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# Connection to Nature

Lu Aye and Felix Kin Peng Hui

Melbourne School of Engineering  
Health and Wellbeing Session, 10 December 2020



# Acknowledgements

- “We acknowledge the Traditional Custodians of country throughout Australia and their connections to land, sea and community. We pay our respect to their elders past and present and extend that respect to all Aboriginal and Torres Strait Islander peoples today.”
- Deanna Strangis, Theresa Walsh, and MSE Wellbeing Working group
- Yu Hu, Master of Environment Candidate 2019

- Staying connected and looking out for one to another

STAYING CONNECTED

(<https://umsu.unimelb.edu.au/support/covid-resources/staying-connected/>)



# Objectives

- To be aware of values (benefits) of connection to nature
- To be able to identify ways of connection to nature
- To be happier and to make positive improvements

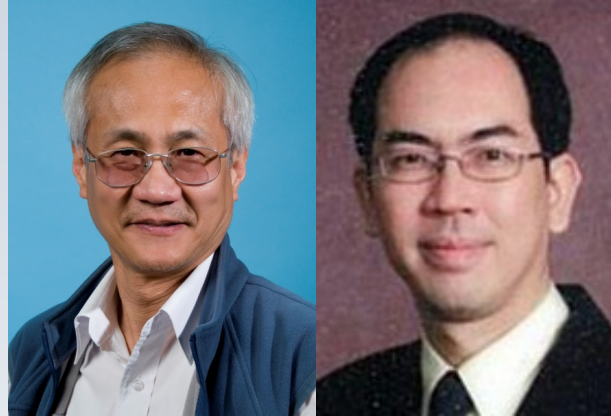


# Schedule

- Introduction (5 min)
- Happiness and Nature presentation (10 min)
- Breakout (10 min)
- Closure (5 min)



# Presenters



- Mental health first aider
- Member, MSE Wellbeing Working group
- Secretary, Dhamma Sukha Meditation Centre, Melbourne
- Lifelong learner

- Member, Infrastructure Engineering Education Committee
- Member, MSE Staff-Student engagement workgroup
- Learning about engagement and performance.



On average how many hours you are indoor in a day?

22<sub>23</sub>1<sub>10</sub>20

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# Where do you interact with nature?

park park  
sea  
garden biking  
sports balcony  
23

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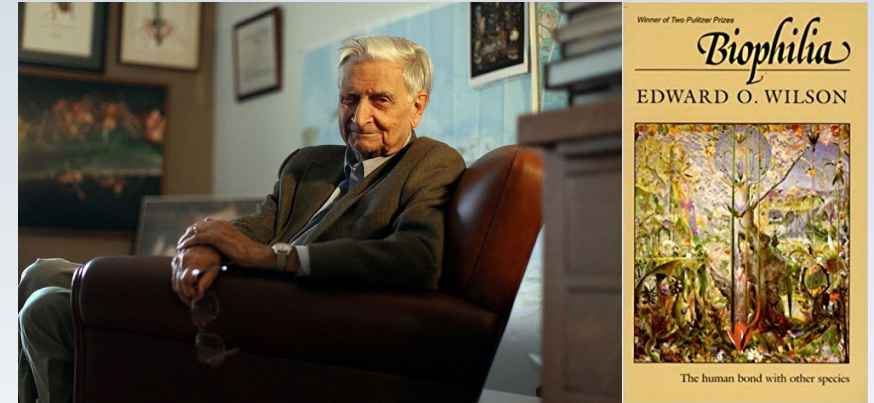


# Interaction with Nature?

- About 90% of people spend close to 22 hr indoor every day (Walden, 2018).
- In a street
- In a park
- In a garden (if we have one)
- On a computer screen (desktop background)
- In an office (indoor plants)

# Parks and nature are really good for your brain

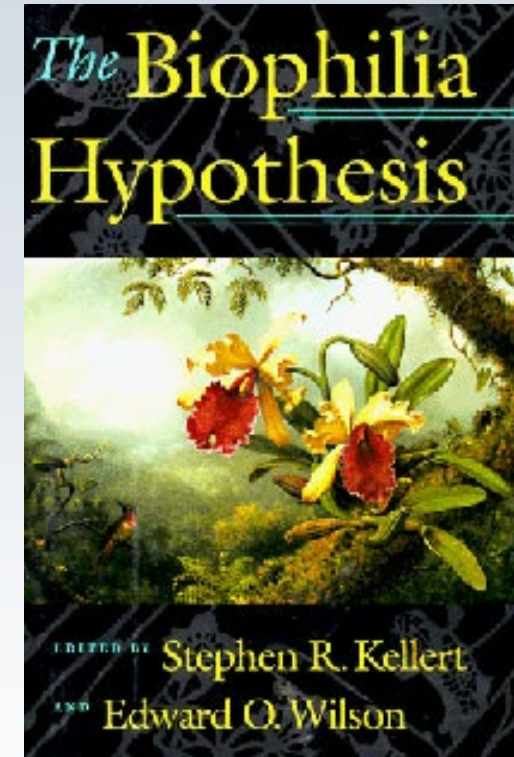
- “During 99% of human history people have lived among hunter-gatherer groups and have been closely connected to other living organisms” (Perrin, 2009).
- Humans have an “innate tendency to focus on life and lifelike processes” (Wilson, 1984): **Biophilia**.
- **Biophilia** is innate (an integral part of human nature) (Wilson, 1993).
- The brain has evolved in “a biocentric world, not a machine regulated world” (Wilson, 1993).



(Source: Mooney, C., 2015. E.O. Wilson explains why parks and nature are really good for your brain, <https://www.washingtonpost.com/news/energy-environment/wp/2015/09/30/e-o-wilson-explains-why-experiencing-nature-is-good-for-the-human-mind/>)

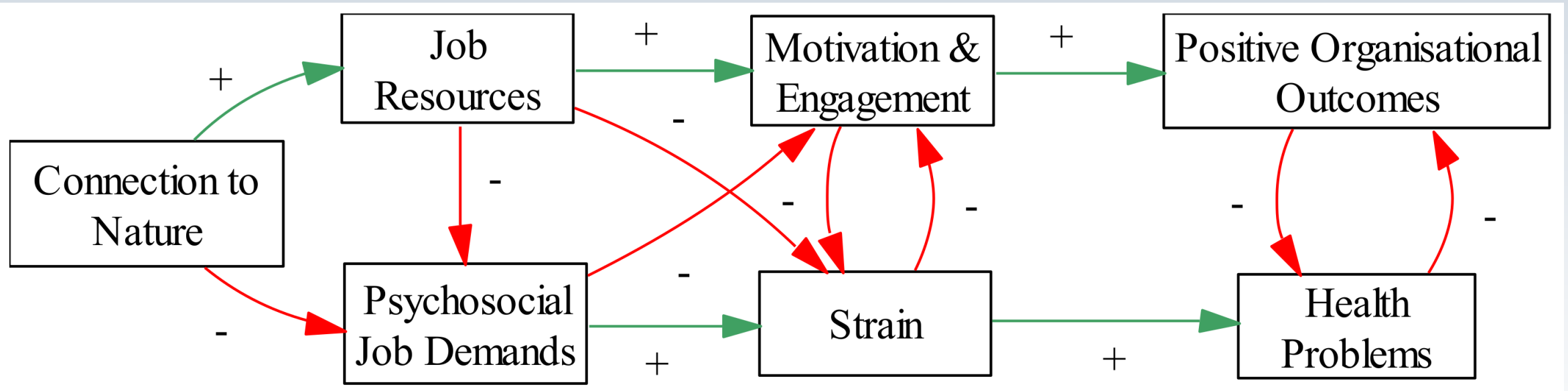
# Mental health benefits

- Contact with nature encourages **psychological well-being**, mitigates the stress of modern living and furthers **physical well-being** (Ulrich, 1993 in S.R. Kellert and E.O. Wilson (Eds.)).
- Patients assigned the **water** and **tree scene** were less anxious and needed fewer doses of strong pain medicine than those who looked at the darker forest photograph, abstract art or no pictures at all (Ulrich, 1993).



<https://islandpress.org/sites/default/files/BookCovers/9781559631488.jpg>

# Connection to nature and wellbeing outcomes



(Source: Hui, F. and Aye, L., 2018. Occupational stress and workplace design. *Buildings*, 8(10), 133, <https://doi.org/10.3390/buildings8100133>.)

**Green Infrastructure (GI)** enables our real nature interaction.



# Effect on children's cognitive functioning

- Children have better cognitive functioning or attentional capacity when housed near, playing or taught in green spaces (Wells, 2000)
- Green outdoor settings appear to reduce Attention-deficit/hyperactivity disorder (ADHD) symptoms in children across a wide range of individual, residential, and case characteristics (Kuo and Taylors, 2004).

## **AT HOME WITH NATURE** Effects of “Greenness” on Children’s Cognitive Functioning

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*NANCY M. WELLS recently received her Ph.D. in psychology and architecture from the University of Michigan. She is currently a postdoctoral fellow in the School of Social Ecology at the University of California at Irvine. Her research interests include the natural environment and restoration, participatory housing programs, the effects of housing quality on occupant well-being, and environments for older adults.*

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## **A Potential Natural Treatment for Attention-Deficit/Hyperactivity Disorder: Evidence From a National Study**

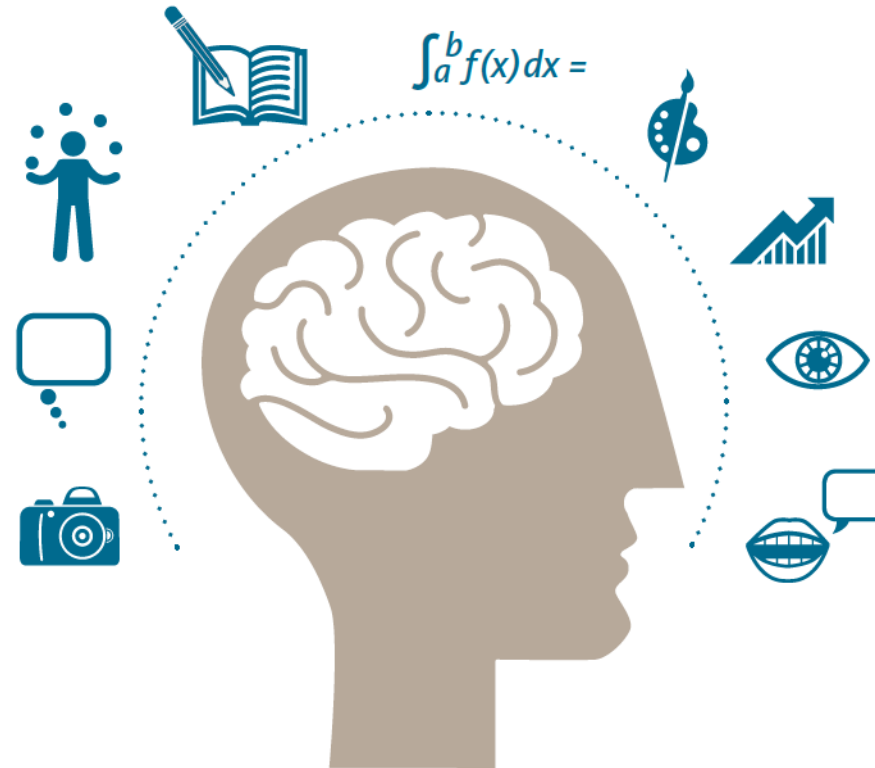
| Frances E. Kuo, PhD, and Andrea Faber Taylor, PhD

# Cognitive function

(Source <https://lpi.oregonstate.edu/sites/lpi.oregonstate.edu/files/lpi-cognition-infographic.pdf>)

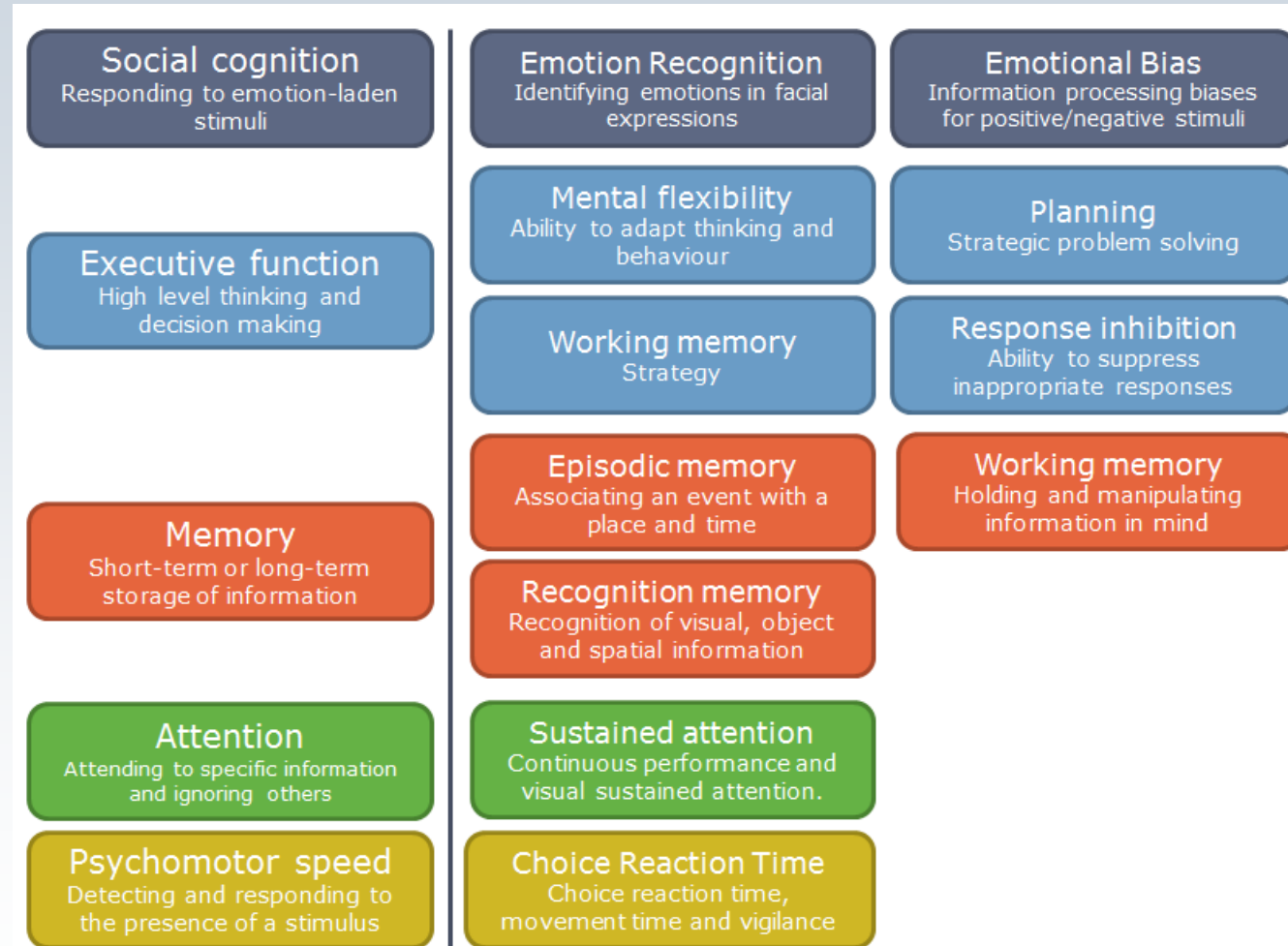
**Cognitive function refers to a variety of mental processes, including:**

ATTENTION  
PERCEPTION  
MEMORY  
REASONING  
PLANNING  
PROBLEM SOLVING  
DECISION MAKING  
LANGUAGE  
MULTITASKING



# Domain specificity of cognition

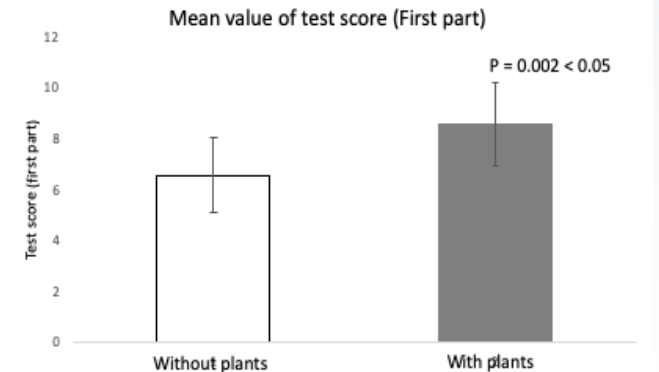
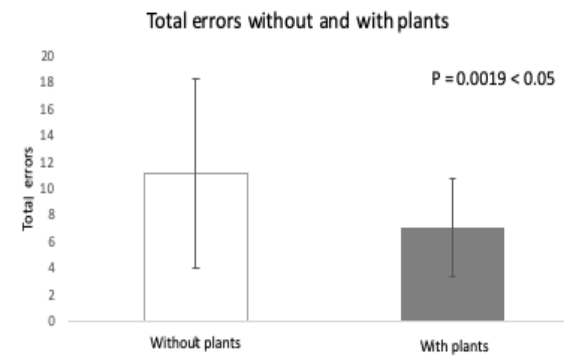
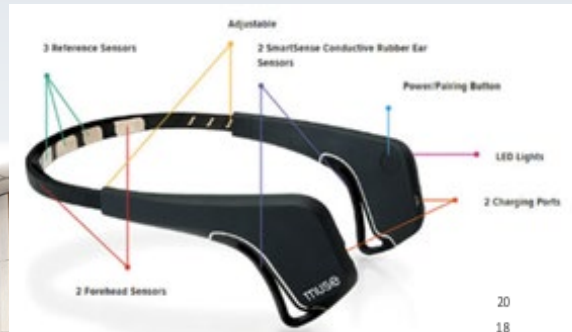
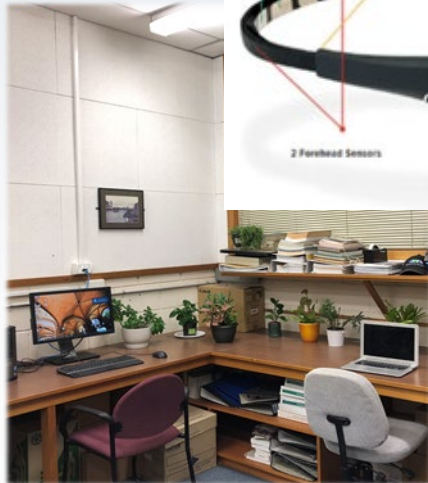
(Source <https://www.cambridgecognition.com/blog/entry/what-is-cognition>)



# Effect on cognitive functioning (Hu, 2019)

Exploring the effects of indoor plants on attention and memory tasks  
Identifying five main brain wave patterns during tasks through EEG system

Experimental design: 1. Sustained Attention to Response Task, 2. Memory task  
Ethics approval, n = 30

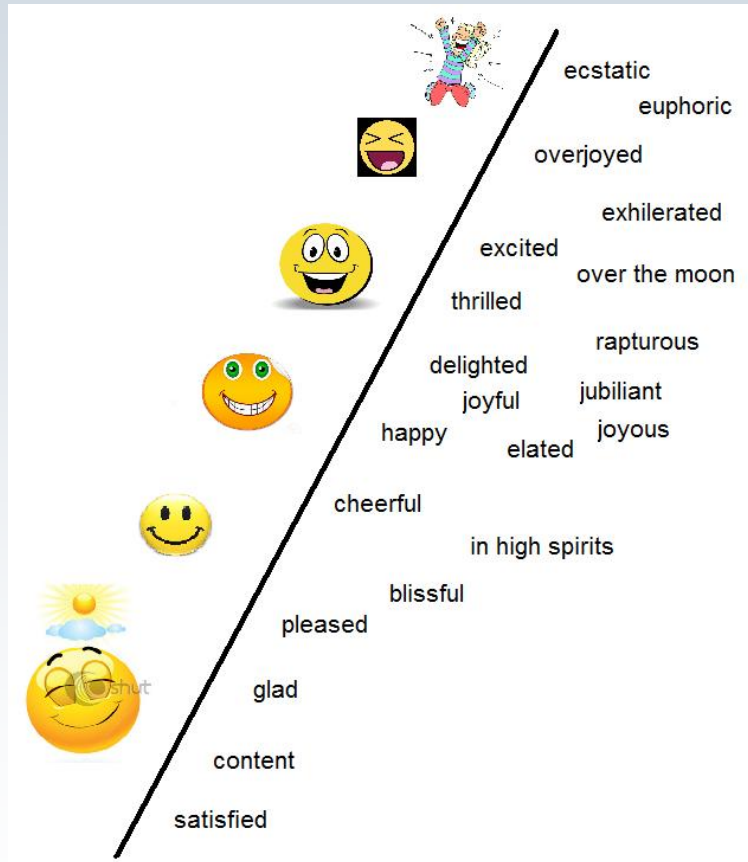


Write words related to your happiness.



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# Happiness spectrum and continuum



Not Happy	Happy for Bad reason	Happy for Good reason	Happy for No reason
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$$Satisfaction = \frac{Reality}{Expectation}$$

$$Satisfaction = Perceived\ outcome - Expected\ outcome$$

<https://pottermolly.wixsite.com/website/post/spectrum-of-happiness>



**On average how many hours you are by yourself (not interacting with people) in a day?**

every 5 10 3  
many 8  
hours 4 14 15 day  
9

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The End.