Difference between restorative and non-restorative environments

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This study examined the difference of the characteristics between restorative environments and non-restorative environments in everyday settings using Hartig et al.'s (1997) Perceived Restorativeness Scale (PRS). Participants were university students around Tokyo area. Given a scenario that describes a situation in which they had become very much fatigued mentally and were trying to restore from it, the participants were asked to answer one place where they thought the most suitable (or the least suitable) when they were in a such situation. Then, they were asked to evaluate the place on PRS items from 0 (not at all) to 10 (completely). Total 458 responses were collected (261 for restorative environment, and 197 for non-restorative environment).
By a factor analysis with maximum likelihood estimation, four factors were revealed from the evaluation scores of 23 PRS items. Judging from the result of promax rotation, the factors were named as being away, order, fascination, and extent, respectively. Then, a one-way MANOVA was conducted to examine the difference between the type of the environment (restorative/non-restorative) with the average subsclae scores of each factor as the dependent variables. The result showed the difference between restorative and non-restorative environment was significant. Follow-up discriminant analyses showed that the amount of being away was the most contributing to the difference between restorative and non-restorative environments.
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ERP dynamics of empathy for non-human beings and ecosystems

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Human beings are intrinsically bonded to the natural world. Regretfully, human systematic destruction of the biosphere may threaten Nature's capacity to sustain life in our planet. Therefore, strategies to promote ecocentric attitudes should be at the core of scientific inquiry. Our previous work suggests that inducing empathy may be a potent technique for creating more ecocentric attitudes and motivate us to protect all forms of life (Sevillano et al., 2007). The evidences so far indicate that empathy towards non-human beings is a reliable human attribute. Surprisingly, no neuroimaging study has been conducted to investigate the neural processes underlying empathy for non human animals, plants and ecosystems.
We aim to address this issue by studying the EEG empathic response of pro-environmental activists to visual stimulus showing humans, animals, plants and ecosystem in distressing situations. The task includes two conditions, where the same visual stimulus triggers either an empathic response or an objective account of the image content. Our approach includes EMG (corrugator muscle activity) of emotional response and subjective empathy ratings. Data is collected from pro-environmental activists and a non pro-environmental group. The experimental design and first pilot results of this ongoing research project will be presented. This work may certainly advance our understanding of ecocentric empathy and devise strategies to effectively cultivate this basic human ability. *joseraul.naranjo@uniklinik-freiburg.de*