

Exploring the Impact of Visual Properties of Natural Objects on Attention in both Real and Virtual Office Environment: A Pilot Study

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ABSTRACT

Human visual attention to natural objects could change their stress levels in indoor environments. However, the impact of object's properties as visual stimuli on people in virtual environments has been not understood yet. Consequently, the lack of understanding may prevent researchers from using virtual environments as a reliable tool to support the design of indoor environments with a combination of natural and non-natural objects. We hypothesize that attention to the natural elements differs among objects with different visual properties. Accordingly, we conducted an experimental study to investigate the influences of visual properties (type of natural objects, size, and location). 20 Participants were assigned to experience one of the two comparable office settings (real versus virtual) including three natural objects. The fixation time was measured by the eye-tracking method for the natural objects in conjunction with non-natural objects. The initial analysis showed that the fixation time of natural objects in VR was not different from the real condition. Additionally, different fixation times of objects varied in visual properties suggested that visual properties affect human attention to various objects.