

Study shows tranquil scenes have positive impact on brain

September 14 2010

Tranquil living environments can positively affect the human brain function, according to researchers at the University of Sheffield.

The research, which was published in the journal *NeuroImage*, uses functional brain imaging to assess how the environment impacts upon our brain functions.

The findings demonstrated that tranquil environmental scenes containing natural features, such as the sea, cause distinct <u>brain areas</u> to become 'connected' with one another whilst man-made environments, such as motorways, disrupt the <u>brain connections</u>.

The research involved academics from the University's Academic Unit of Clinical Psychiatry, Academic Radiology and the School of Architecture, along with the School of Engineering, Design and Technology at the University of Bradford and the Institute of Medicine and Neuroscience at Jülich, Germany. The team carried out functional brain scanning at the University of Sheffield to examine <u>brain activity</u> when people were presented with images of tranquil beach scenes and non-tranquil motorway scenes.

They utilised the fact that waves breaking on a beach and traffic moving on a motorway produce a similar sound, perceived as a constant roar, and presented the participants with images of tranquil beach scenes and non-tranquil motorway scenes while they listened to the same sound associated with both scenes.



Using brain scanning that measures brain activity they showed that the natural, tranquil scenes caused different brain areas to become 'connected' with one another - indicating that these <u>brain regions</u> were working in sync. However, the non-tranquil motorway scenes disrupted connections within the brain.

Dr Michael Hunter, from the Sheffield Cognition and Neuroimaging Laboratory (SCANLab) based in Academic Clinical Psychiatry within the University of Sheffield's Department of Neuroscience, said: "People experience tranquillity as a state of calmness and reflection, which is restorative compared with the stressful effects of sustained attention in day-to-day life. It is well known that natural environments induce feelings of tranquillity whereas manmade, urban environments are experienced as non-tranquil. We wanted to understand how the brain works when it perceives natural environments, so we can measure its experience of tranquillity."

Professor Peter Woodruff, from SCANLab, said: "This work may have implications for the design of more tranquil public spaces and buildings, including hospitals, because it provides a way of measuring the impact of environmental and architectural features on people's psychological state. The project was a real collaborative effort, bringing together researchers from Psychiatry, Radiology and Architecture at the University of Sheffield, as well as Engineering at the University of Bradford and the Institute of Medicine and Neuroscience at Jülich, Germany."

Provided by University of Sheffield

Citation: Study shows tranquil scenes have positive impact on brain (2010, September 14) retrieved 1 May 2024 from https://medicalxpress.com/news/2010-09-tranquil-scenes-positive-impact-brain.html



This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.