# Landscape Experience, Landscape Appreciation and Landscape Visualisation

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Our environment has a range of sensory qualities. Humans possess a number of sensory systems that allow them to sense and perceive these qualities. These include an auditory system (the sense of hearing), a tactile system (the sense of touch), a kinaesthetic system (the ability to sense and coordinate movement), a vestibular system (the sense of balance), an olfactory system (the sense of smell), a gustatory system (the sense of taste) and a visual system (the visual sense). Of all senses, the visual sense is by far the most dominant component of human sensory perception (Bruce et al. 1996).
The planning and design disciplines, including e.g. Landscape Architecture, Architecture, Planning, etc., deal with the analysis, planning, and design of our physical environment. In terms of addressing the range of senses they tend to focus on the visual landscape. The visual environment with its numerous visual stimuli can be represented via a palette of analogue and digital media. They are essential to communicate proposed changes to experts as well as to the public in the decision-making process.
The level of sophistication of visual representations is constantly improving. However, a landscape when experienced off-site and as represented through a representation medium will always be a rather reductionist experience. Most planning and design experts tend not to be aware of this fact. Neither do our planning and design approaches take this into account. On the other hand, an entire artificial representation of our sensory experiences in a laboratory environment poses rather insurmountable technological hurdles. Only recently, visual and acoustic stimuli are combined in a virtual environment (Lindquist et al. 2016).
Through an on-site experience it is possible to experience the multitude of sensory impressions. However, by visiting a real site one would only be able to perceive the existing situation. On rare occasions 1:1 scale models are erected to indicate proposed changes or display boards on construction sites are used to show new developments. Recent innovations in Augmented Reality permit to overlay digital visualisations on real-world imagery, e.g. showing only the future changes on top of the existing environment (Lange 2011). Increasingly, mobile devices are able to display complex 3D graphics (Haynes & Lange 2016), while at the same time access to high-capacity mobile phone networks is available. Mobile devices such as tablet PCs and smart phones can support augmented reality, thus providing an expansion of the currently available planning and design toolkit allowing to experience an augmented reality view of the real world on-site while also providing the user with a complex sensory experience.

References

Bruce, V., P. R. Green and M. A. Georgeson 1996. *Visual perception, physiology, psychology and ecology*. Psychology Press, East Sussex.

Haynes, P. and E. Lange 2016: In-situ Flood Visualisation Using Mobile AR. *IEEE Symposium on 3D User Interfaces* 2016 (3DUI), 19–23 March, Greenville, SC, USA, 243-244.

Lange, E. 2011. 99 volumes later: We can visualise. Now what? *Landscape and Urban Planning* 100, 403-406.

 

Lindquist, M., E. Lange and J. Kang 2016. From 3D Landscape Visualization to Environmental Simulation: The Contribution of Sound to the Perception of Virtual Environments. *Landscape and Urban Planning* 148, 216-231.

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