

Mindfulness, Stress and Social Connection

John D. Dunne

Distinguished Professor of Contemplative Humanities
University of Wisconsin-Madison



Asian Languages and Cultures
COLLEGE OF LETTERS AND SCIENCE
UNIVERSITY OF WISCONSIN-MADISON



Transdisciplinary Center for
Research in Psychoactive Substances
SCHOOL OF PHARMACY
UNIVERSITY OF WISCONSIN-MADISON

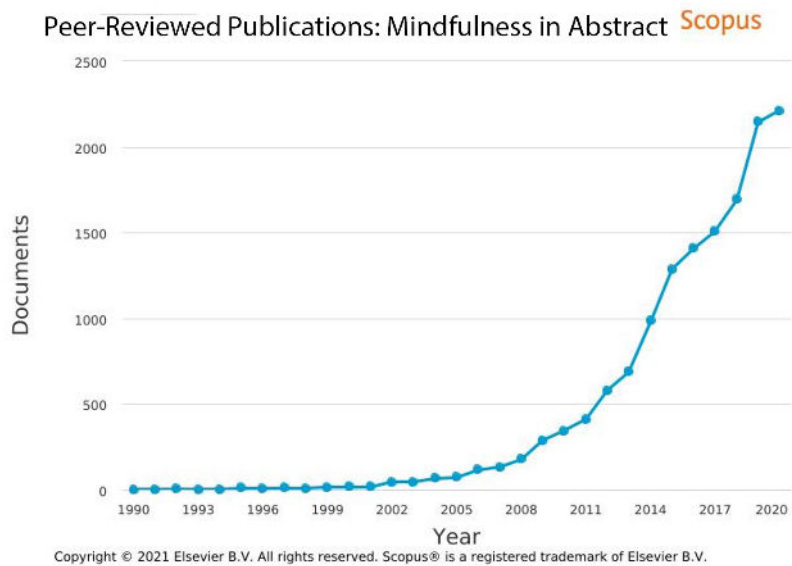
1



What is mindfulness?

- Derived from Buddhist Practices
- Diverse, even within Buddhism
- Now secularized for modern audiences
- Used for various purposes
- The subject of much scientific research

2



3

ANNUAL REVIEWS

Annual Review of Clinical Psychology

Mindfulness Meditation and Psychopathology

Joseph Wielgosz,^{1,2,3} Simon B. Goldberg,^{1,4}
Tammi R. A. Kral,^{1,2,5} John D. Dunne,^{1,6}
and Richard J. Davidson^{1,3,7,8}

Annu. Rev. Clin. Psychol. 2019. 15:2.1–2.32

The *Annual Review of Clinical Psychology* is online at
clipsy.annualreviews.org

<https://doi.org/10.1146/annurev-clinpsy-021815-093423>

Copyright © 2019 by Annual Reviews.
All rights reserved

Keywords

mindfulness, meditation, psychopathology, neuroscience, RDoC

Abstract

Mindfulness meditation is increasingly incorporated into mental health interventions, and theoretical concepts associated with it have influenced basic research on psychopathology. Here, we review the current understanding of mindfulness meditation through the lens of clinical neuroscience, outlining the core capacities targeted by mindfulness meditation and mapping them onto cognitive and affective constructs of the Research Domain Criteria matrix proposed by the National Institute of Mental Health. We review efficacious applications of mindfulness meditation to specific domains of psychopathology including depression, anxiety, chronic pain, and substance abuse, as well as emerging efforts related to attention disorders, traumatic stress, dysregulated eating, and serious mental illness. Priorities for future research include pinpointing mechanisms,

4

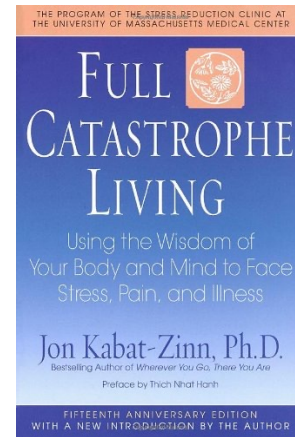
What is “mindfulness”?

Mindfulness- Based Stress Reduction



Jon Kabat-Zinn

*“Paying attention
in a particular way:
on purpose,
in the present moment,
and non-judgmentally”*



5

What is “stress”?

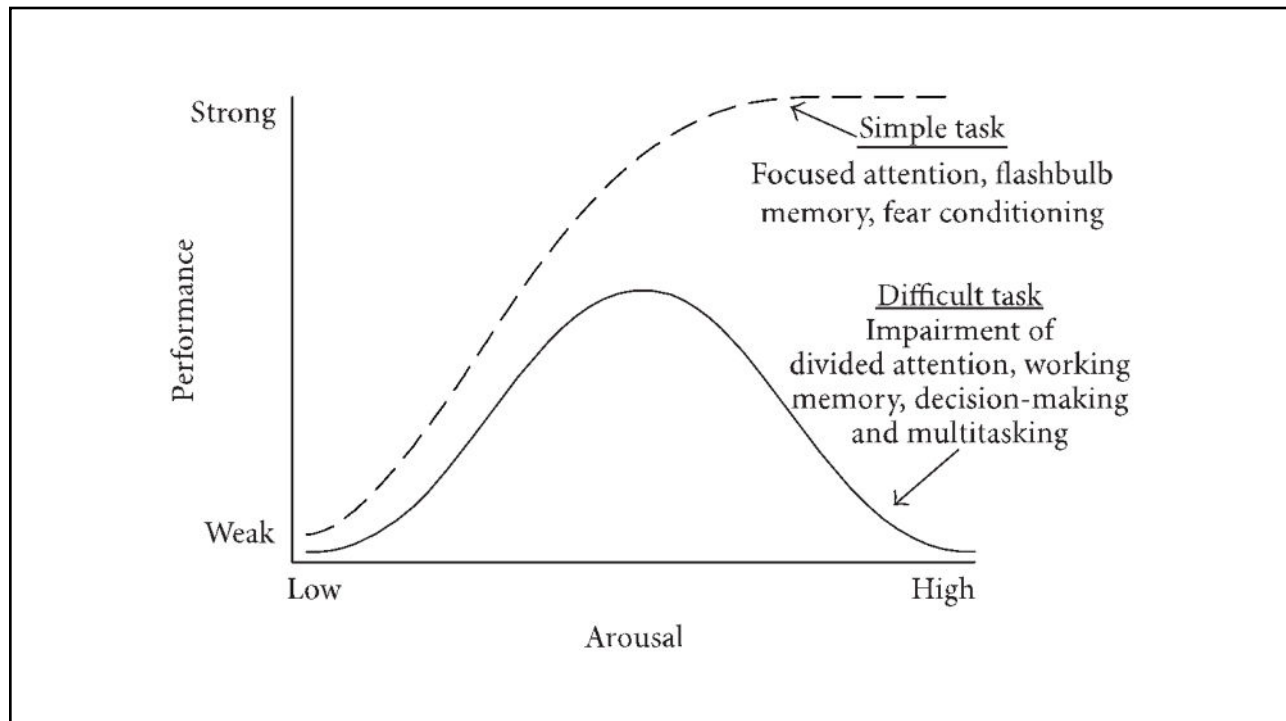


A response to a threat or challenge...

“Eustress”

“Distress”

6



7

What is "stress"?

A response to a threat or challenge...

Interpretation matters!

"Eustress"

"Distress"

Needs exceed resources

8

What is “stress”?



A response to a threat or challenge...

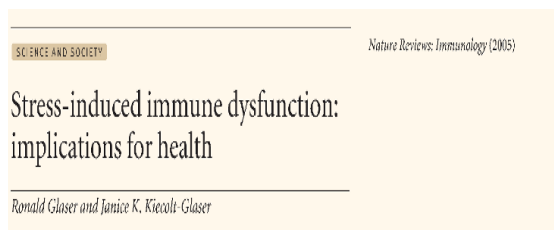
“Eustress”

“Distress”

“Toxic stress”

May have
systemic
aspects

9



PERSPECTIVE

<https://doi.org/10.1038/s41591-019-0675-0>

nature
medicine

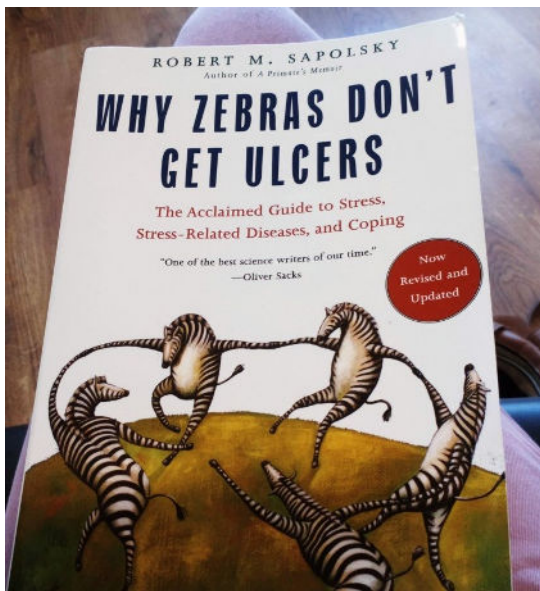
Chronic inflammation in the etiology of disease across the life span

David Furman^{1,2,3,4,*}, Judith Campisi^{1,5}, Eric Verdin⁶, Pedro Carrera-Bastos⁴, Targ^{4,7}, Claudio Franceschi^{8,9}, Luigi Ferrucci¹⁰, Derek W. Gilroy¹¹, Alessio Fasano¹², Miller¹³, Andrew H. Miller¹⁴, Alberto Mantovani^{15,16,17}, Cornelia M. Weyand¹⁸, Jorg J. Goronzy¹⁹, Thomas A. Rando^{20,21,22}, Rita B. Effros²³, Alejandro L. Nicole Kleinstreuer^{26,27} and George M. Slavich²⁸

Although intermittent increases in inflammation are critical for survival during infection, recent research has revealed that certain social, environmental and lifestyle factors can promote chronic inflammation (SCI) that can, in turn, lead to several diseases that collectively represent the leading causes of disability worldwide, such as cardiovascular disease, cancer, diabetes mellitus, chronic kidney disease, neurodegenerative disorders, and autoimmune and inflammatory diseases. In the present Perspective we describe the risk factors that promote this health-damaging phenotype, including poor diet, environmental factors, and chronic stress, and we discuss potential interventions to reduce the risk of SCI and its associated diseases.

Possibly including
depression and anxiety...

10



11

Mental Time Travel (MTT)

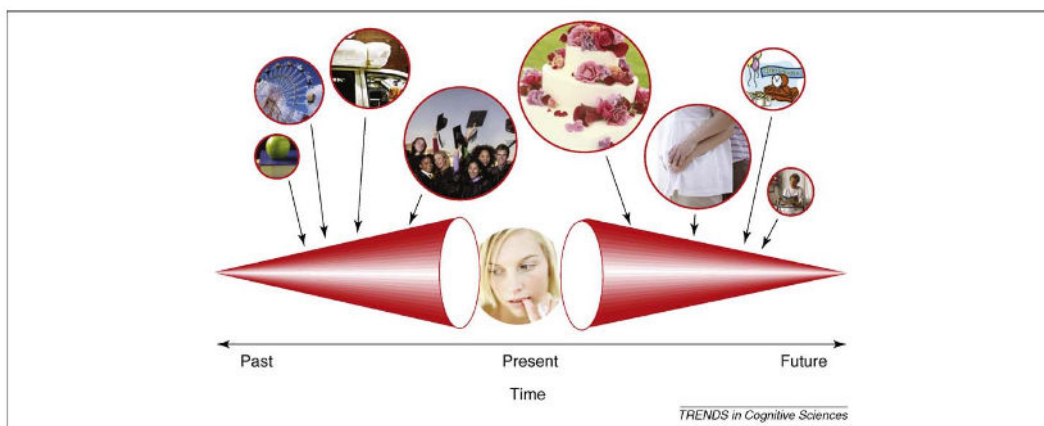


Figure 1. The bi-cone shows a mental time traveler in the present moment who can both remember past episodic memories and plan future events. The circular balloons show memories or planned events at varying temporal distances into the past or future. The size of these balloons represents the number and clarity of these memories or plans. Although individuals show bulges in the cone for particularly memorable periods in their past, the bi-cone represents the pattern of human MTT [7-13].

Roberts & Feeney, 2009

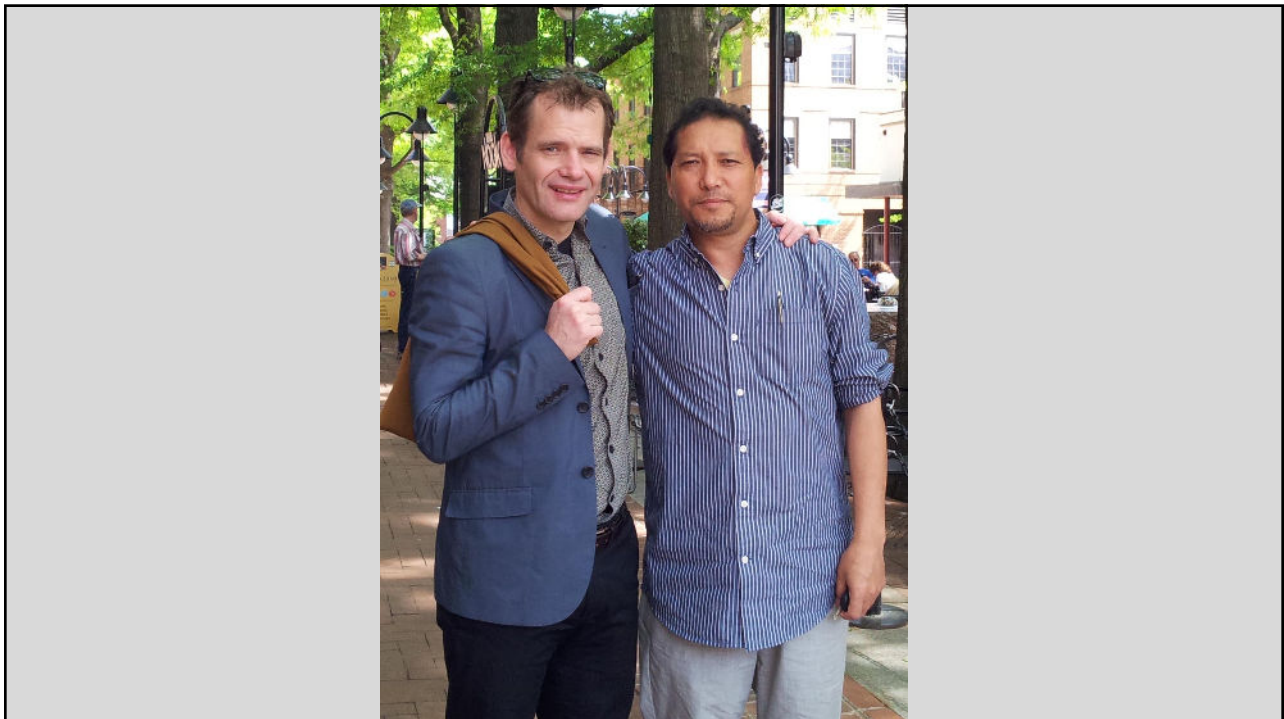
12



“Reification”

- During “Mental Time Travel,” humans tend to “reify” their thoughts, such that they seem like real depictions of the world, even if the thoughts are untrue.
- Reification involves “embodied simulation” with psycho-physical impacts.
- “Experiential Fusion” makes the simulation seem especially real, with a bigger impact.
- Emotionally charged simulations are especially prone to Experiential Fusion.

13



14

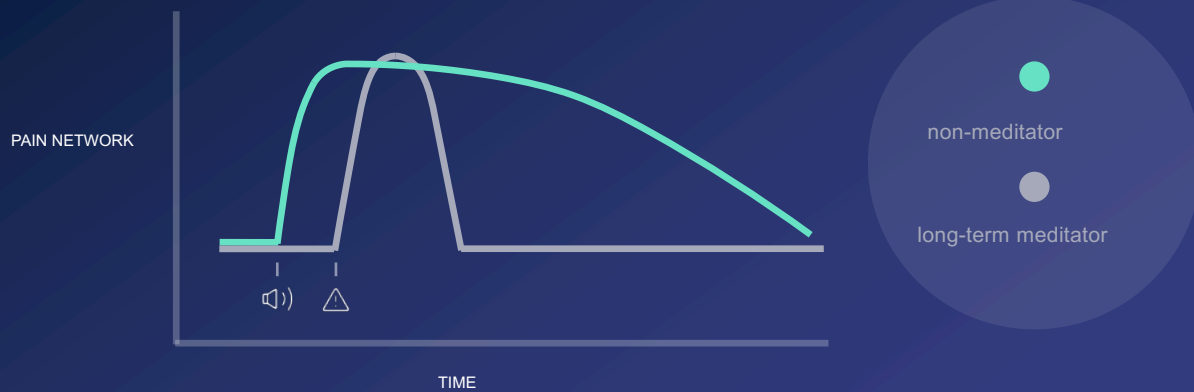


15

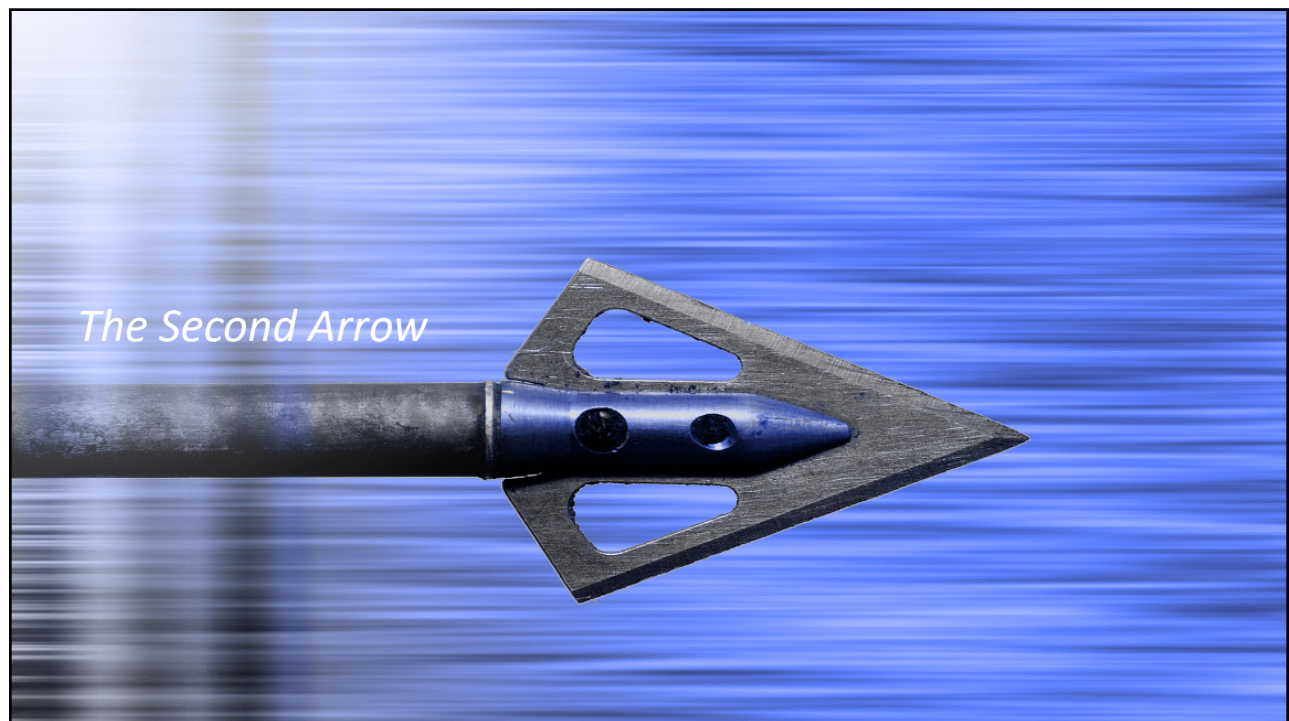


16

Recovery from Negative Events



17



18



1. Sit in a comfortable way.
2. Bring the attention to the sensations of breathing.
3. When distractions arise, simply note that they have occurred without further conceptual elaboration or judgment.
4. Drop the distractor and return the attention to the sensations of breathing.

19

“Dereification” or “Decentering”



20



21

- *Humans have evolved to be cooperators.*
- Humans can “outsource” their cognitive load to other humans as a means to maximize resources
- The Human mind/body “expects” to have other humans in proximity.
- Without that support, resource utilization rises
- Perceived threat increases



Social Baseline Theory: The Role of Social Proximity in Emotion and Economy of Action

Lane Beckes and James A. Coan*
University of Virginia



23

The Quality of Connection



24

healthyminds
innovations

Center for healthyminds
UNIVERSITY OF WISCONSIN-MADISON

The New York Times Wirecutter

Best
Meditation
App

healthyminds
program


Healthy Minds Program App

The Healthy Minds Program App is your easy-to-use guide to well-being.

[Download on the App Store](#)

[Get it on Google Play](#)


25



Adult classes


Reduce stress and develop greater balance in life

Active classes




Mindfulness-based stress reduction

An introduction to ways of reducing stress and developing greater balance in life, through guided instruction in meditation practices, gentle yoga, group dialogue and applications to daily life.



Mindfulness in Motion

Explore moving meditations, inspired by yoga, Qigong and other traditions, which allow you to connect to breath awareness, active relaxation, postural alignment, flexibility and resilience.



Day of Mindfulness

This day-long session provides opportunity to deepen or refresh your practice within the support of community. Intended for those who have completed mindfulness-based stress reduction.

26



BADGER TALKS

Center for

healthyminds

UNIVERSITY OF WISCONSIN-MADISON

ASIAN LANGUAGES
& CULTURES



27