



### ***Exposure to the sounds of nature in the natural and built environment: A multisensory perspective***

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In this talk, I would like to review the role of the sounds of nature (both real and digital) in multisensory environmental design. I will start by considering the relative importance of the sounds of nature that has been highlighted by the emerging body of research concerning the beneficial effects of exposure to nature on our social, cognitive, and emotional well-being. I will consider the relative benefits of exposure to nature in each of the senses, and how when combined, issues of sensory overload, sensory congruency/mismatch, and sensory dominance may arise (Spence, 2021).

Having considered the case of the multisensory exposure to real nature, I will then move on to consider the increasingly common use of nature sound's in the built environment, again as part of multisensory experience design (Spence, 2020). In such cases, questions of congruency, and whether it matters, are even more relevant. What is more, the question of whether digital nature (sounds) provide the same benefits as actual exposure to nature are especially pertinent. While nature sounds are sometimes used to connect us to nature (and the associated benefits of biophilia) at other times they may be used to help mask distracting background noise (as when the sounds of flowing/falling water are played in the open plan office).

The future of mixed multisensory reality and responsive nature soundscapes will be touched upon, and the question of whether it might be possible to design caricatured nature soundscapes (that are even better for us than what nature has to offer) will also be raised. Finally, I will take a closer look at the growing interest in nature sounds concerns their incorporation into experiential dining, starting with the famous 'Sound of the sea' dish served at Heston Blumenthal's The Fat Duck restaurant, and subsequently extended to a number of other dining experiences (Youssef et al., 2019).

Spence, C. (2020). Senses of space: Designing for the multisensory mind. *Cognitive Research: Principles & Implications (CRPI)*, 5:46. <https://rdcu.be/b7q1t>.

Spence, C. (2021). *Sensehacking: How to use the power of your senses for happier, healthier living*. London, UK: Viking Penguin. <https://www.penguin.co.uk/books/308513/sensehacking/9780241361139.html>.

Youssef, J., Keller, S., & Spence, C. (2019). Making sustainable foods (such as jellyfish) delicious. *International Journal of Gastronomy & Food Science*, 16:100141. <https://doi.org/10.1016/j.ijgfs.2019.100141>.