

Accepted Manuscript

Title: How eye-catching are natural features when walking through a park? Eye-tracking responses to videos of walks

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PII: S1618-8667(17)30354-0
DOI: <https://doi.org/10.1016/j.ufug.2017.12.013>
Reference: UFUG 26041

To appear in:

Received date: 5-6-2017
Revised date: 11-12-2017
Accepted date: 19-12-2017

Please cite this article as: Amati, Marco, Sita, Jodi, Parmehr, Ebadat, Mccarthy, Chris, How eye-catching are natural features when walking through a park? Eye-tracking responses to videos of walks. Urban Forestry and Urban Greening <https://doi.org/10.1016/j.ufug.2017.12.013>

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How eye-catching are natural features when walking through a park? Eye-tracking responses to videos of walks

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Since the 1960s researchers have developed a range of techniques for evaluating landscape preference. In parallel with this trend, eye-tracking technology has become cheaper, more mobile and more accurate, heralding a new era of big data capture and analysis for landscape preference. In this project our objective was to capitalise on the increasing mobility, sophistication and cheapness of eye-tracking technology to examine its utility in analysing landscape preference. In the following we describe how we eye-tracked 35 participants as they viewed walks through two different parks in the urban center of Melbourne, Australia. We show how participants dwelt on trees and bushes more than other objects. When we compared this to the time and space that objects occupy, participants overwhelmingly dwelt on artificial objects such as lamp-posts, distant buildings and benches. Overall we provide an exploration and method for analysing eye-tracking data in parks by normalising the dwell time by the content, providing a robust means of comparing different dynamic stimuli such as videos.

Keywords: landscape appreciation, park preference, eye-tracking, machine learning

Introduction: the urban age meets the age of biology

As global urban populations continue to increase, residents will face a number of challenges that include the need for restorative environments and an enhanced connection with nature. The quality of these connections are going to be moderated by what the Organisation for Economic Cooperation and Development has heralded as the ‘age of biology’ in which

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