IMPACT OF EXPOSURE TO GREEN SPACES AND LAPTOP USE ON STUDENTS' COGNITIVE FUNCTIONING

Bin Jiang (PI, Corresponding Author), Rose Schmillen (Co-PI, U of IL), William C. Sullivan (Co-PI, U of IL)

Although many studies have been conducted that demonstrate the restorative affects of green spaces, the conditions of these experiments are controlled in such a way that the participants have no distractions to direct their attention elsewhere. When taking a break from studying or working, many college students do not just sit quietly in a space. Technology is an easy medium to turn to when taking a break, and students may use it to surf the internet, watch TV, or play games. If a student is using technology in a restorative space, does it influence the restorative effects of nature? The goal of this study is to find out if the restorative benefits of being in a green space are in any way compromised by the use of technology, specifically a laptop. If laptop use predicts lower rates of recovery from stress and recovery of the ability to pay attention, then it may influence people to spend more time in nature without technology. However, if people can still recover in a green space more than in a barren space even while using their laptops, it may inspire people to use their computers to take a break in a more restorative space. This study may also give us a glimpse into how technology affects our perception of the world around us.

Based off of what we know about attention restoration, one would suppose that the condition of a restorative green space without the use of technology would be most restorative. The barren space with the use of technology is likely to be least restorative because the environment does not support restoration and the use of technology could itself be mentally fatiguing. The two remaining factors are harder to guess. Is it more beneficial in terms of attention restoration to be in a restorative space with the use of technology or to be in a barren space that is free of technology?

The outcome could also be dependent on what kind of technology is used. If the activity on the laptop requires more directed attention, it would have a greater mentally fatiguing effect, or would make recovery in a restorative space lower. By asking the students to record what kind of activities they engage in on their laptops, we can also analyze the data according to types of applications used.

Through this study, we are learning how to better make recommendations for attention restoration. Is a green space just as restorative with the distraction of technology, or is it less restorative? By conducting this study, we are learning more about the mechanisms behind attention restoration. Is it required that people pay attention to the restorative space, or can restoration work through distraction or other avenues of hard fascination? This study also begins to prompt questions about what kind of activities done in restorative spaces affect attention restoration.