Mindfulness and Psychedelics

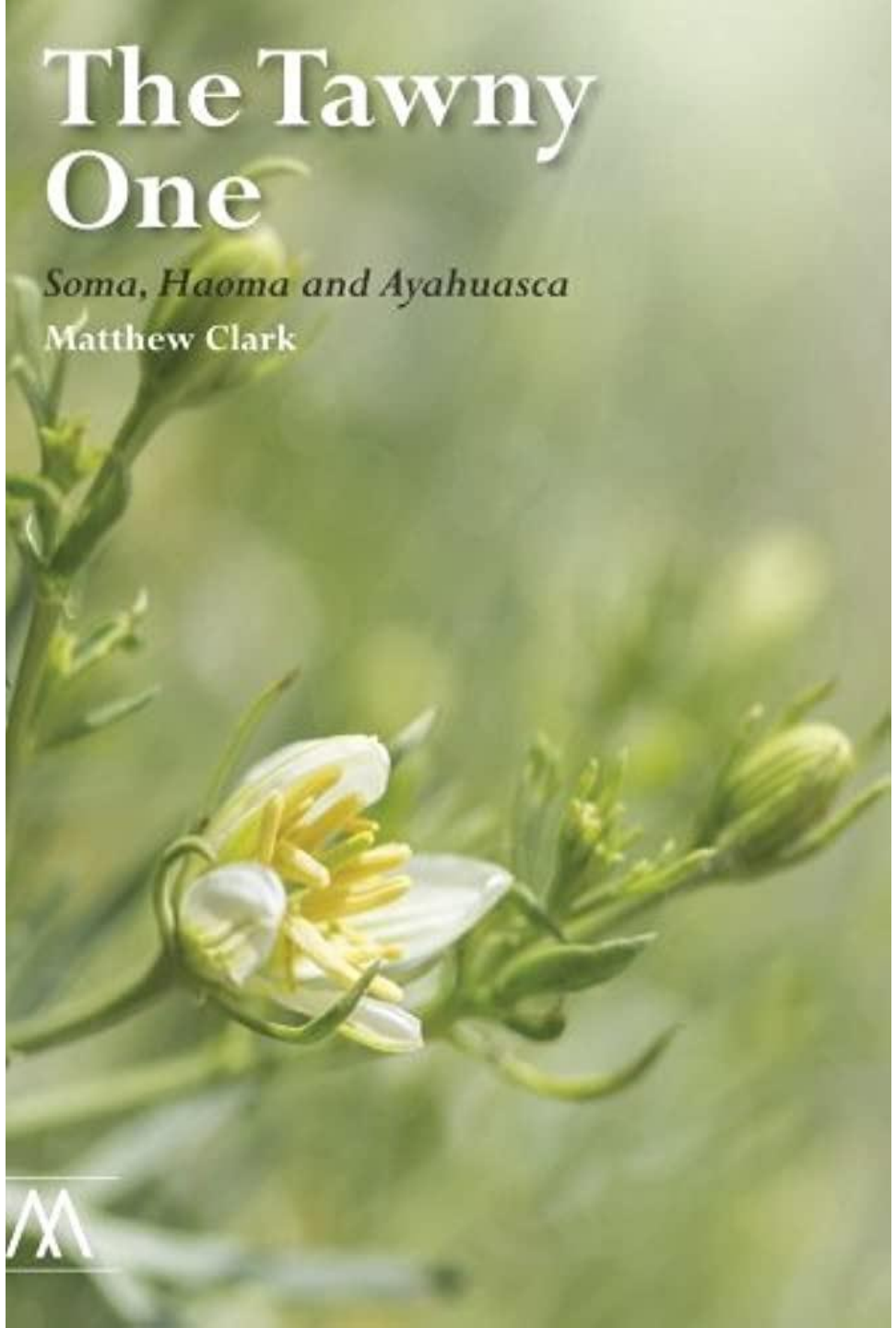
Mag. Dennis Johnson

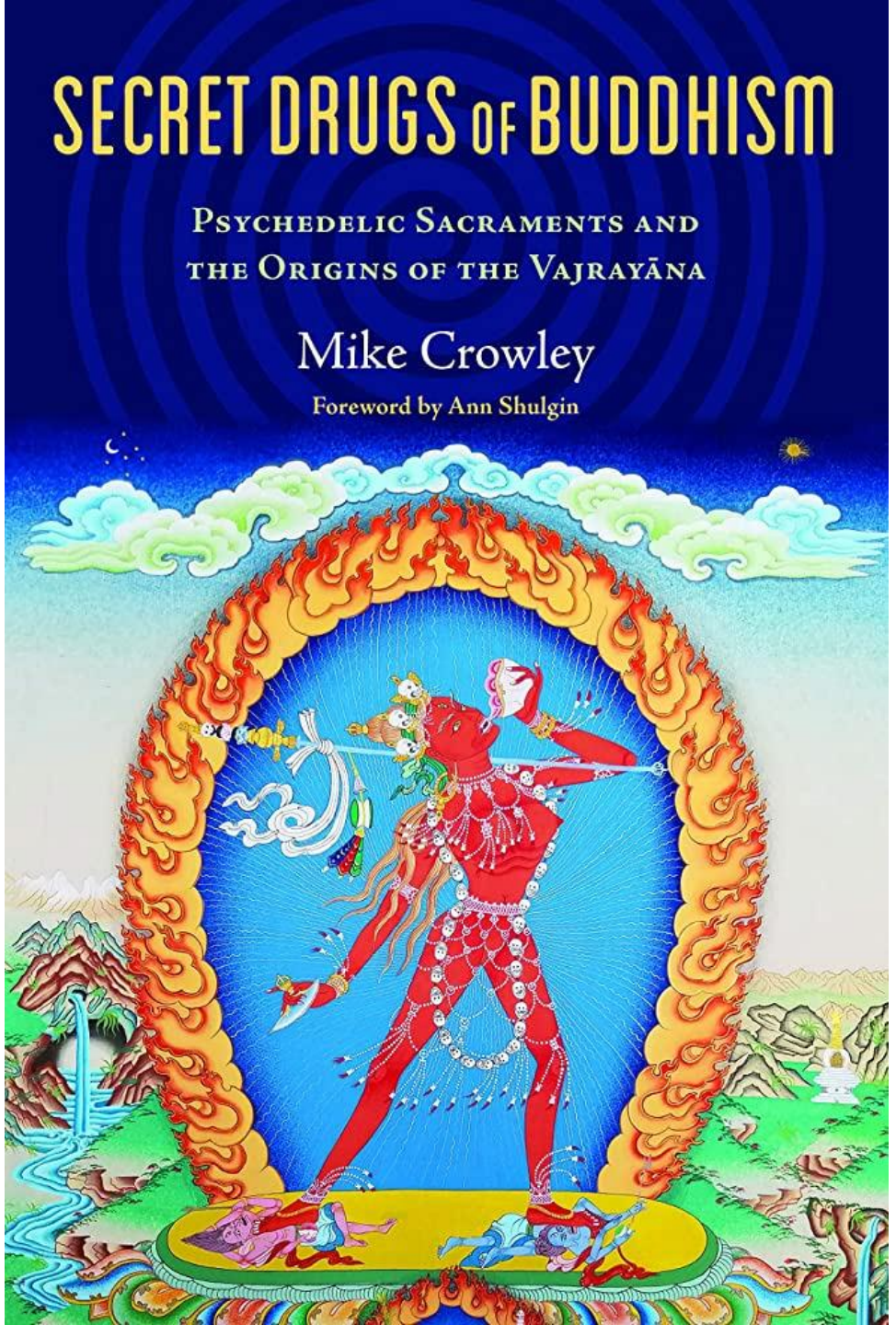
May 20, 2023

Psychedelic Society Vienna

Mindfulness and Psychedelics

- Roots in contemplative traditions
- Transformations in modernity
- Therapeutic effects
- Transdiagnostic efficacy
- Evidence-based approaches
- Possible negative side-effects
- Mainstreaming and critical voices
- Altered states and traits
- Neuroplasticity


The Tawny One
Soma, Haoma and Ayahuasca
Matthew Clark


SECRET DRUGS OF BUDDHISM
PSYCHEDELIC SACRAMENTS AND THE ORIGINS OF THE VAJRAYĀNA
Mike Crowley
Foreword by Ann Shulgin

Overview

Part 1

- A cultural history of mindfulness in the West &
basic concepts and mechanisms of action of mindfulness

Part 2

- Research findings on the connections and possible synergies between mindfulness and psychedelics

„Mindfulness“

[Translation of the Buddhist term *sati* or *smṛti*]

Form of awareness
(mindful awareness)
“present-moment non-judgmental awareness”

Practices that elevate that form of awareness
(mindful awareness practices)

Applications of that awareness for specific goals
(mindfulness-based interventions)

„Psychedlics“

Psychoactive substances in general:

Anxiolytics, Empathogen, Stimulants, Depressants, Hallucinogens (Psychedelics, Dissociatives, Deliriants)

Serotonergic hallucinogens

Lysergamides (LSD, …)

Tryptamines (Psilocybin, DMT, …)

Phenethylamines (Mescaline , 2C B, …)

Empathogens

MDMA, MDEA, MDA, …

„Mindfulness“

Present moment experience

Material form
(somatic and sensory dimension)

Feeling tone
(hedonic dimension, i.e. pleasant, unpleasant or neutral)

Perception
(perceptual and cognitive dimension, i.e. comprehension, recognition, memory, …)

Mental formations
(affective, conative, exertive dimension, i.e. volitional forces, emotional processes, ...)

Consciousness
(five forms of sense consciousness and mental consciousness)

The five facets of mindfulness

Observing

Describing

Acting with Awareness

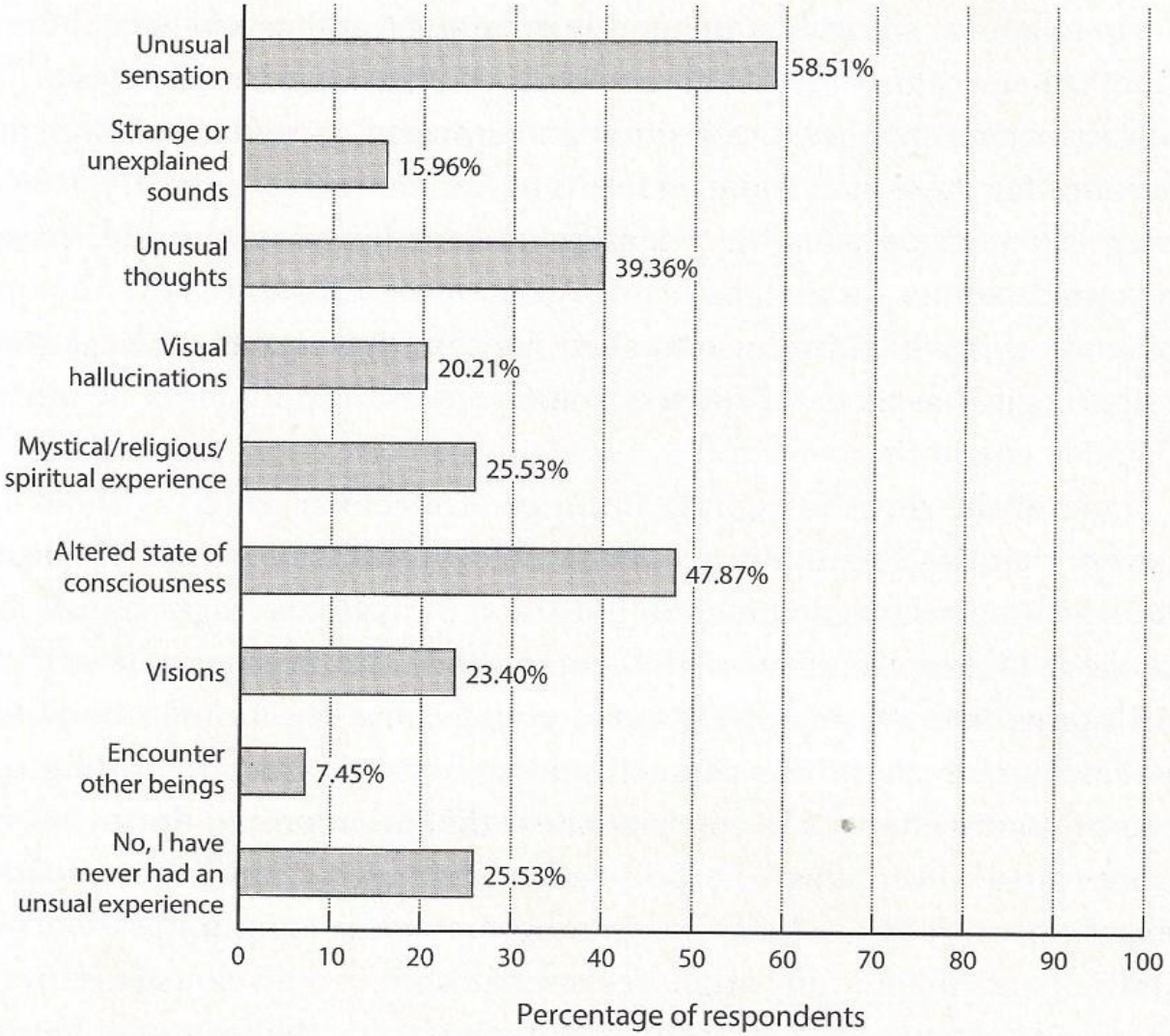
Nonjudging of inner experience

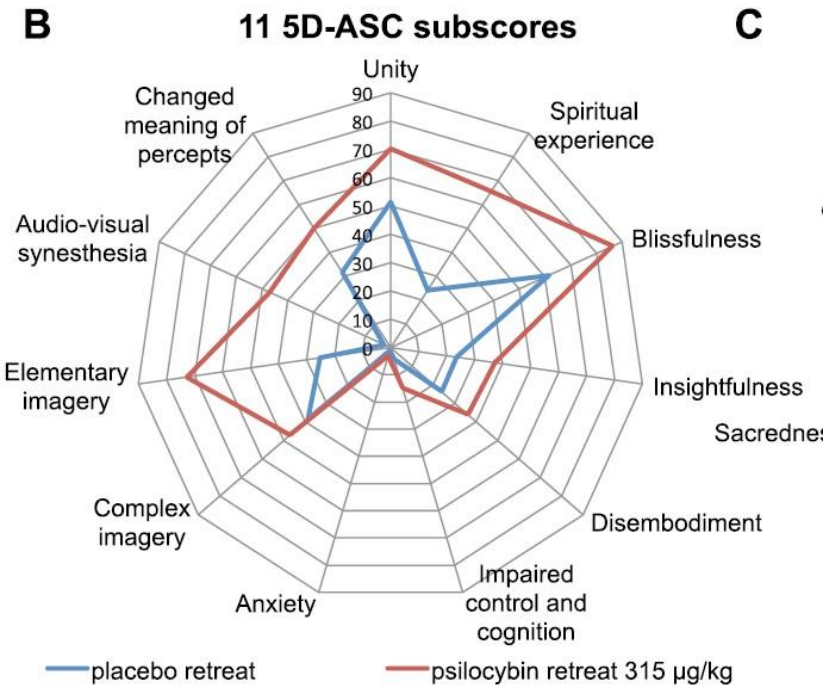
Nonreactivity to inner experience

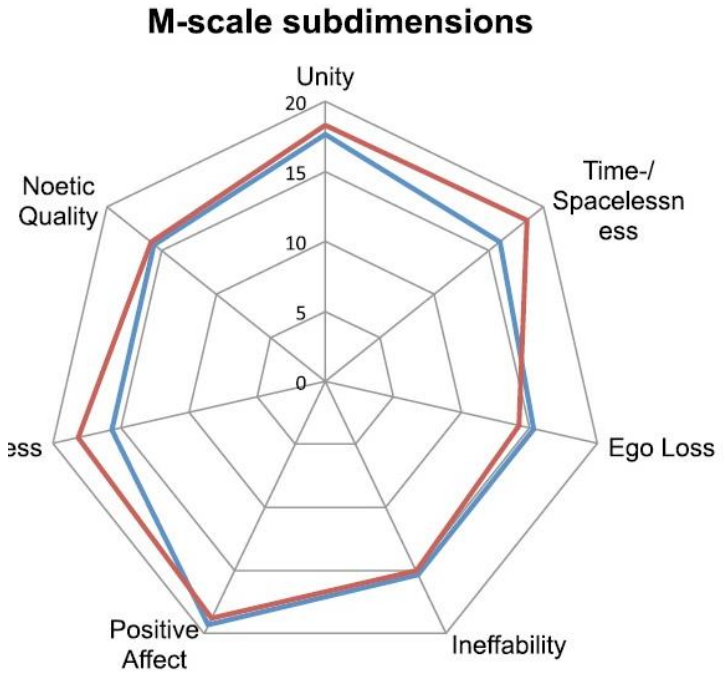
→ Five Facet Mindfulness Questionnaire

→ Compare the concept of psychedelics as “non-specific amplifiers” (Stan Grof)

FIGURE 4.4 During a Vipassanā course, have you ever had an unusual experience, such as the following (please tick all that apply)?





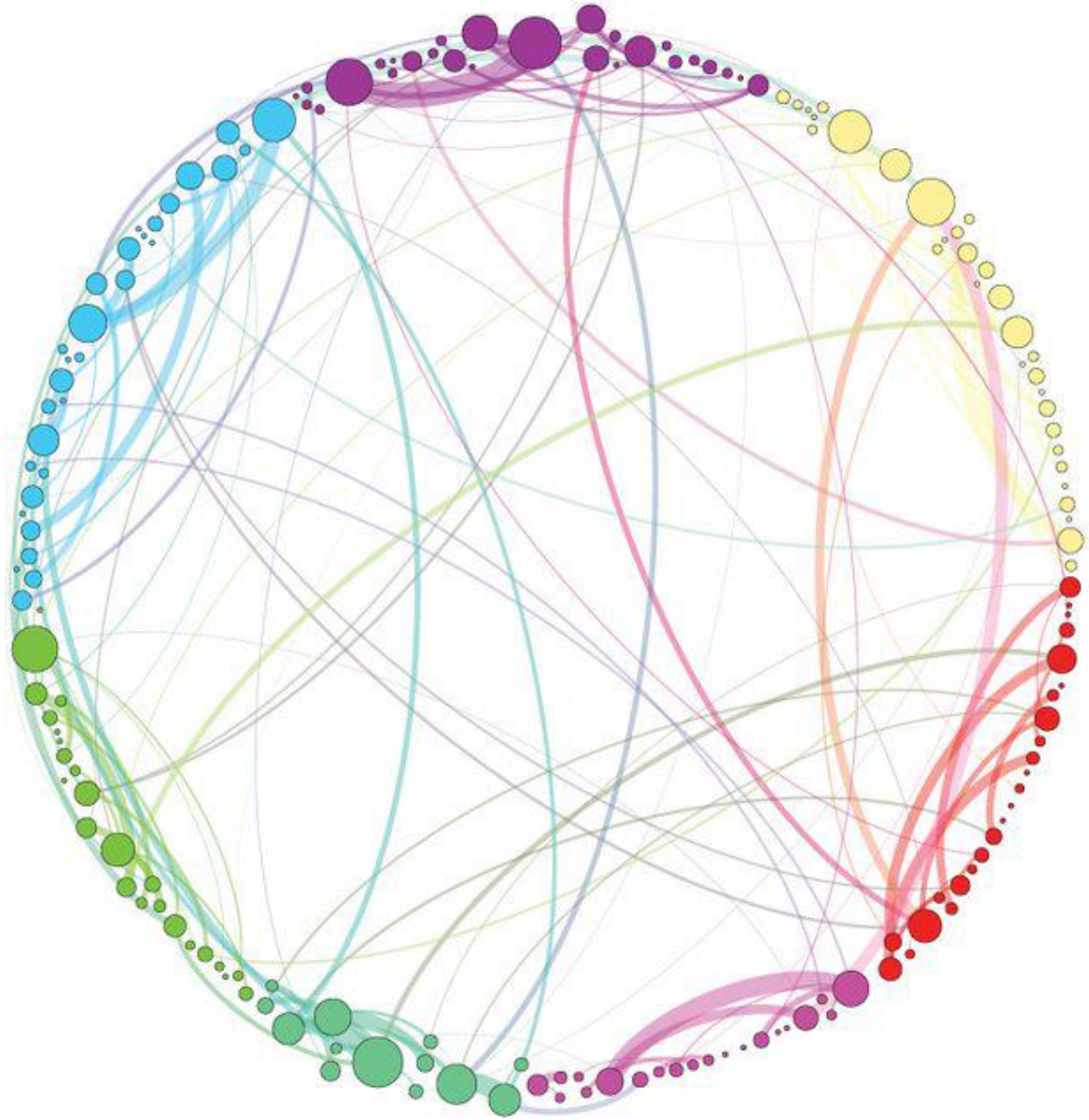


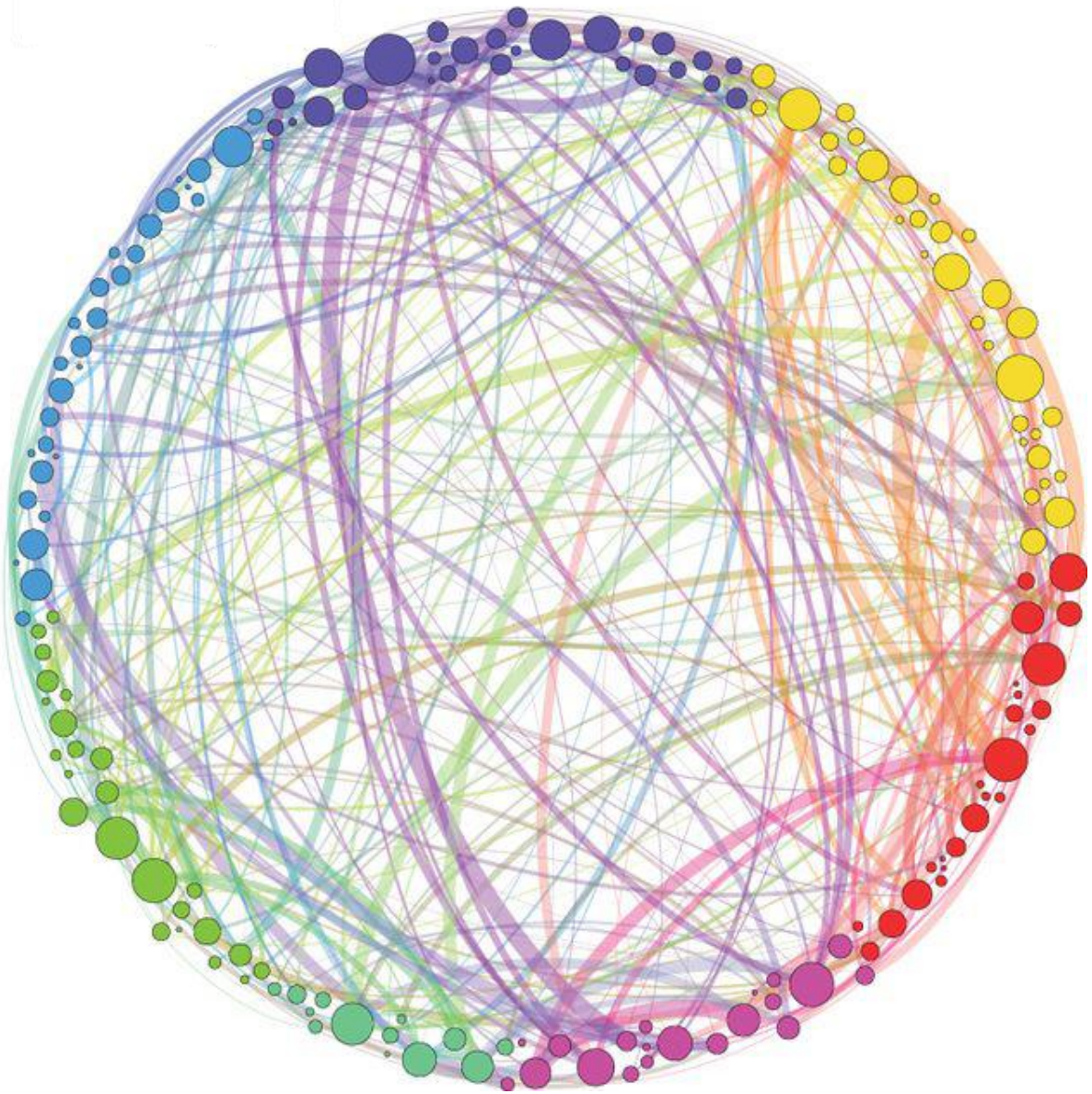
Osto 2016 & Smigielski et al. 2019

Mindfulness & Psychedelics

“The similarities of psychedelic and non-psychedelic contemplative experience suggests that the explanation of psychedelic experience is not through mechanisms unique to psychedelics but rather through shared mechanisms affected by non-drug procedures [such as mindfulness].” (Winkelman 2017: 2)

“Psychedelics induce a temporary disruption of neural hierarchies [the DMN] by reducing top-down control and increasing bottom-up information transfer in the human brain [… leading to] more primary forms of consciousness based in a somatic awareness and subjective feeling states.” (ibid.: 7)





The Default Mode Network

The Default Mode Network and self-referential processing:

Mentalizing
Internal dialogue
Self-related judgements
Mental time travel
Getting cought up in one’s experience
Mind wandering
“Ego integrity”

Mindfulness

sati → mindfulness → mindfulness^{MBIs} → mindfulness^{x}

First generation
(Mindfulness-based Stress Reduction &
Mindfulness-based Cognitive Therapy, 1980-)

Second generation
(Mindfulness-based Interventions,
Compassion-based Interventions & Positive Psychology Interventions, 2000-)

Third generation
(Nondual awareness & pharmacological pathways, 2020-)

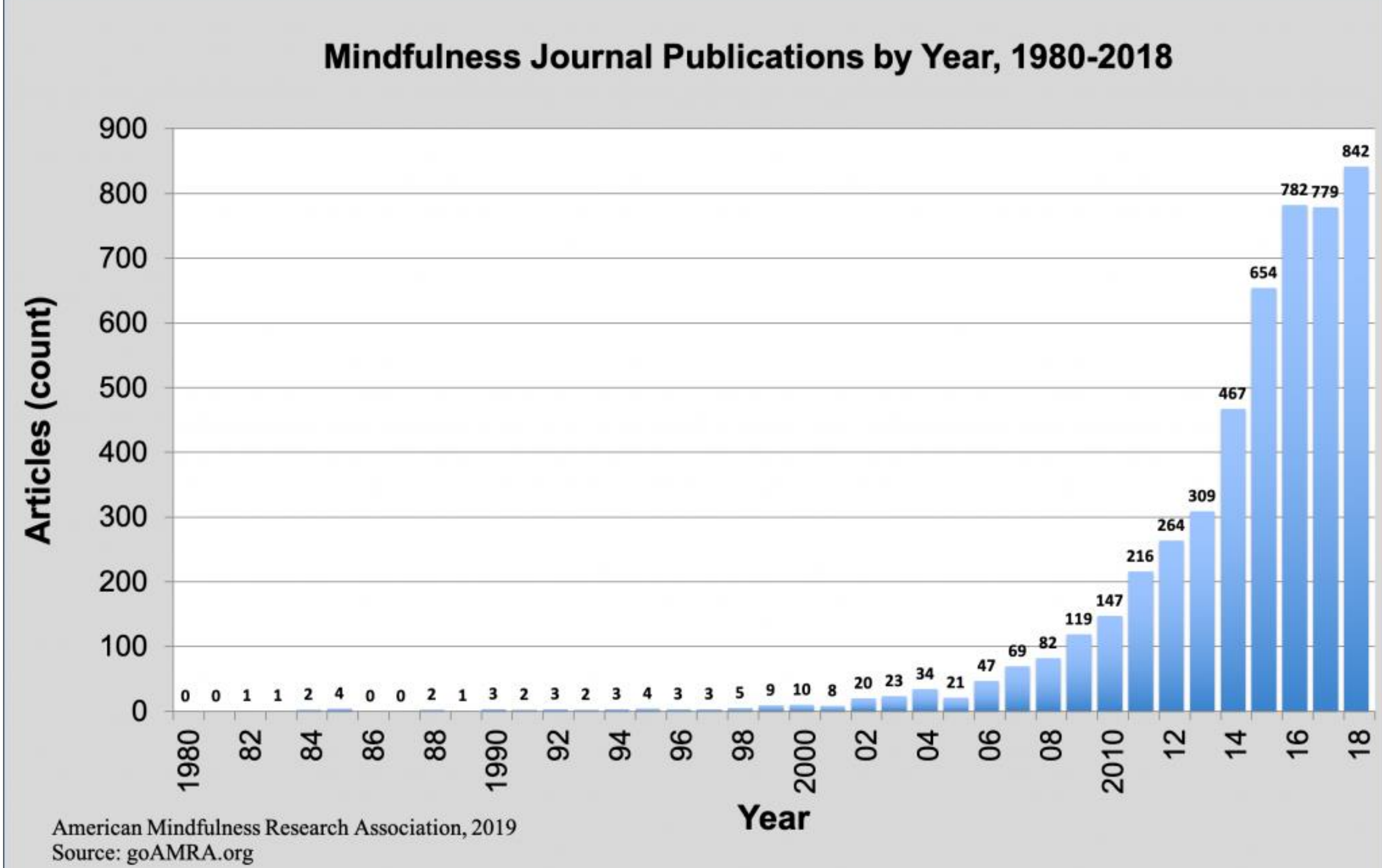
MBSR – Mindfulness-Based Stress Reduction

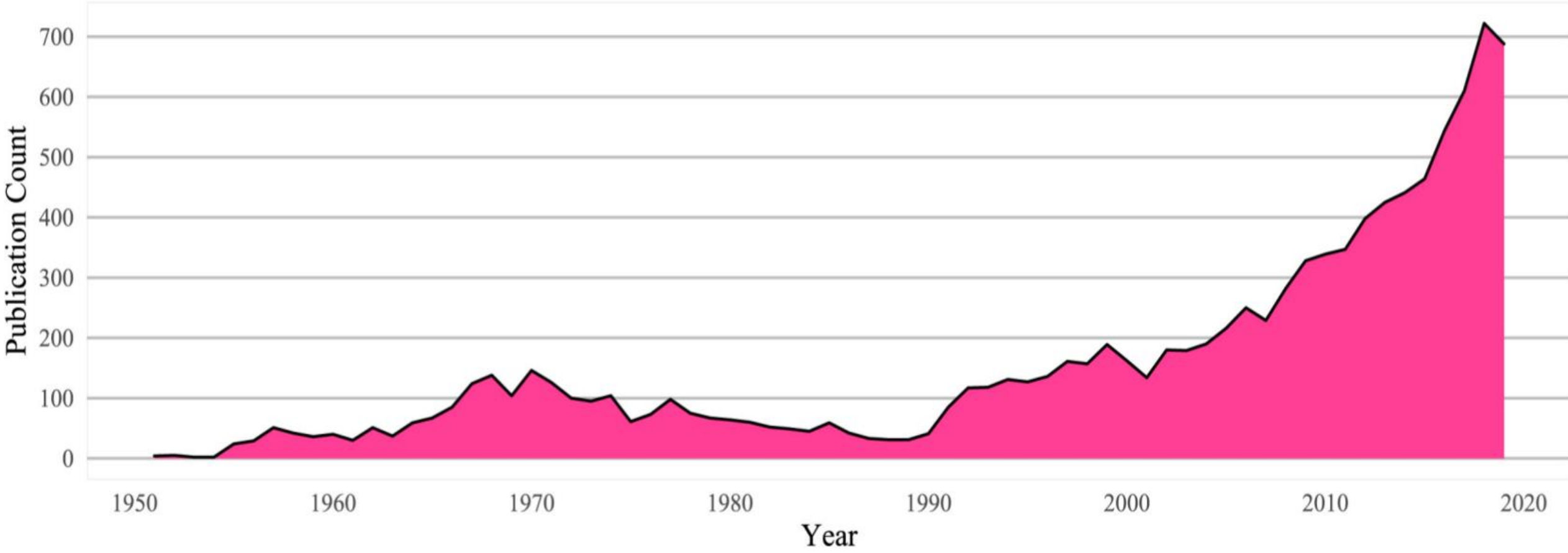
Based on modernized Buddhist meditation traditions
Founded in late 70ies by Jon Kabat-Zinn
Mindfulness-Based Stress Reduction Clinic, University of Massachusetts

Eight-week programm
Weekly two-and-a-half-hour group session
Home practice of 45 minutes daily mindfulness practice

Bodyscan, mindful movement, sitting meditation
Increase in acceptance of present-moment experience

MBSR = the mother of all modern MBIs


Mindfulness Journal Publications by Year, 1980-2018
Articles (count)
900
800
700
600
500
400
300
200
100
0
0 0 1 1 2 4 0 0 2 1 3 2 3 2 3 4 3 3 5 9 10 8 20 23 34 21 47 69 82 119 147 216 264 309 467 654 782 779 842
1980 82 84 86 88 1990 92 94 96 98 2000 02 04 06 08 2010 12 14 16 18
Year
American Mindfulness Research Association, 2019
Source: goAMRA.org



Web of science psychedelic publication count by year

Petranker et al. 2020

Mindfulness-Based Interventions

- MBAT Mindfulness-Based Art Therapy
- MBBT Mindfulness-Based Biofeedback-Therapy
- MBCL Mindfulness-Based Compassionate Living
- MBCP Mindfulness-Based Childbirth and Parenting
- MBCPM Mindfulness-Based Chronic Pain Management
- MBCR Mindfulness-Based Cancer Recovery
- MBCT Mindfulness-Based Cognitive Therapy
- MBCTC Mindfulness-Based Cognitive Therapy for Children
- MBCTC Mindfulness-Based Cognitive Therapy for Cancer
- MBEAT Mindfulness-Based Eating Awareness Training
- MBEC Mindfulness-Based Elder Care
- MBPBS Mindfulness-Based Positive Behavior Support
- MBEB Mindfulness-Based Emotional Balance
- MPP Mindful Parenting Program
- MSPE Mindful Sport Performance Enhancement
- MBHP Mindfulness Basics for Helping Professionals
- MBPI Mindfulness-Based Program for Infertility
- MBRE Mindfulness-Based Relationship Enhancement
- MBRP Mindfulness-Based Relapse Prevention
- MBSR Mindfulness-Based Stress Reduction
- MBSRT Mindfulness-Based Stress Reduction for Teens
- MBTI Mindfulness-Based Therapy for Insomnia
- MBTSR Mindfulness-Based Tinnitus Stress Reduction
- MBFT Mindfulness-Based Feminist Therapy
- MEAL Mindful Eating and Living
- MMFT Mindfulness-Based Mind Fitness Training
- MSC Mindful Self-Compassion Training
- MRE Mindfulness-Oriented Recovery Enhancement
- MBRP Mindfulness-Based Relapse Prevention for Addiction
- MBSP Mindfulness-Based Strengths Practice
- MBFP Mindfulness Based Flourishing Program

→ Compare the concept of psychedelics as “non-specific medicines” (Amanda Fielding)

Mindfulness-based Interventions: Core Elements

1) Theories and practices from the confluence of contemplative tradtitions and modern science
2) A model of human experience addressing the causes of human distress and pathways to relieving it
3) A new relationship to experience (present-moment focus, decentering and approach orientation)
4) Development of attentional, emotional and behavioural self-regulation, as well as positive qualities like compassion, wisdom, equanimity
5) Engages in a sustained intensive training in mindfulness meditation in an experiential inquiry-based learning process

Crane et al. 2017

Mindfulness-based Interventions: Flexible elements

1) The core elements are integrated with adapted curriculum elements and tailored to specific contexts and populations
2) Variations in program structure, length and delivery are formatted to fit the population and context

Crane et al. 2017

Mindfulness spreads into society

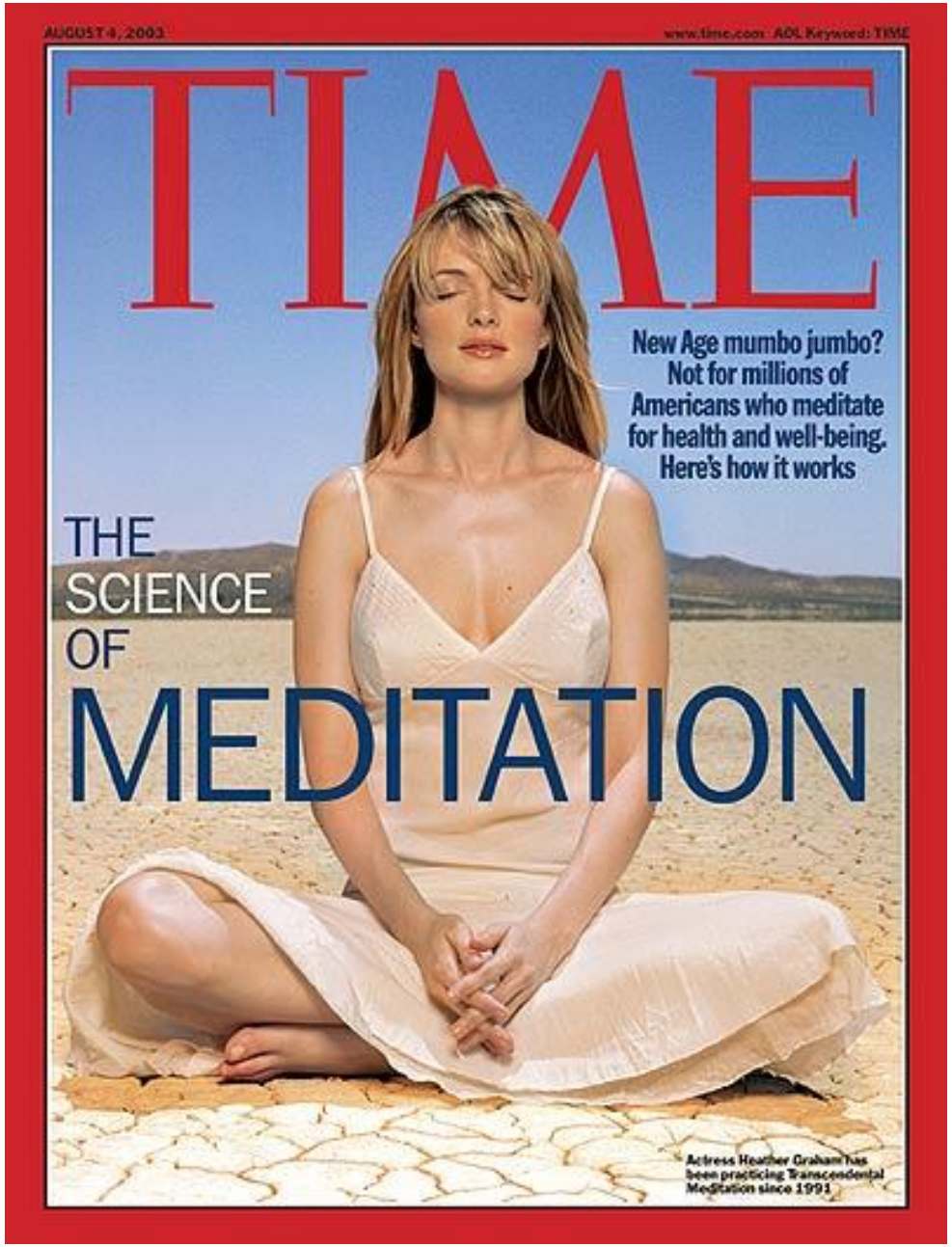
Education

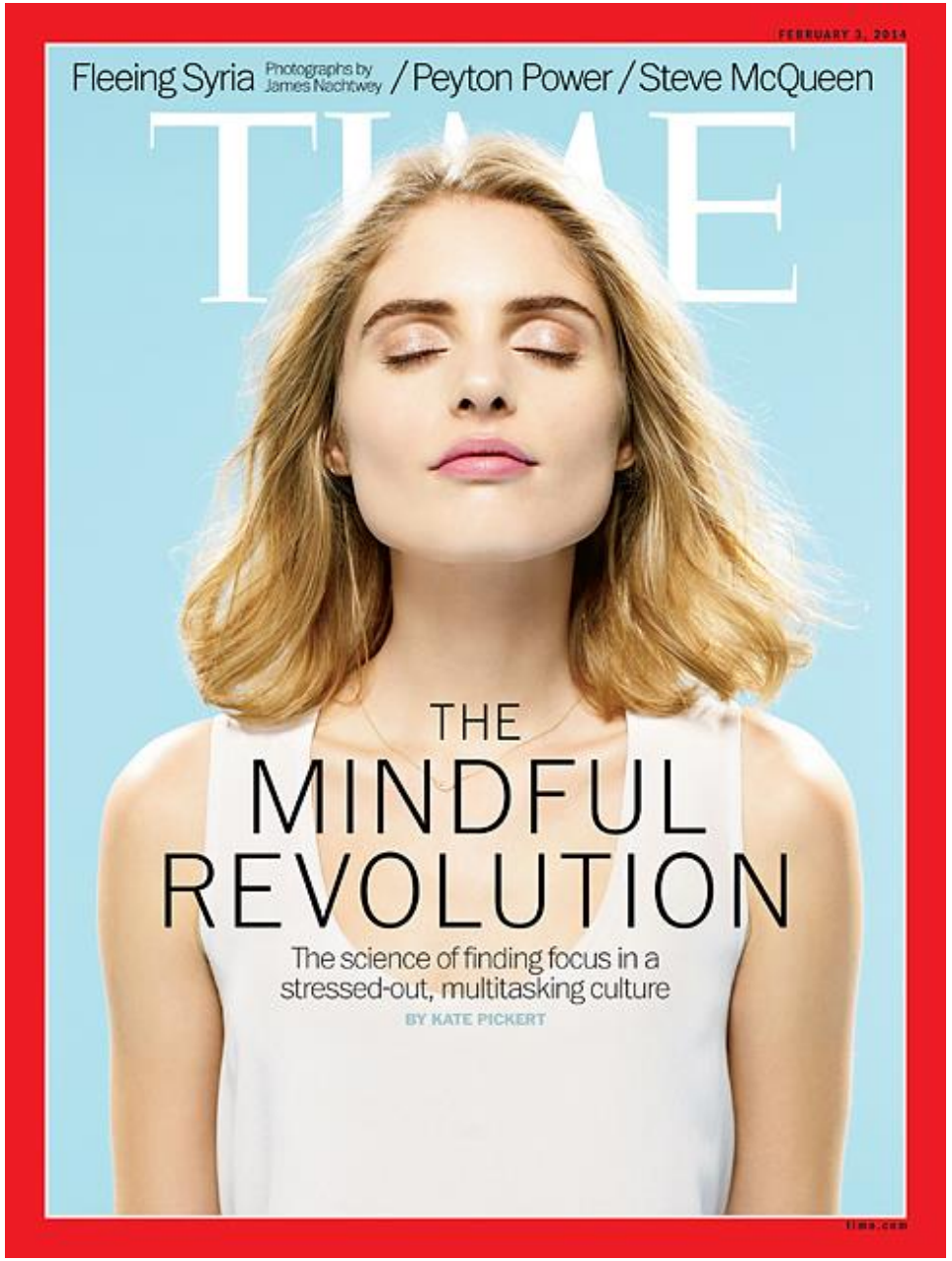
Politics

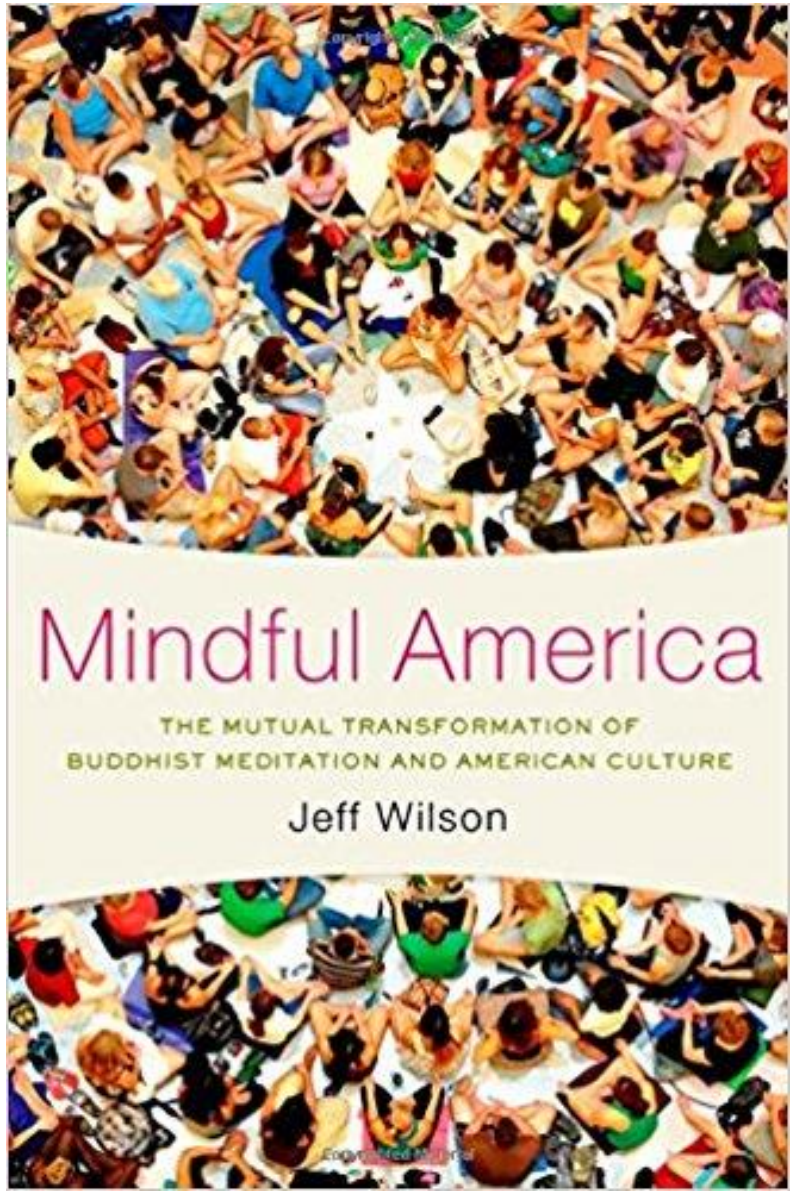
Mindfulness spreads into society

Business

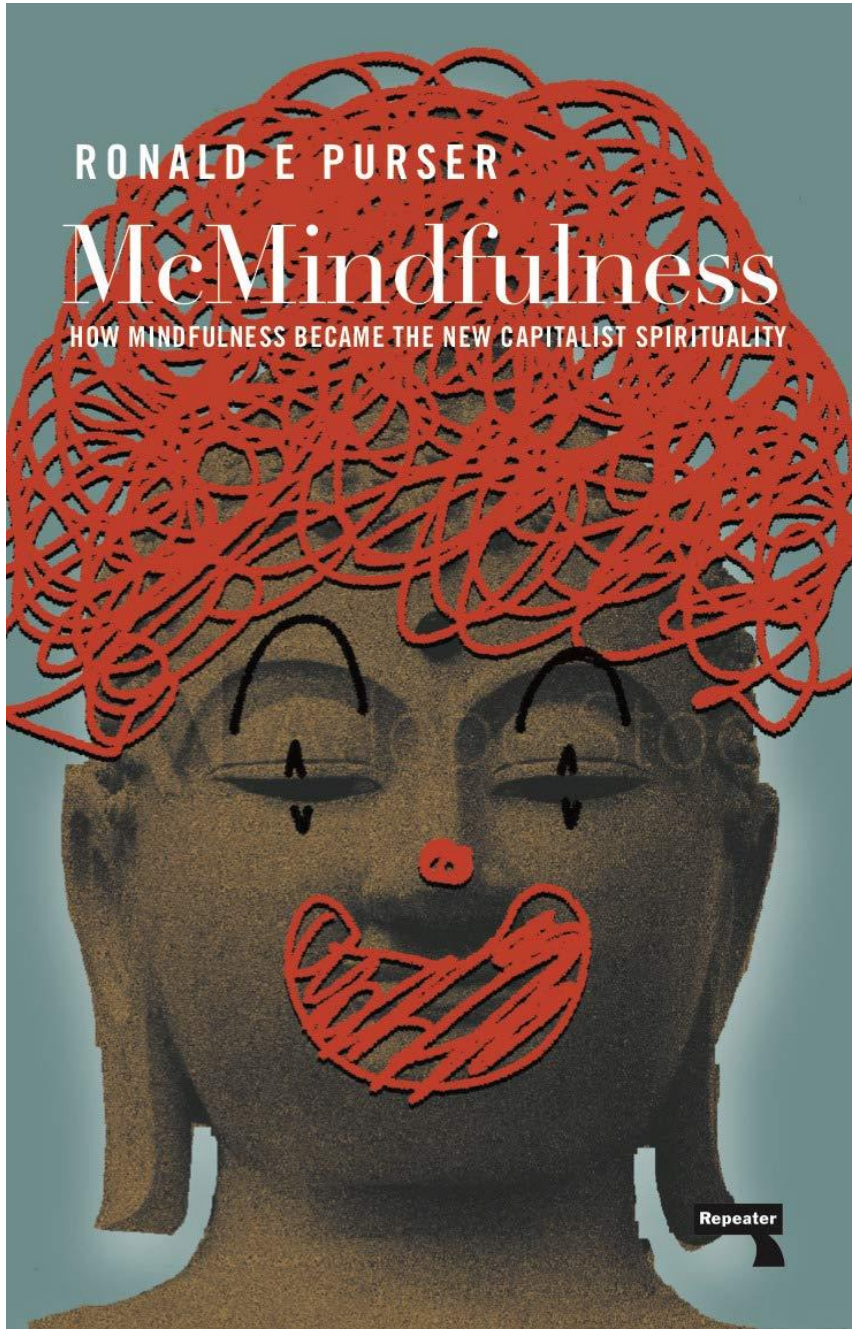
Military

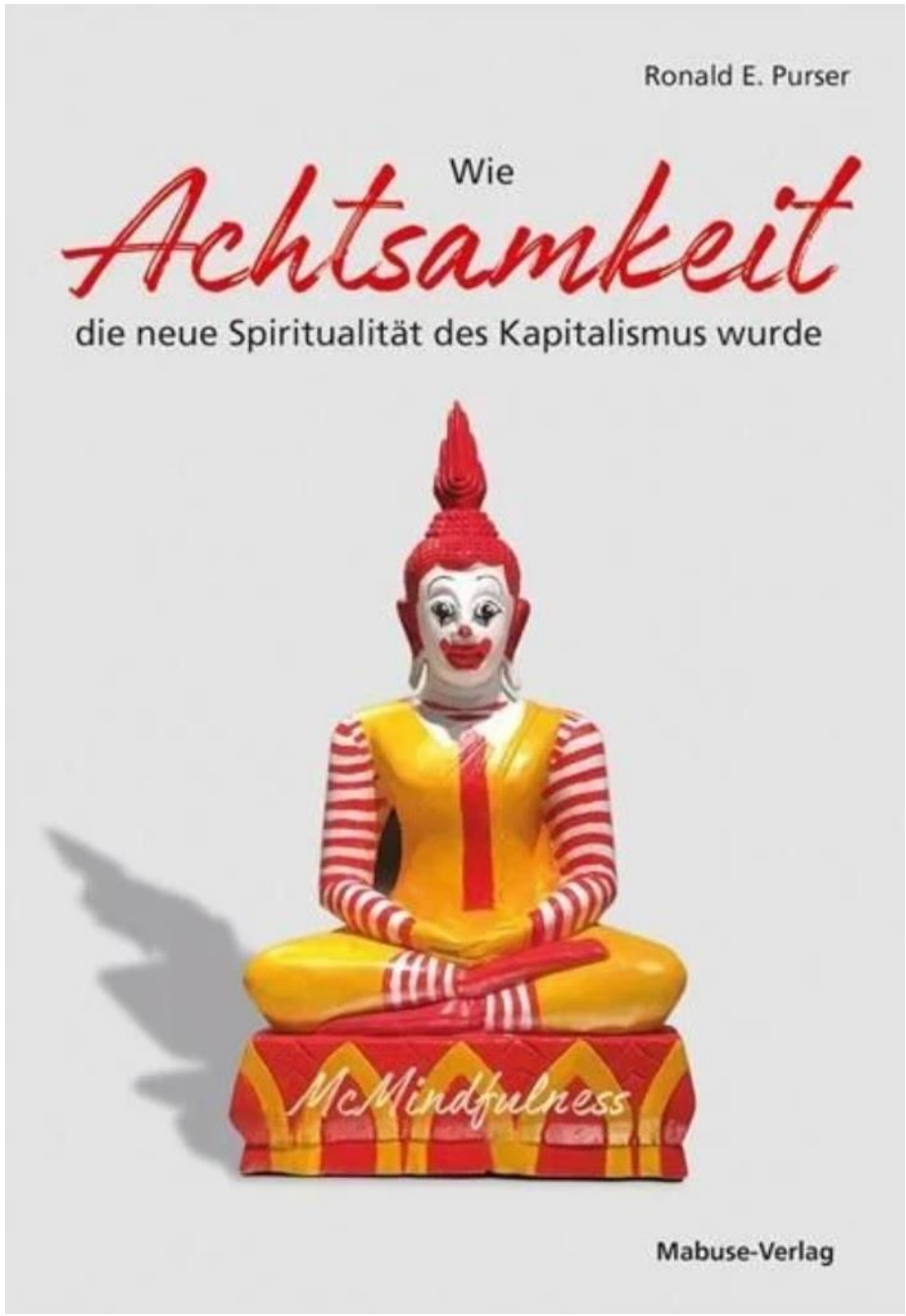

AUGUST 4, 2003
www.time.com AOL Keyword: TIME
TIME
New Age mumbo jumbo? Not for millions of Americans who meditate for health and well-being. Here's how it works
THE SCIENCE OF MEDITATION
Actress Heather Graham has been practicing Transcendental Meditation since 1991


FEBRUARY 3, 2014
Fleeing Syria Photographs by James Nachtwey / Peyton Power / Steve McQueen
TIME
THE MINDFUL REVOLUTION
The science of finding focus in a stressed-out, multitasking culture
BY KATE PICKERT
time.com



1. Mediating Mindfulness: How Does Mindfulness Reach America?
2. Mystifying Mindfulness: How Is Mindfulness Made Available for Appropriation?
3. Medicalizing Mindfulness: How Is Mindfulness Modified to Fit a Scientific and Therapeutic Culture?
4. Mainstreaming Mindfulness: How Is Mindfulness Adapted to Middle-Class Needs?
5. Marketing Mindfulness: How Is Mindfulness Turned into a Commercial Product?
6. Moralizing Mindfulness: How Is Mindfulness Related to Values and Worldviews?


RONALD E PURSER
McMindfulness
HOW MINDFULNESS BECAME THE NEW CAPITALIST SPIRITUALITY
Repeater


Ronald E. Purser
Wie
Achtsamkeit
die neue Spiritualität des Kapitalismus wurde
McMindfulness
Mabuse-Verlag

Q&A

Break

Basic concepts of mindfulness

1) Attentional control	≠ Autopilot
2) Metacognitive awareness	≠ Automatic patterns
3) Defusion	≠ Fusion
4) Acceptance	≠ Resistance
5) Self-compassion	≠ Self-criticism
6) Orientation towards experience	≠ Avoidance

Knuf & Hammerer 2013

ABBILDUNG 1 Wirkfaktorenspirale

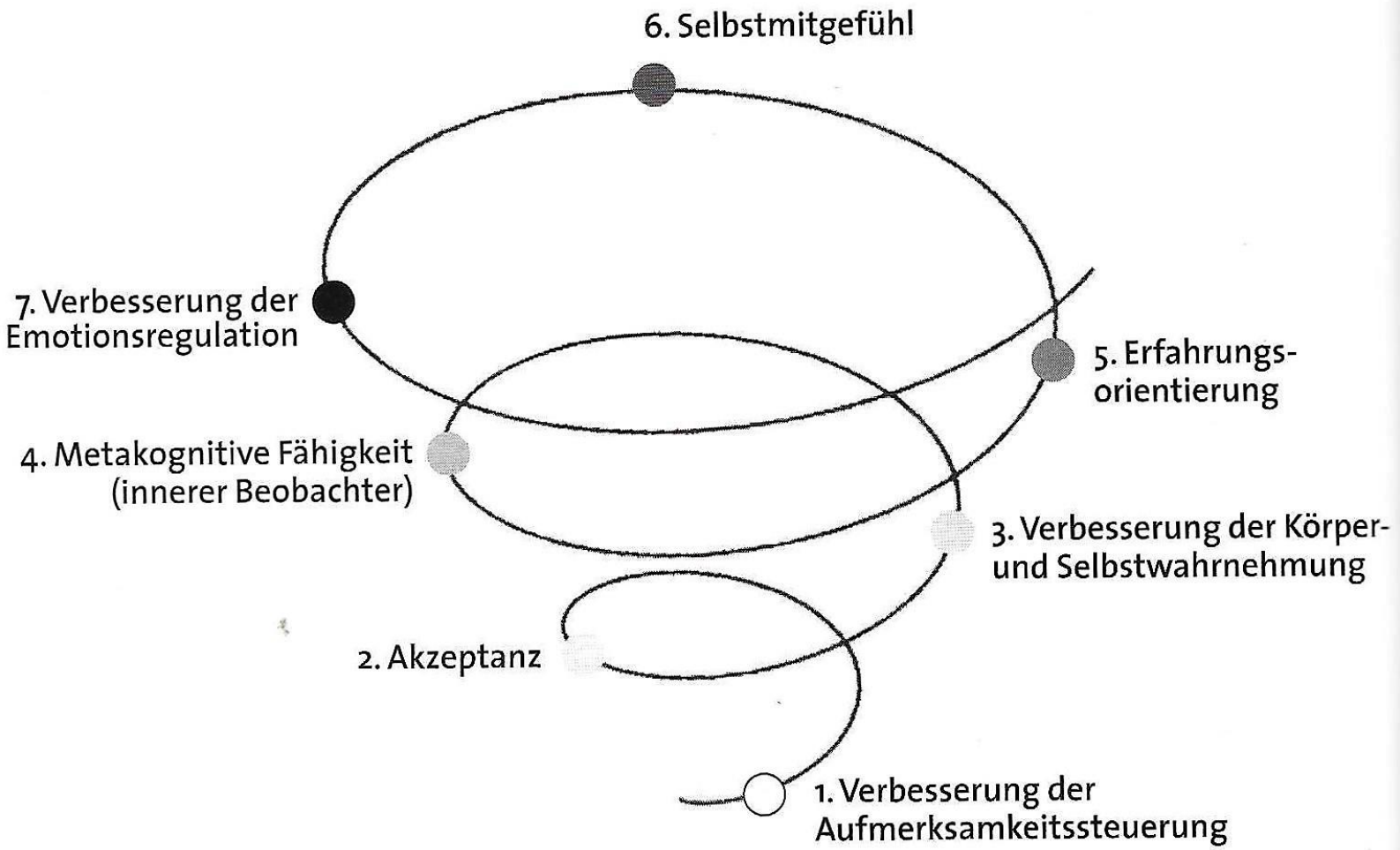


Abbildung 10 Vorgeschlagene Mechanismen, über die Achtsamkeit ihre Wirkung entfaltet

	Beispiel-Instruktionen	Selbstbeschreibungen und experimentelle Befunde	Damit in Zusammenhang stehende Gehirnregionen
1. Aufmerksamkeits-regulierung	Halten der Aufmerksamkeit beim gewählten Objekt; wenn die Aufmerksamkeit abgleitet wird, wird sie zum gewählten Objekt zurück-geleitet	Erhöhte Aufmerksamkeits-leistung: exekutive Aufmerk-samkeit (Attention Network Test und Stroop-Interferenz), »orienting«, »alerting«, ver-minderter »attentional blink«	Anterior cingulate Cortex (ACC)
2. Körpergewahrsein	Aufmerksamkeitsfokus ist meist ein Objekt der inne-ren Empfindung: senso-rische Empfindungen des Atmens, der Gefühle und andere Körper-empfindungen	Zunahme an Werten der »ob-serve«-Skala des Five Facet Mindfulness Questionnaire; narrative Berichte über erhöhtes Körpergewahrsein	Insula, Temporo-parietale Junction

Hölzl 2013

3.1 Emotionsregulation: Reappraisal (Umdeutung)	Emotionalen Empfindungen auf eine andere Weise begegnen (nichtwertend, mit Akzeptanz)	Zunahme an positivem Reappraisal (Cognitive Emotion Regulation Questionnaire)	(Dorsaler) präfrontaler Cortex (PFC)
3.2 Emotionsregulation: Exposure und Extinction	Sich dem zuwenden und sich dem öffnen, was im Feld des Gewahrseins erscheint; innere Reaktivität unterlassen	Zunahme an Nichtreaktivität gegenüber inneren Empfindungen (Five Facet Mindfulness Questionnaire)	Ventro-medialer PFC, Hippocampus, Amygdala
4. Veränderung des Selbsterlebens	Loslassen von der starren Identifikation mit einem »Selbst«	Berichtete Veränderungen im Selbstkonzept (Tennessee Self Concept Scale, Temperament and Character Inventory)	Medialer PFC, posteriorer cingulärer Cortex, Insula, Temporo-parietale Junction

Hölzl 2013

Part 2

Research findings on the connections and possible synergies between mindfulness and psychedelics

Mindfulness & Psychedelics

- Alternative treatments for various psychopathologies
- Transdiagnostic efficacy
- Decrease in clinical symptoms
- Enhancement of wellbeing in healthy participants
- Salutogenic mechanisms via corresponding neuromodulatory effectes

→ Synergistic effects when both are used in combination

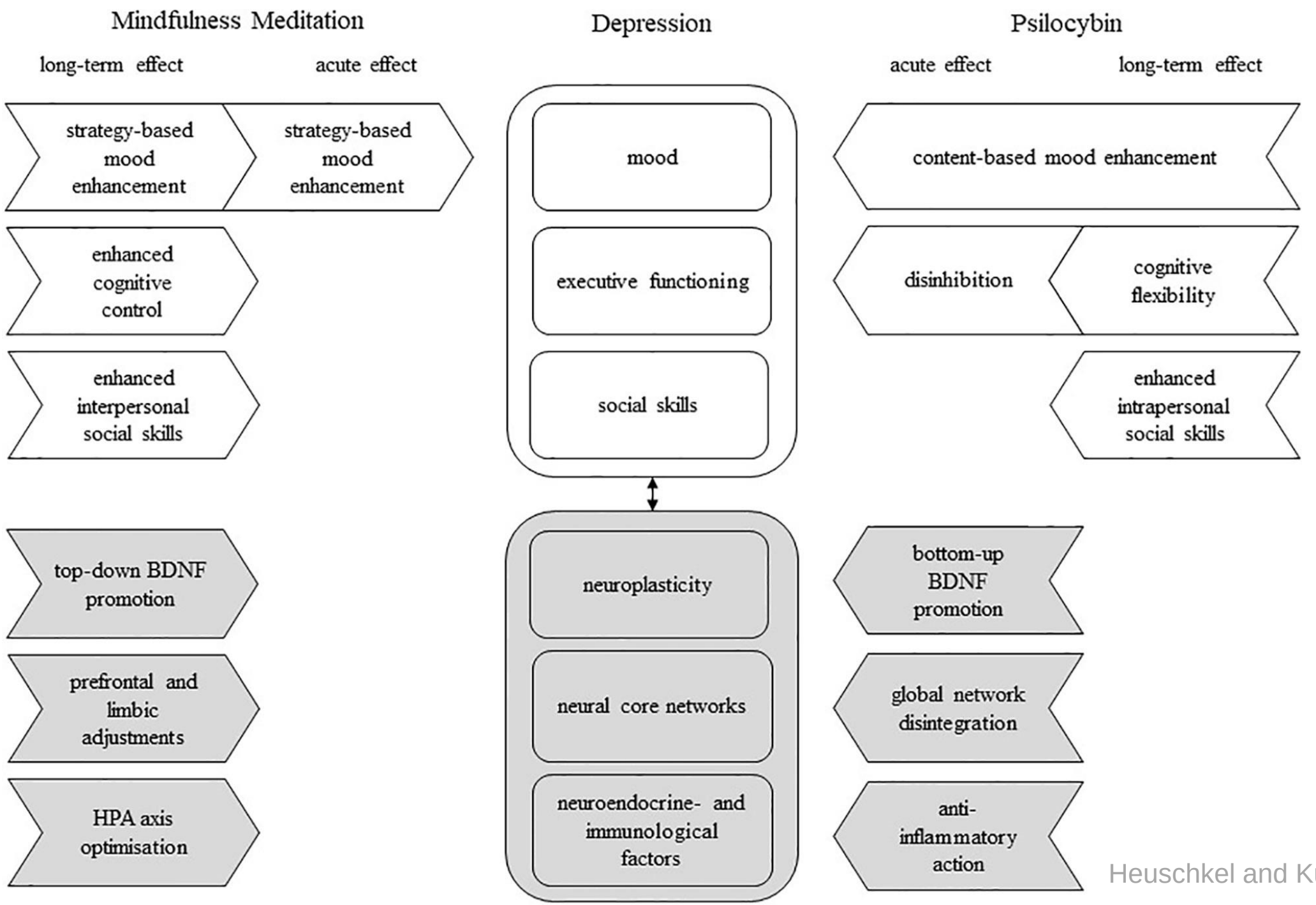
Eleftherio et al. 2021

Mindfulness & Psychedelics

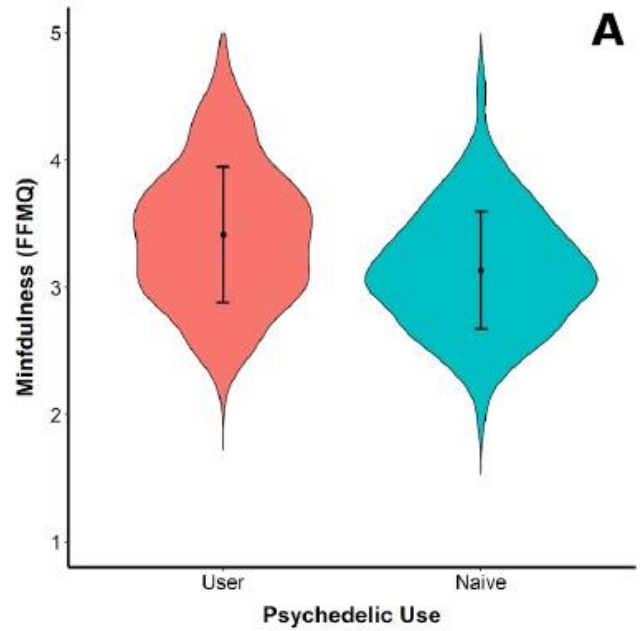
Overlaps:

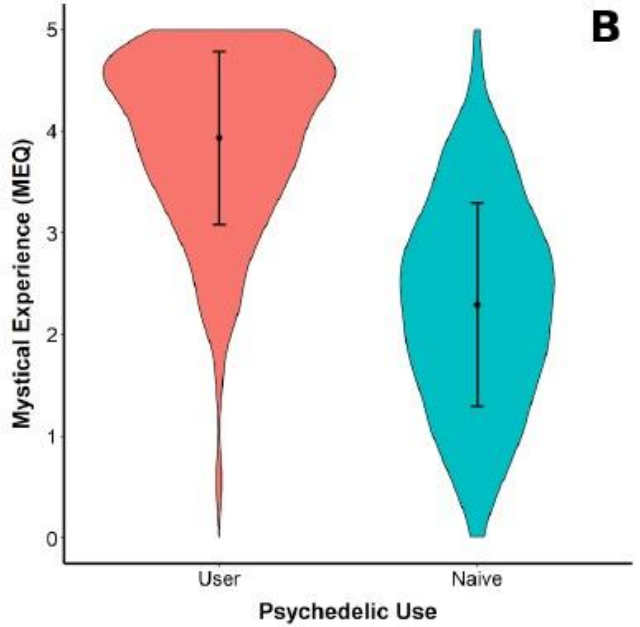
- Antidepressive effects
- Mystical experiences
- Psychological mechanisms
- Neuromodulating effects

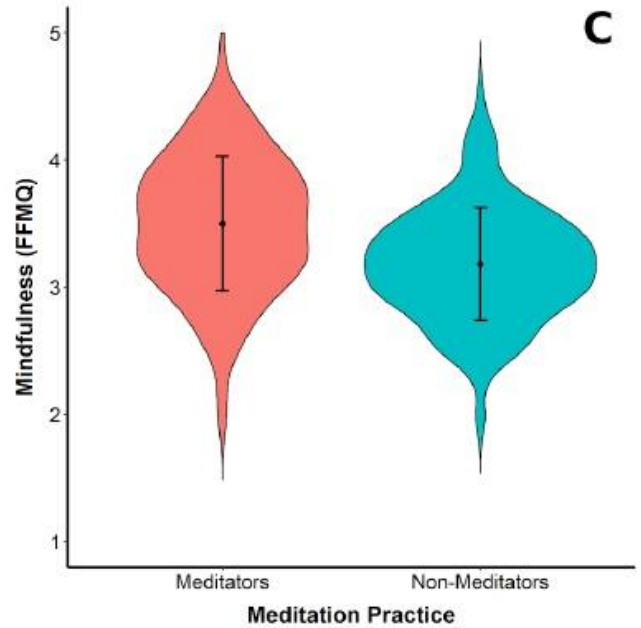
Eleftherio et al. 2021

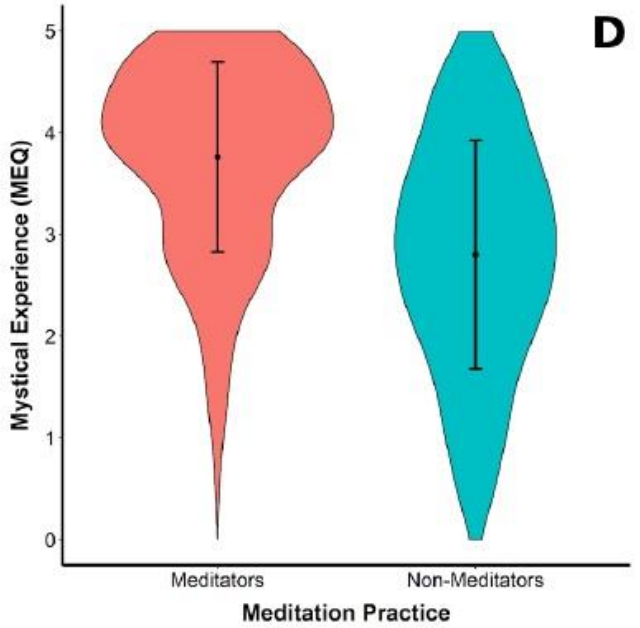


Heuschkel and Kuypers 2020

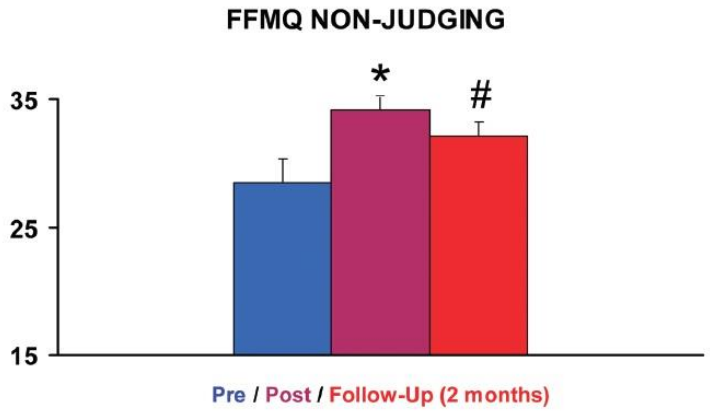


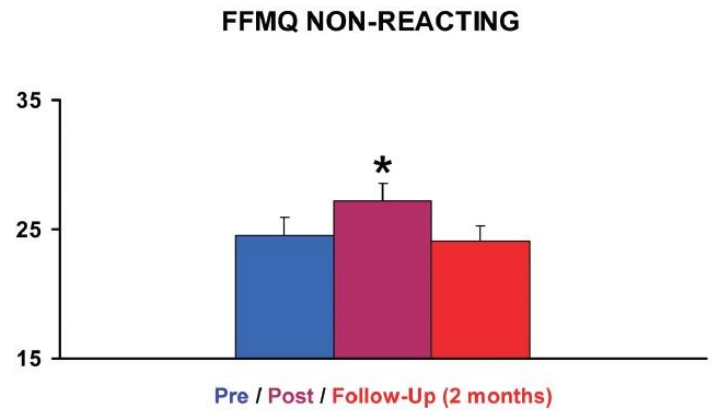


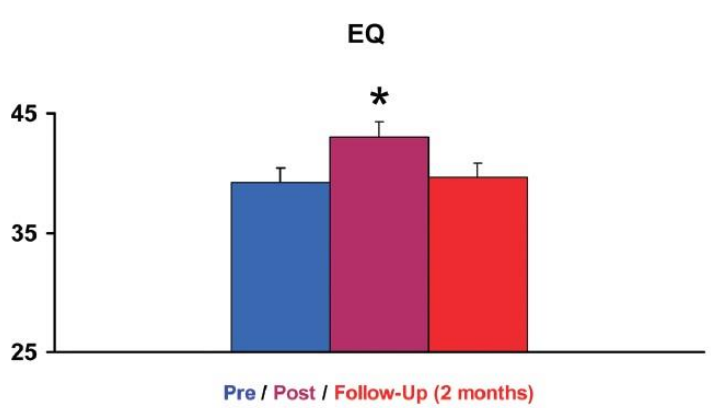


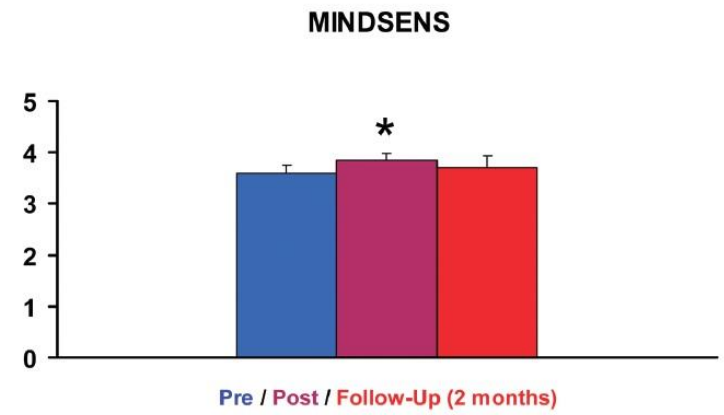


Qiu and Minda forthcoming



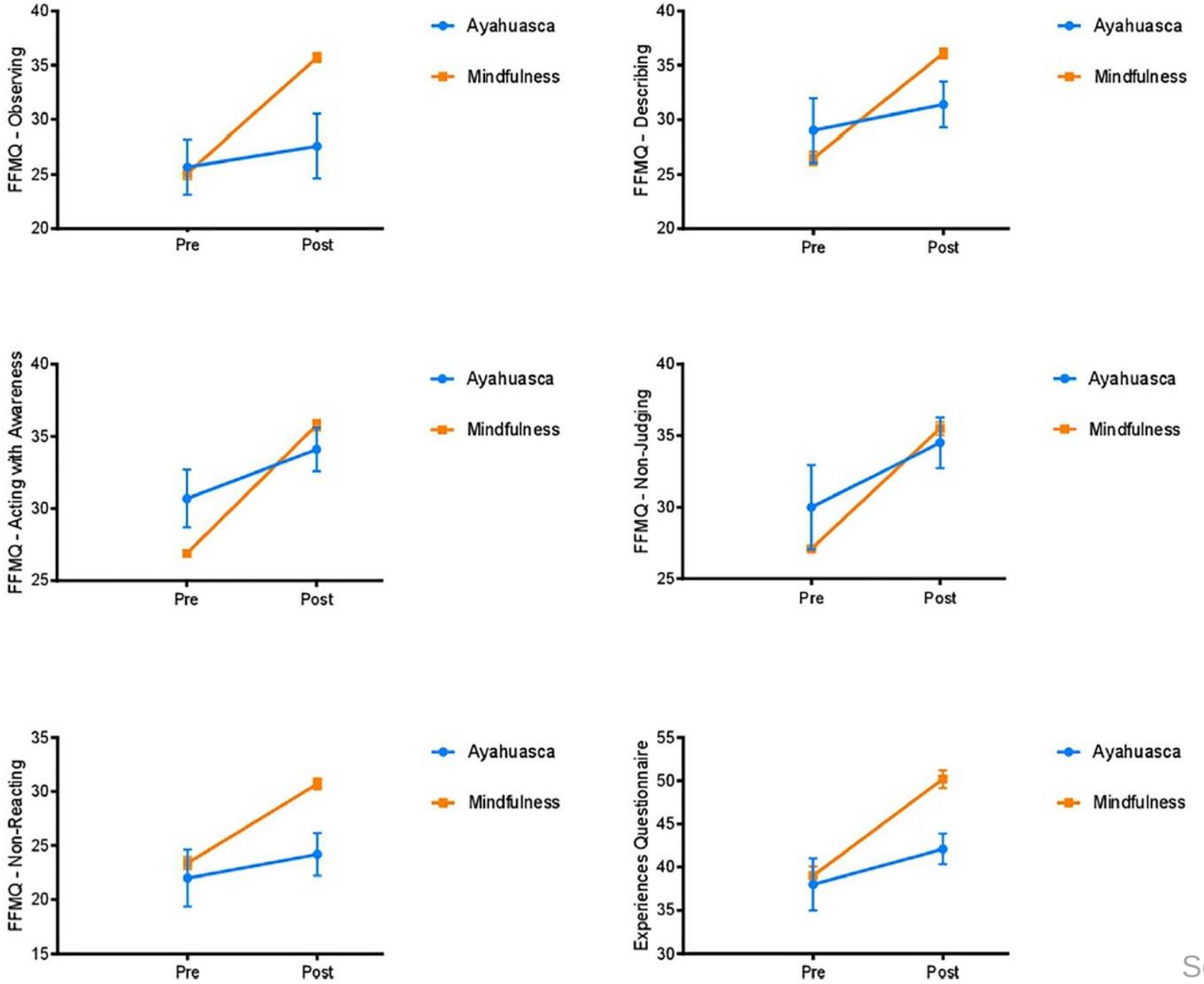






Sampedro et al. 2017

Researcher & Year	Substance	Study Design	Notes
Soler et al. 2016	Ayahuasca	Natural setting	↓Judgement ↓Reactivity ↑ Decentering ↑MINDSENS
Sampedro et al. 2017	Ayahuasca	Natural setting	↓Judgement ↓Reactivity ↑ Decentering ↑MINDSENS ↑Self-compassion
Soler et al. 2018	Ayahuasca	4 sessions vs. 8 weeks MBSR	↓Judgement
Uthaug et al. 2018	Ayahuasca	Natural setting	↓Judgement ↑Prsent-moment awareness
Uthaug et al. 2019	5-MeO-DMT	Natural setting	↓Judgement
Uthaug et al. 2020	5-MeO-DMT	Natural setting	↓Judgement
Griffiths et al. 2018	Psilocybin	2 sessions with 6-month spiritual guidance Begleitung	↑Non-attachment↑Spirituality ↑Intensity of practice ↑Engagement in practice ...
Smigielski et al. 2019	Psilocybin	1 session during 5-day retreat	↑ Meditation depth ↑Trait acceptance ↑Self-acceptance



Soler et al. 2018

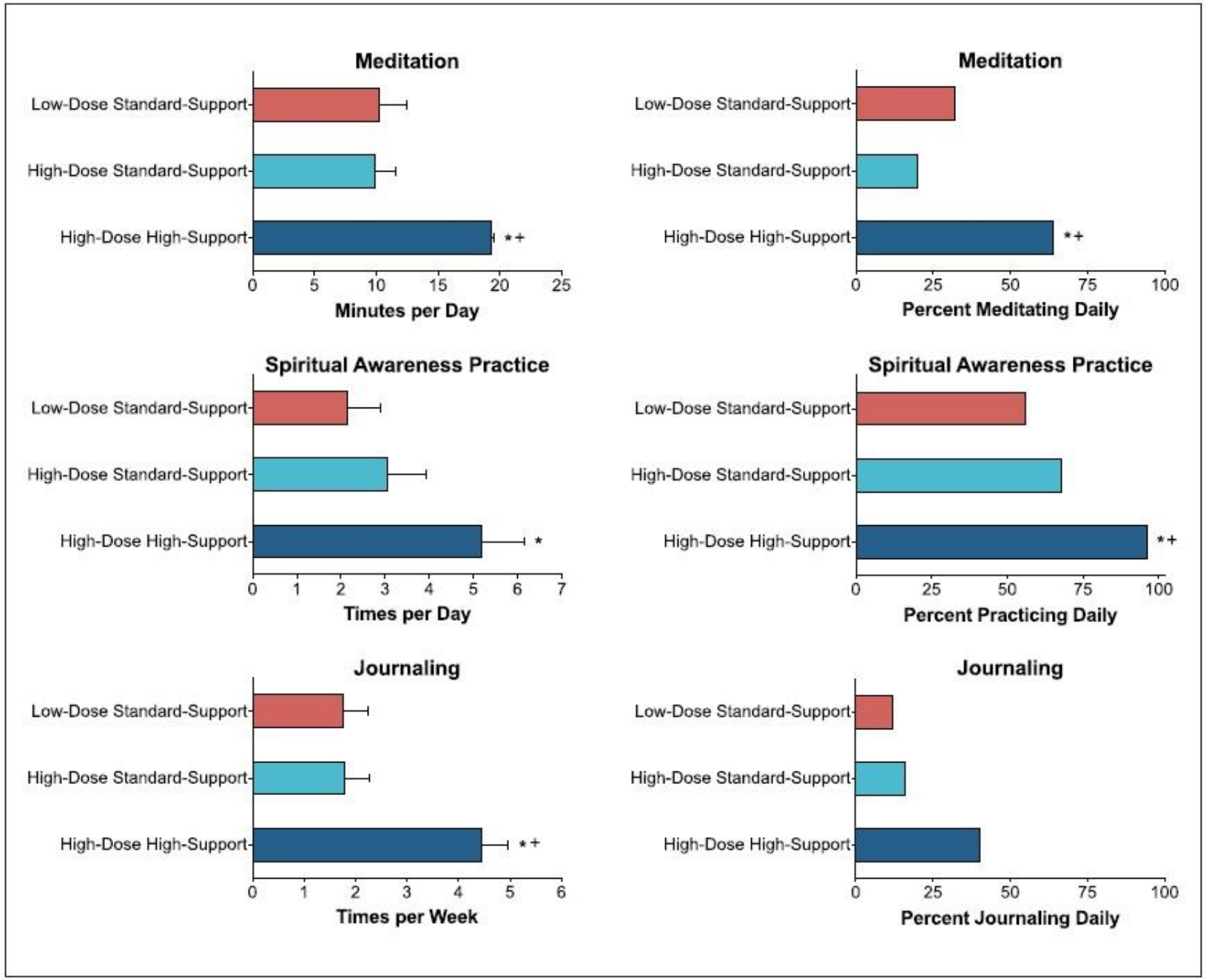
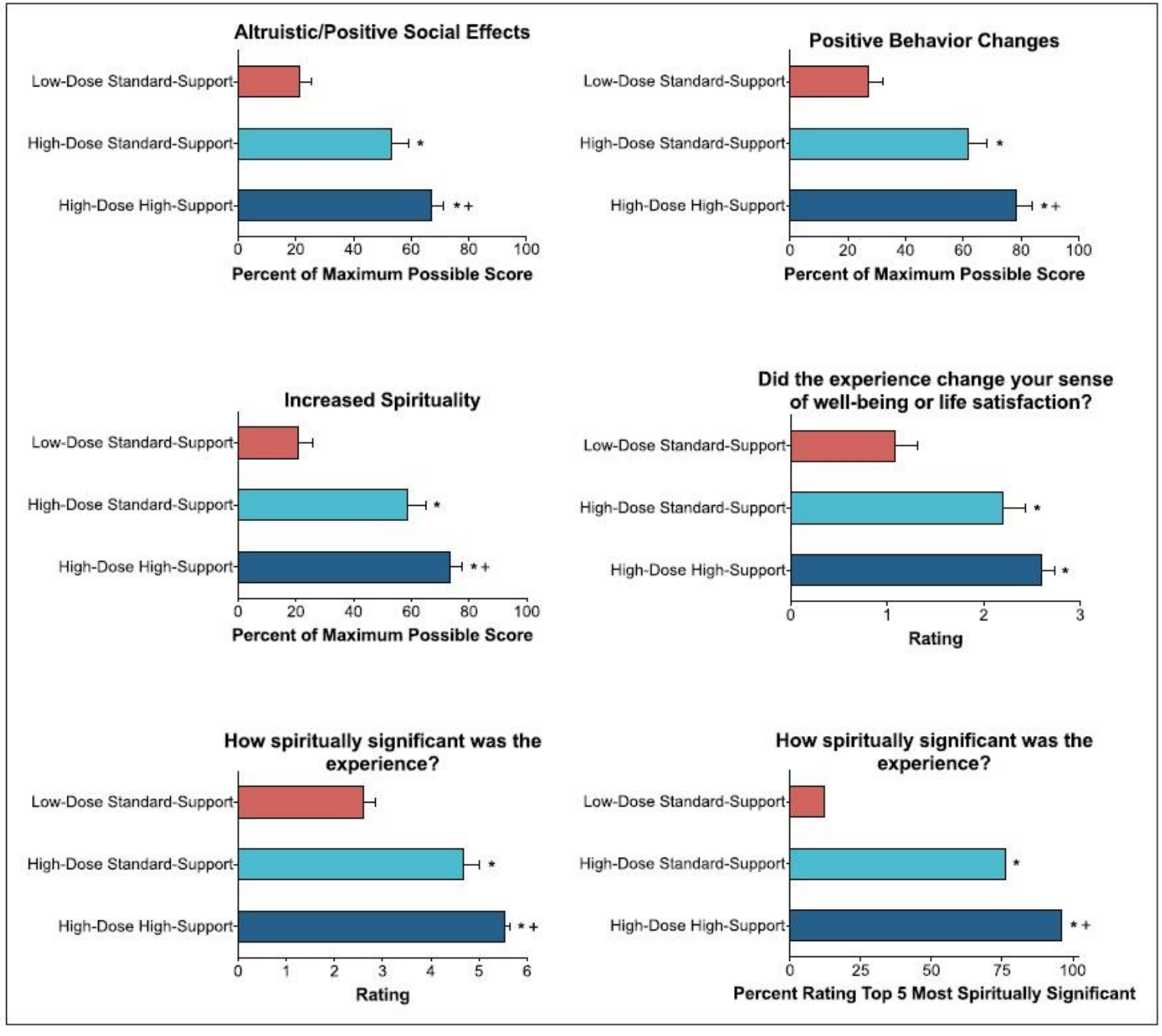


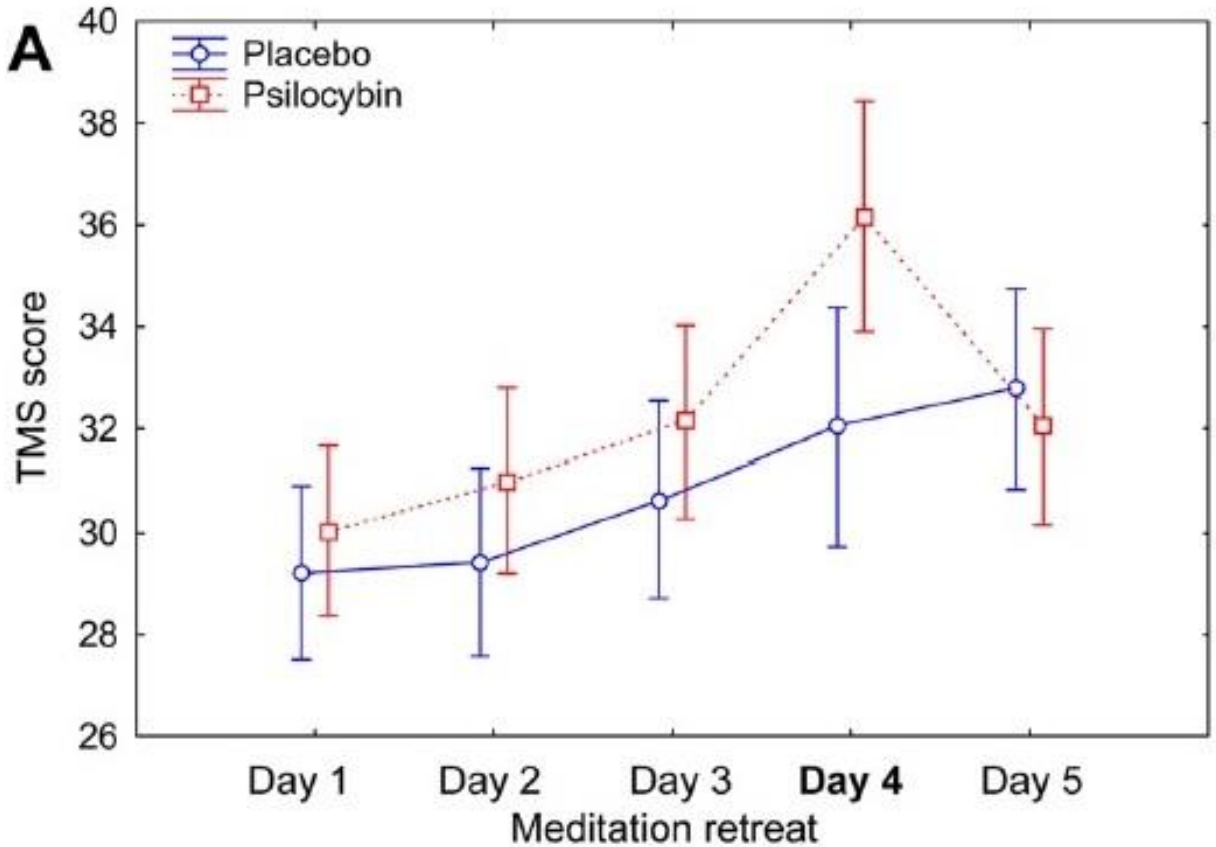
Figure 4. Spiritual practices at 6 months (from Table 4).

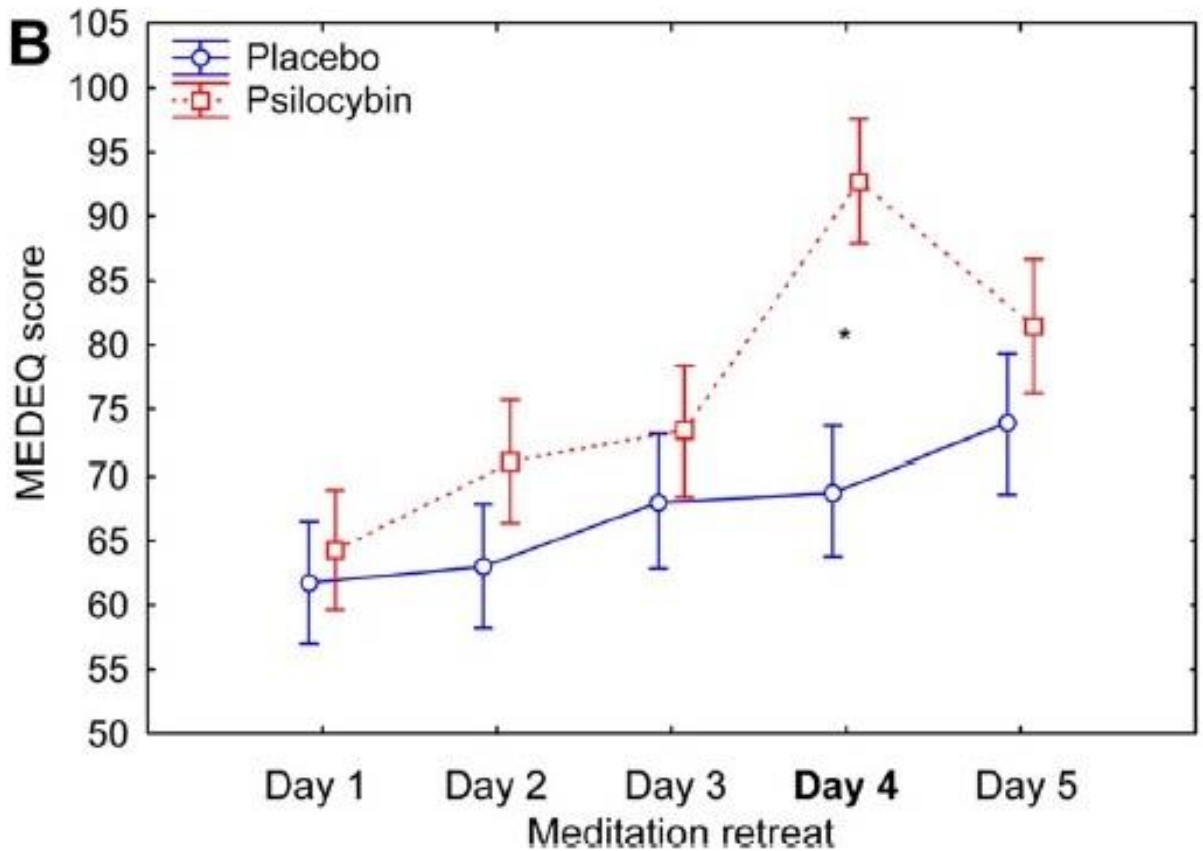
Griffiths et al. 2018



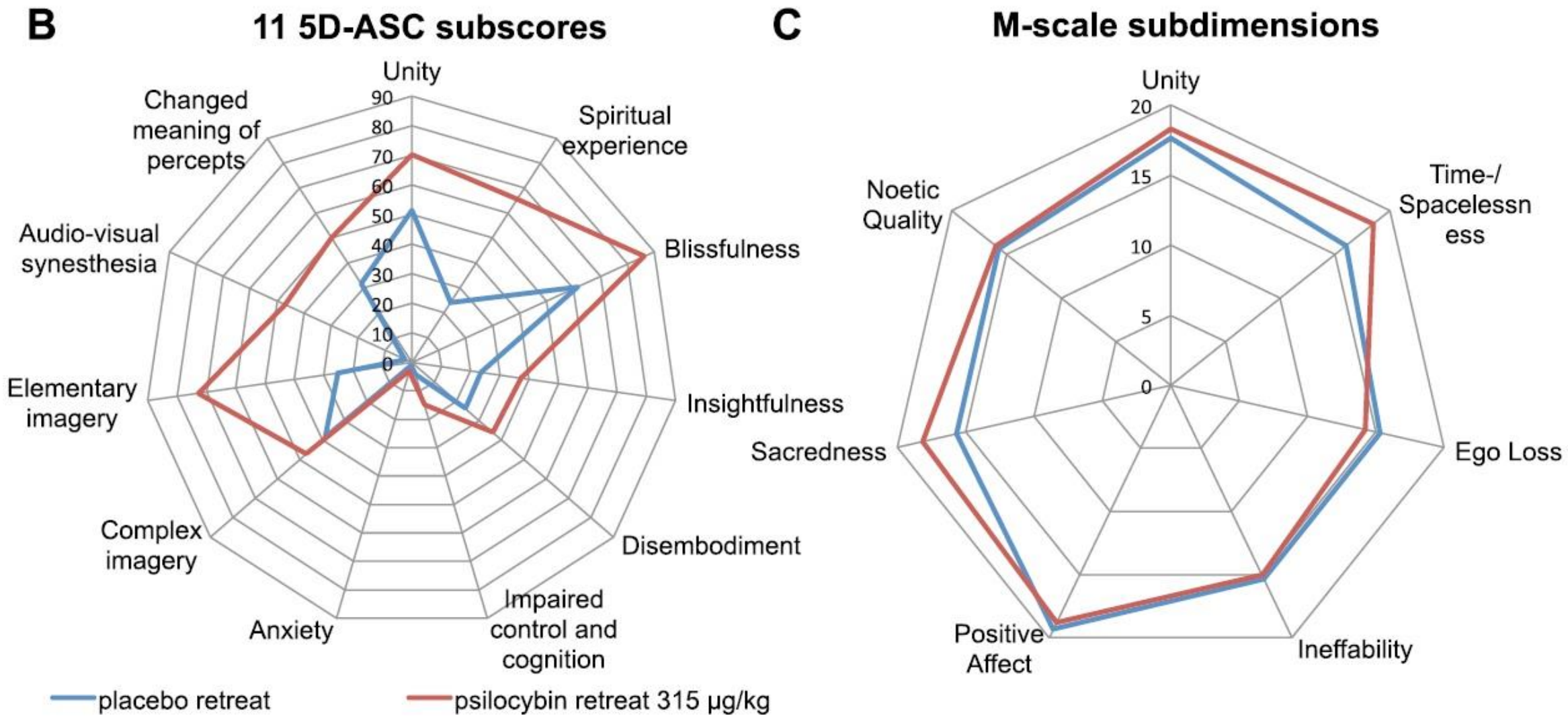
Griffiths et al. 2018

Figure 5. Participant ratings of effects attributed to psilocybin session experiences at the 6-month follow-up (Illustrative results from Table 5).

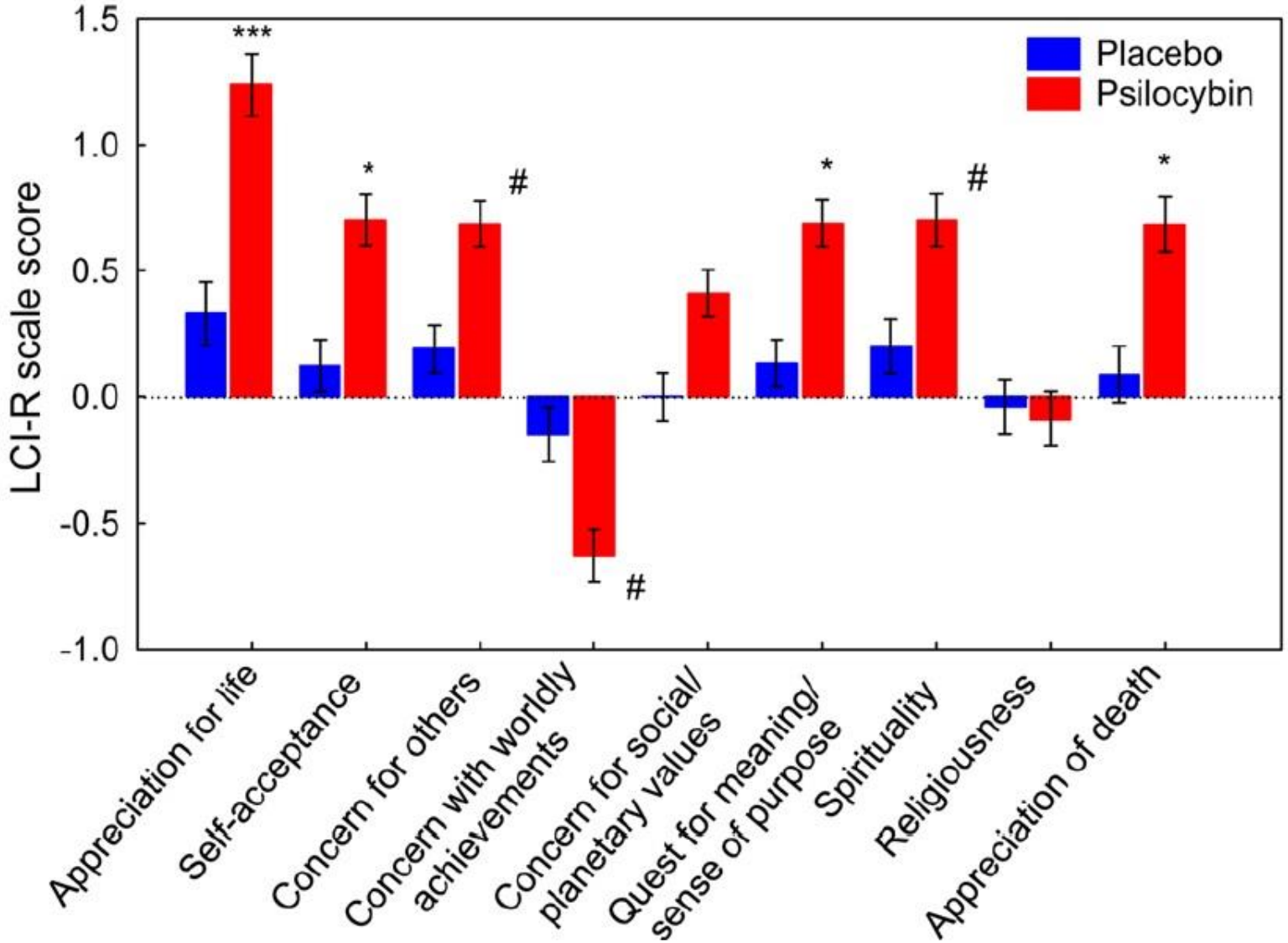




Smigielski et al. 2019



Smigielski et al. 2019



Smigielski et al. 2019

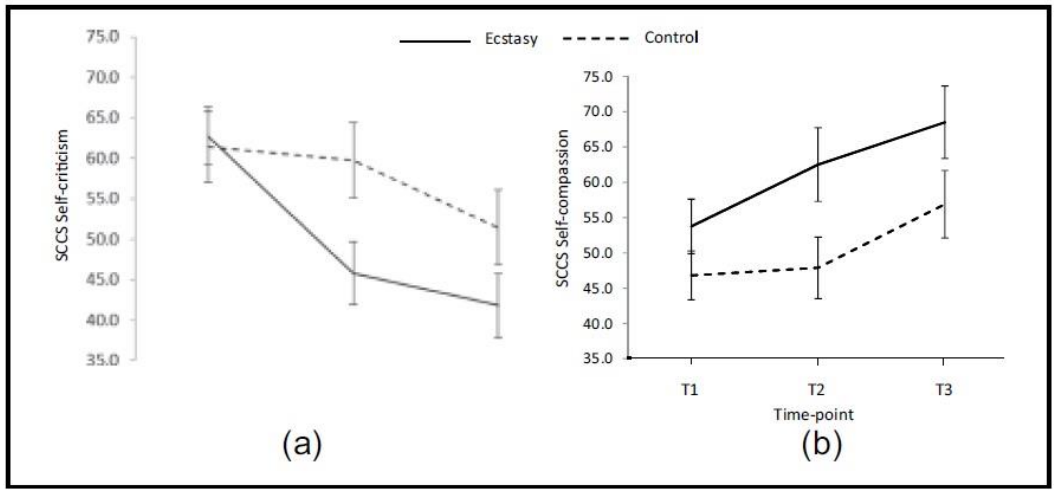


Figure 2. (a): Mean ± SEM Self-Compassion and Criticism Scale (SCCS) self-criticism scores at three time points corresponding to pre- (T1) and post-ecstasy (T2) and post-compassionate imagery (CI) (T3) on the CI + ecstasy session and at similar intervals on the control session when CI occurred between T2 and T3 and no ecstasy was consumed. (b): Mean ± SEM SCCS self-compassion scores. In both panels, the ecstasy session data are represented by the solid black line and the control data by the dashed line.

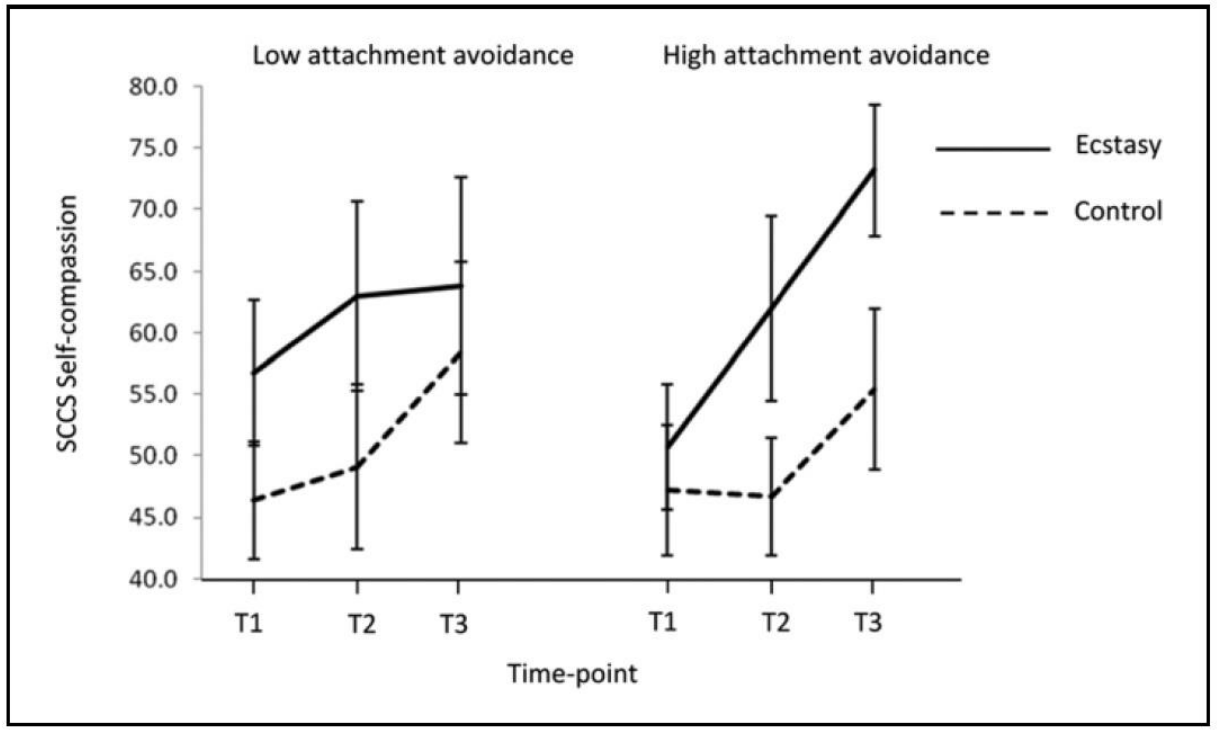


Figure 3. Moderating effect of avoidant attachment on self-compassion at three time points (T1, T2, T3) on the compassionate imagery + ecstasy and control sessions, as per Figure 2.
SCCS: Self-Compassion and Criticism Scale.

Synergies

1) Mindful state recognition
2) Motivation for mindfulness practice
3) Depth of mindfulness
4) Mindful compassion
5) Psychedelic non-avoidance
6) Sustained psychedlic proximity and generalization

Payne et al. 2021

Exposure of novice meditators to classical psychedelics

- **Decrease** confusion about how to practice mindfulness and increase confidence in the methods and benefits of practice
- **Increase** the depth of meditation practice and subsequent mindful awareness
- **Increase** motivation to practice and amount of practice
- **Increase** (self-)compassion, within practice and in daily life
- **Increase** reported benefits of mindfulness on behavior, relationships, affect, and cognition

Payne et al. 2021

Mindfulness training in people naive to psychedelics

- **Reduce** anxiety and avoidant responding during challenging psychedelic dosing sessions
- **Sustain** the felt sense of proximity to changes in attitude, perspective, and affect of the psychedelic experience
- **Sustain** a range of mental health benefits associated with psychedelic dosing for a longer period
- **Lead to** a more generalized influence within daily attitudes, feelings, relationships, and behaviors

Payne et al. 2021

Synergies

The weaknesses of each intervention are offset by the strengths of the other:

→ Psychedelic experiences can produce substantial therapeutic changes – but they have limited effectiveness in sustaining them

→ Mindfulness practice has a number of initial barriers to entry – but its benefits multiply over time

Payne et al. 2021

Q&A






Thanks for your attention!
Attend this talk again online in German language on June 3, 2023 (e-mail me).

Stay in touch:

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🧠 Online Mindfulness Courses starting in Fall 2023! 💎