presented in the context of progressive (e.g. lively urban squares or busy traffic streets) vs. conservative places (e.g. quiet residential areas or urban parks) affect the perception and evaluation of the setting. In addition we will study the vision-sound interactive effects in four experimental contexts of increasing ecological validity: from passive observation of static spherical photos to a dynamic VR immersion in a filmed spherical setting using experimental and on-line survey methods. In the WP2 we will develop planning and designing strategies for urban green spaces in order to improve acoustic environment, support their restorative function and enhance place attachment using location data from mobile phones and GPS tracking data. Restorativeness was found to be higher in audio-visually coherent settings. Accordingly, providing coherent urban green spaces in terms of audio-visual stimuli should support their restorative function and thus attract people. This may be particularly important in cities where the soundscape environment might be characterized by high noise pollution. In the WP3 we will explore and spatially assess the relationship between city soundscape, place attachment and environmental stewardship with the use of PPGIS survey and citizen's budget analysis. Studies show that there is a reciprocal relationship between people's sense of place and their willingness to get involved in actions on behalf of this place. The existent studies demonstrate the relationship between sense of place and environmental stewardship, however what is the precise nature of this relationship, for example would people be more willing to act on behalf of conservative or progressive places, and how can sound affect environmental stewardship remains uncovered.

This project crosses boundaries of different disciplines and combines at least three different disciplines: landscape architecture and urban planning (studies in landscape perception), social geography (studies of human relationships with their environment, participation of residents in local communities), and social and environmental psychology (studies of place attachment and sense of place through experimental and participatory approaches).