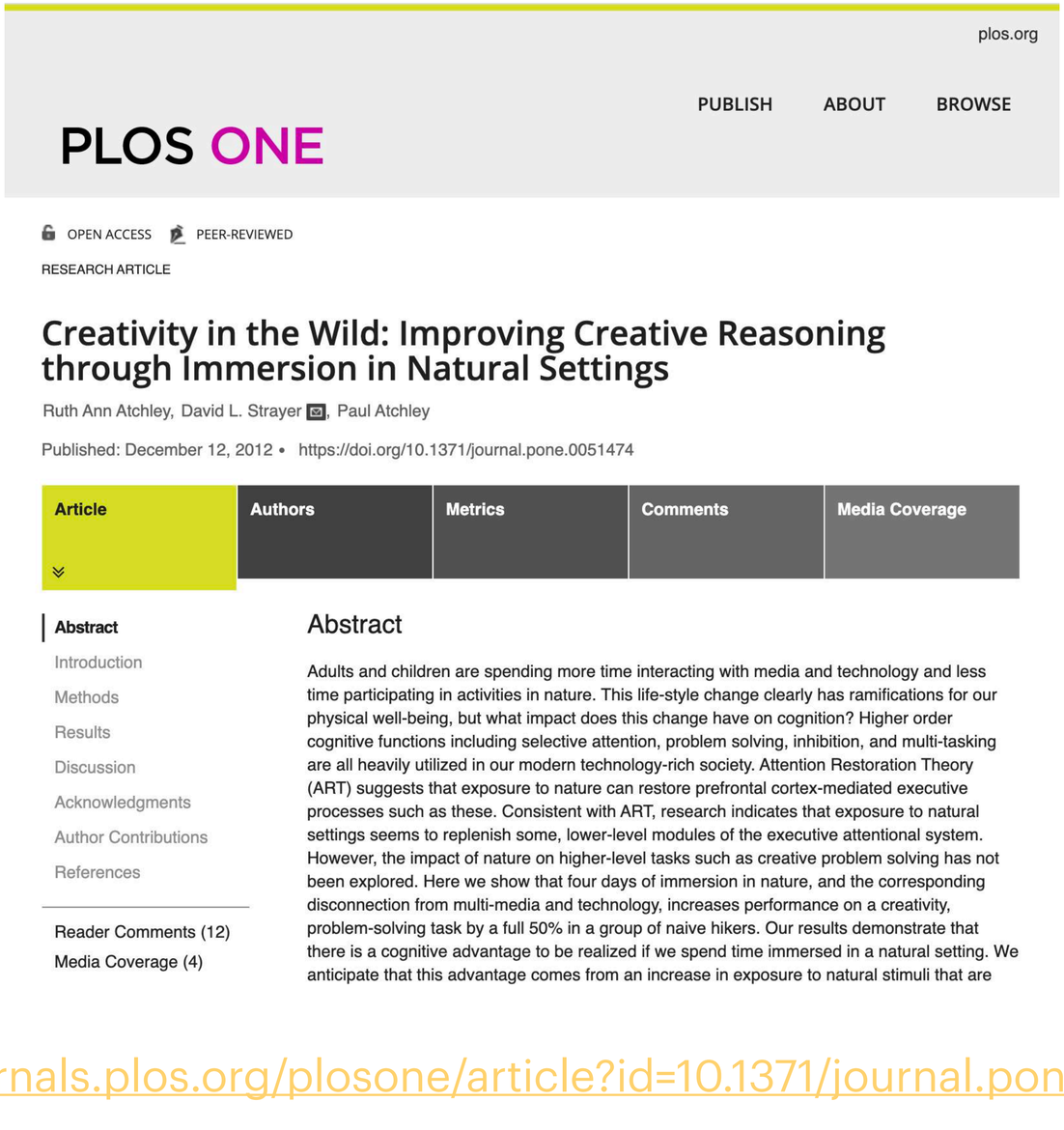

LEARNING
FROM
AND IN
NATURE
helpfully

HUMAN THRIVING — Nature for physical and mental wellbeing

BIOPHILIC DESIGN — Bring nature into the built world

NATURE IN PRODUCTS — Natural mechanics as inspiration



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RESEARCH ARTICLE

Creativity in the Wild: Improving Creative Reasoning through Immersion in Natural Settings

Ruth Ann Atchley, David L. Strayer, Paul Atchley

Published: December 12, 2012 • https://doi.org/10.1371/journal.pone.0051474

Article | Authors | Metrics | Comments | Media Coverage

Abstract

Adults and children are spending more time interacting with media and technology and less time participating in activities in nature. This life-style change clearly has ramifications for our physical well-being, but what impact does this change have on cognition? Higher order cognitive functions including selective attention, problem solving, inhibition, and multi-tasking are all heavily utilized in our modern technology-rich society. Attention Restoration Theory (ART) suggests that exposure to nature can restore prefrontal cortex-mediated executive processes such as these. Consistent with ART, research indicates that exposure to natural settings seems to replenish some, lower-level modules of the executive attentional system. However, the impact of nature on higher-level tasks such as creative problem solving has not been explored. Here we show that four days of immersion in nature, and the corresponding disconnection from multi-media and technology, increases performance on a creativity, problem-solving task by a full 50% in a group of naive hikers. Our results demonstrate that there is a cognitive advantage to be realized if we spend time immersed in a natural setting. We anticipate that this advantage comes from an increase in exposure to natural stimuli that are

https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0051474

Is Conference Room Air Making You Dumber?

A small body of evidence suggests that when it comes to decision making, indoor air may matter more than we have realized.

https://www.nytimes.com/2019/05/06/health/conference-room-air.html

AT HOME WITH NATURE
Effects of "Greenness" on Children's Cognitive Functioning

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.*

ABSTRACT: The nearby natural environment plays a far more significant role in the well-being of children residing in poor urban environments than has previously been recognized. Using a premove/postmove longitudinal design, this research rules out the effects of various extraneous variables that have plagued previous studies and explores the linkage between the naturalness or restorativeness of the home environment and the cognitive functioning of low-income urban children. Both before and after relocation, objective measures of naturalness are employed along with a standardized instrument measuring the children's cognitive functioning. Results indicate that children whose homes improved the most in terms of greenness following relocation also tended to have the highest levels of cognitive functioning following the move. The implications with respect to policy and design are also discussed.

By the time my children are ready to begin school, never mind graduate, they're tired. They've been fighting the rats, and have to shiver on account of

Outdoor Recreation, Health, and Wellness: Understanding and Enhancing the Relationship

Geoffrey Godbey

Abstract

The research literature on outdoor recreation as it relates to human health is vast and growing. To help policymakers take new and emerging findings into account when designing recreation and park services and initiatives for the 21st century, this paper summarizes the salient issues and identifies research gaps. It considers how being outside in natural surroundings may improve health and how outdoor physical activities benefit participants. Particular attention is given to children's health problems that can be mitigated through outdoor play, sports, and nature study. The paper describes approaches to measuring physical activity and recent trends in park visitation and outdoor activity participation. It looks at variables that affect participation in outdoor activities and considers the projected demographic changes that will affect policymaking in this arena. The findings of this literature review point to potential new directions for outdoor recreation policy, as well as new policy questions to be explored.

Key Words: outdoor recreation, public health, physical activity, children's health

JEL Classification Numbers: I18, Q26

PSYCHOLOGICAL BENEFITS OF NATURE EXPERIENCES: AN OUTLINE OF RESEARCH AND THEORY

With Special Reference to Transpersonal Psychology

John Davis, Ph.D.

Naropa University and School of Lost Borders

July 2004

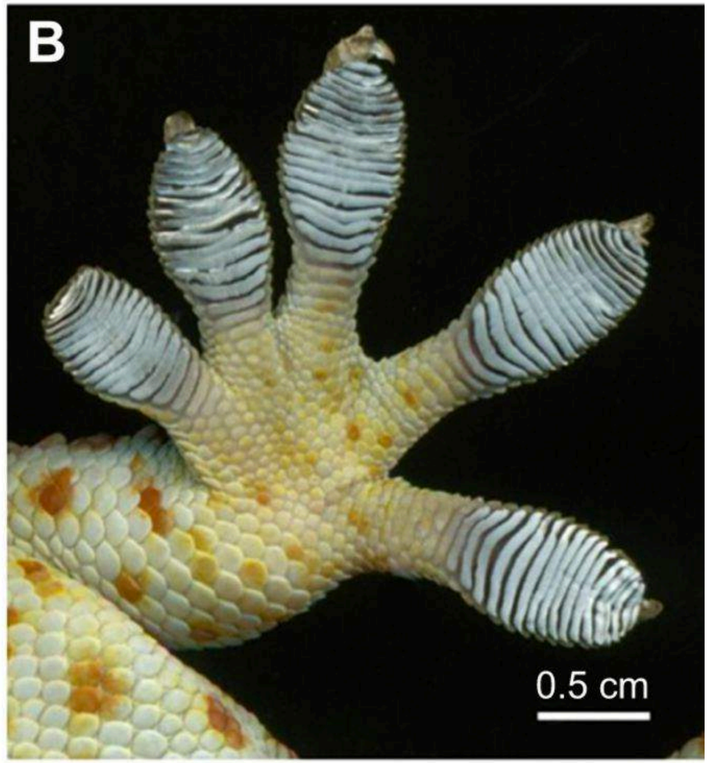
A strong body of psychological research, supported by widespread anecdotal evidence, confirms the hypothesis that direct contact with nature leads to increased mental health and psychological development. This research helps explain the attraction of nature for city-dwellers and supports the value of increasing contact with nature for children and adults.

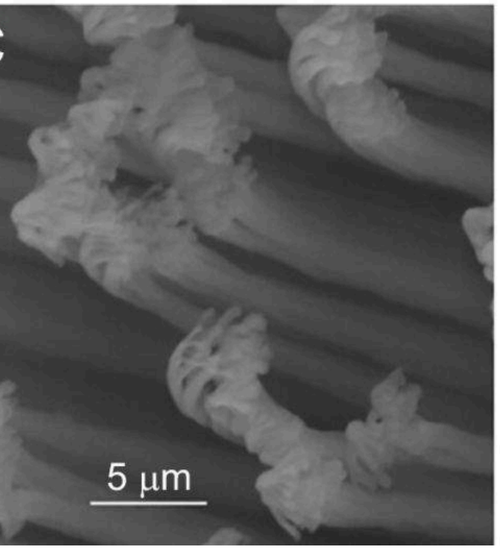
Research settings include a full range of encounters with nature -- extended wilderness excursions, hiking in open space, strolling through a city park, gardening, tending a small plot of urban grass or a vacant city lot with its attendant ecosystem, and even watching nature scenes on TV. While different psychological approaches (evolutionary, behavioral, cognitive, psychodynamic, systems, humanistic, and transpersonal) focus on different aspects of the psychological benefits of nature experiences, all have shown that nature experiences are desirable and healthy. This is phenomenal agreement! There is also limited, but suggestive, research that these findings are cross-cultural and universal.

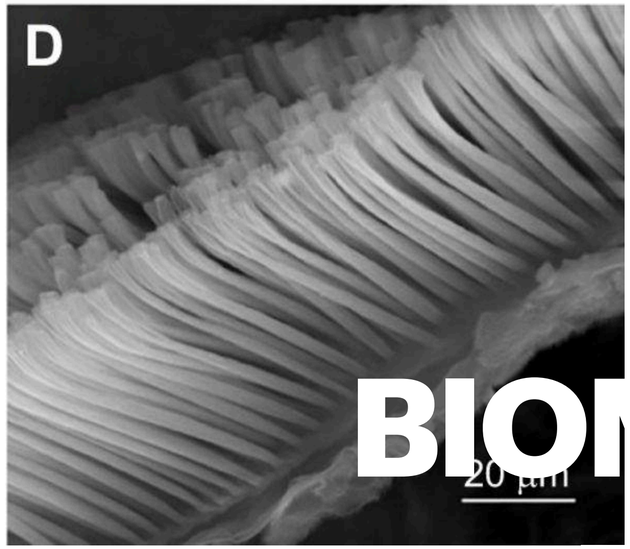
The degree of empirical support cited here varies. In addition to the research which has been conducted and confirmed directly on nature experiences, some findings from related

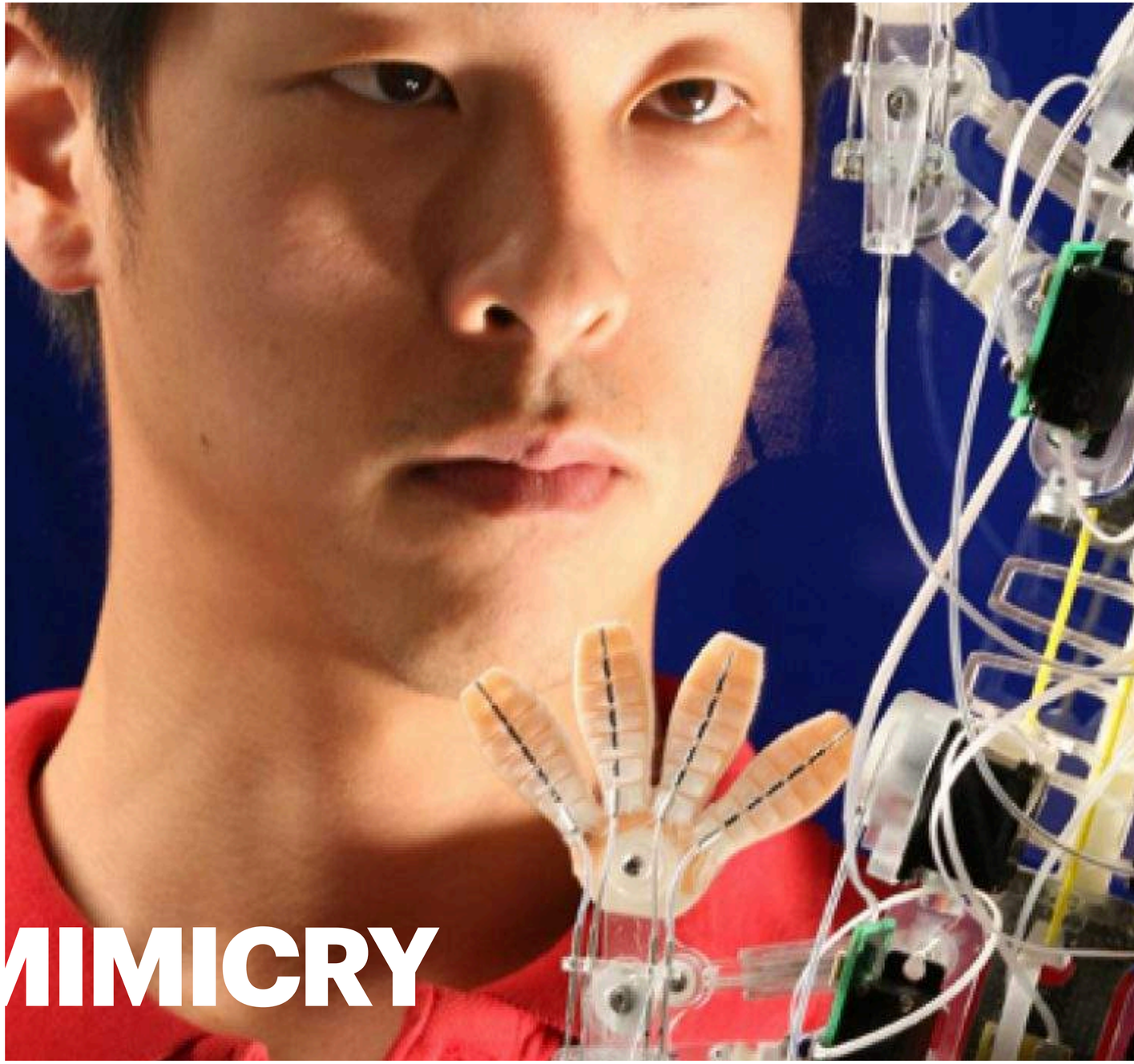
BIOPHILIC DEISGN


‘THE SPHERES’
the spheres
helpfully



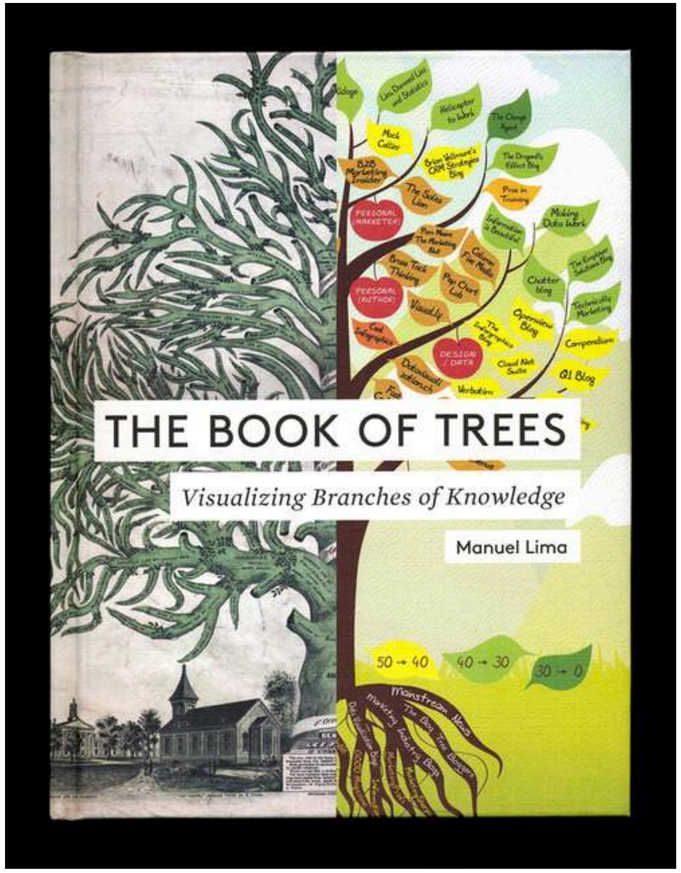


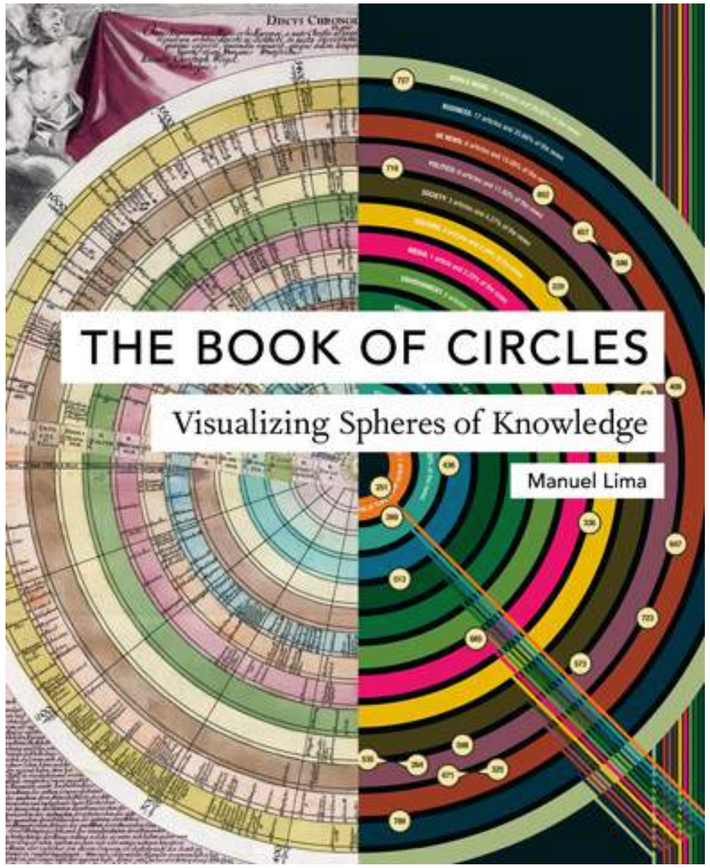




BIOMIMICRY

Why Are Data-Viz Designers So Obsessed With Circles?





https://www.wired.com/2017/05/data-viz-designers-obsessed-circles/

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IDEAS ARE PLANTS

Metaphors We Live By, Lakoff & Johnson

https://www.cc.gatech.edu/classes/AY2013/cs7601_spring/papers/Lakoff_Johnson.pdf

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