

Vitalize me! Overcoming ego-depletion by viewing bright and sunny nature

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Vitalize me! Overcoming ego-depletion by viewing bright and sunny nature

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Introduction

Self-regulation relies on a limited resource (Hagger, et al., 2010), the depletion of this resource is referred to as ego-depletion. Because self-regulation capacity is important for success in many aspects of life, finding ways to overcome ego-depletion is a non-trivial issue. Some means to overcome ego-depletion have already been suggested, as for instance glucose intake or positive affect. Subjective vitality, which can be described as positive energy available to the self, has been linked to ego-depletion (Ryan & Deci, 2008). Studies have shown that vitality can be increased by being in nature (Ryan, et al., 2009) as well as by exposure to bright light (Partonen & Lönnqvist, 2000). Moreover, a conceptual link has recently been made between self-regulation and executive functioning, central to Attention Restoration Theory (ART; Kaplan & Berman, 2010). One of the central premises in ART is that viewing natural environments can help restore decreases in executive functioning. These findings suggest that both exposure to natural views and to daylight can help overcome ego-depletion, which is the main focus of the present study. The unique contribution of this research is that it experimentally investigates previously made (theoretical) links between ego-depletion, vitality, and restoration by investigating joint exposure to daylight and nature.

Method

We have conducted a series of lab studies with a typical ego-depletion experimental design consisting of a first task requiring self-regulation (retyping a paragraph with restrictions) by which performance on a subsequent self-regulation task (the stroop task) would become impaired. Between tasks, participants were asked to watch a slideshow and to imagine being in the

displayed environment. Manipulations included environment (natural vs. urban), weather (sunny vs. overcast weather), and lightness (light vs. dark). During the study, psycho-physiological measures were taken (e.g., heart rate variability; HRV). After both tasks, participants completed a mood questionnaire, which measured mood across three dimensions (vitality, tense arousal, and positive affect). An additional questionnaire probed the control variables state / trait self-control, and need for restoration.

Analysis and expectations

Data collection and analysis are still ongoing. Performance on the stroop task, the psycho-physiological outcomes, and mood will be the dependent variables. Results of study 1 (environment) indicate that viewing natural environments causes an increase in self-control capacity, while the opposite holds for urban environments. We will be presenting the results of study 1 (environment) and will provide insights in the results of study 2 (weather).

References

- Hagger, M., Wood, C., Stiff, C. & Chatzisarantis, N. Ego-depletion and the strength model of self-control: A meta-analysis. (2010). *Psychological bulletin*, 136, 495-525.
- Kaplan, S. & Berman, M. (2010). Directed attention as a common resource for executive functioning and self-regulation. *Perspectives on Psychological Science*, 5, 43-57.
- Partonen, T. & Lönnqvist, J. (2000). Bright light improves vitality and alleviates distress in healthy people. *Journal of Affective disorders*, 57, 55-61.
- Ryan, R. & Deci, A. (2008). From ego-depletion to vitality: Theory and findings concerning the facilitation of energy available to the self. *Social and Personality Compass*, 22, 702 – 717.
- Ryan, R., Weinstein, N., Bernstein, J., Brown, K., Mistretta, L. & Gagné, M. (2009). Vitalizing effects of being outdoors and in nature. *Journal of Environmental Psychology*, 30, 159-168.