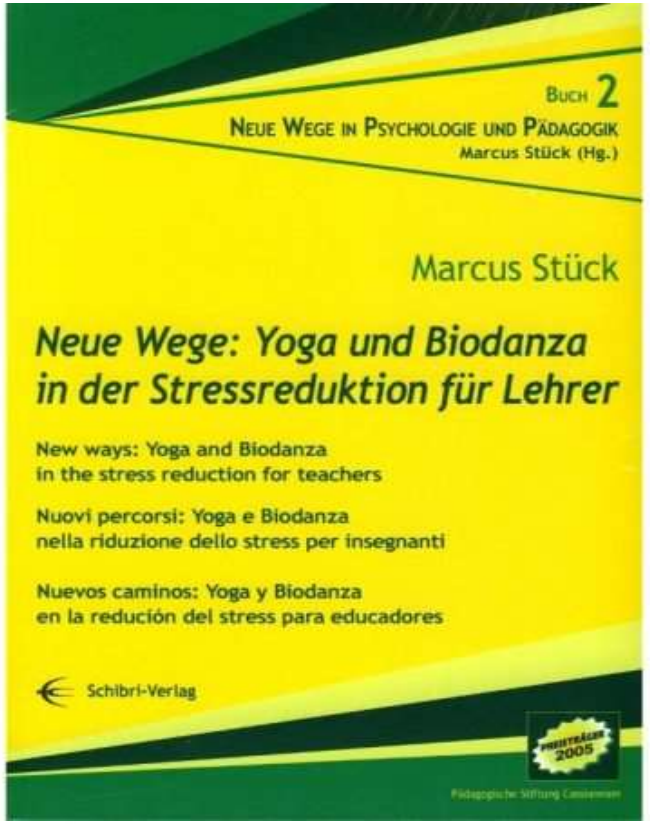
BIONET - COLLOQUIUM OF HONOUR
ON THE OCCASION OF THE 60TH BIRTHDAY
OF PROF. DR HABIL. MARCUS STUECK

CURRENT ISSUES ON
BIOCENTRIC HEALTH
AND BIODANZA RESEARCH



Psychological bases of yoga, mindfulness and biodanza out of a view of a psychologist

By Edgar Galindo

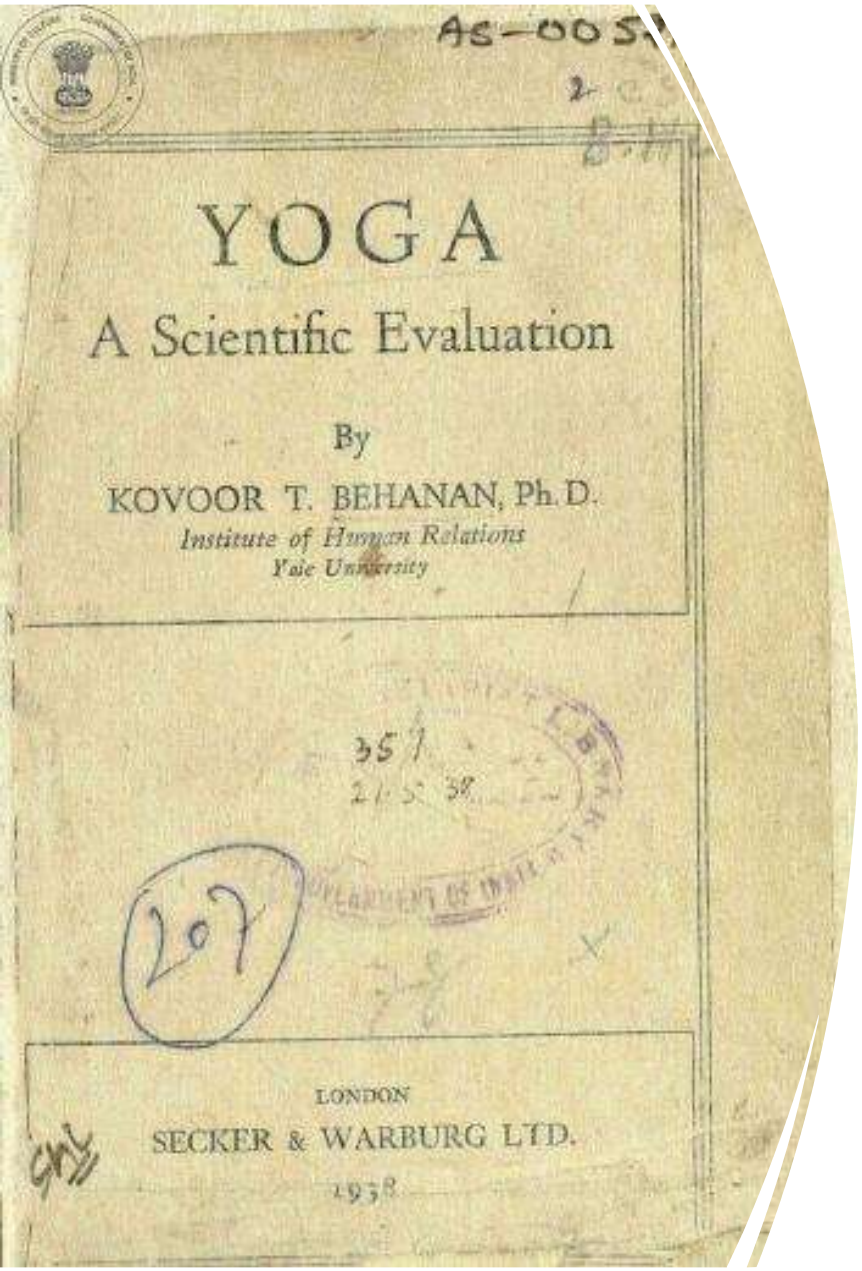
The present work:

We know that body exercise has a positive effect on body and mind, especially in elderly people, creating neuroprotective mechanisms (Tari et al, 2025).

But: Has every kind of bodily movement/exercise positive effects?

I will review some evidences showing that such effects depend on cognitive factors.

A CONTRIBUTION TO EXPLAIN THE PSYCHOLOGICAL FACTORS INTERVENING IN BIODANZA.



I.-YOGA AND MEDITATION/ MINDFULNESS

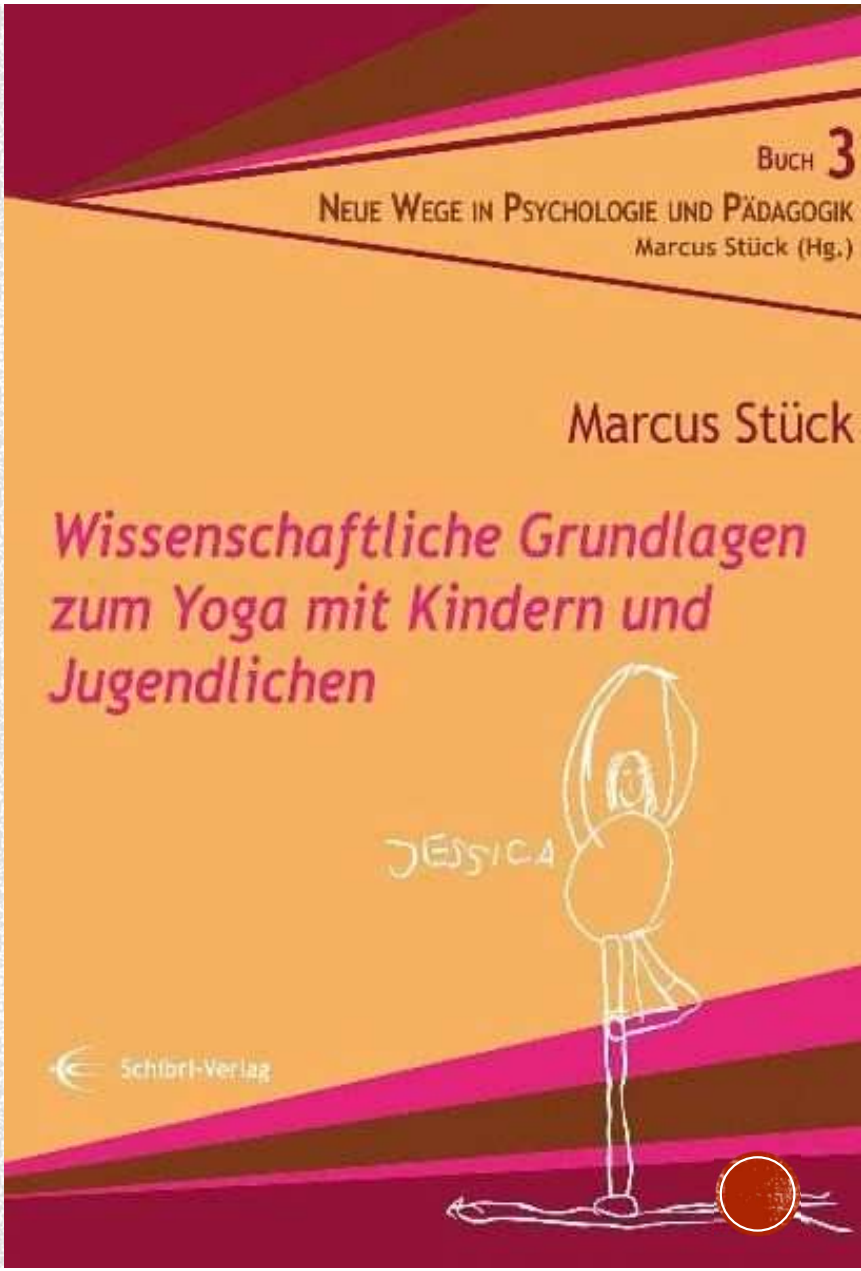
- Yeats-Brown (1930) Indian yogis could control body functions like the own bleeding.
- Behanan (1937) “scientific evaluation”
- **Yoga practices are result of centuries of experiences on the conscious control of internal body states. A high level of control on the functioning of internal organs is attained through learned exercised that can go through years.**
- Today: Yoga is a tool in the control of stress, but also in several diseases, cardiovascular disease, hypertension, type II diabetes and insulin resistance, obesity, lipid profile, (Manchanda, & Madan, 2014).

SCIENTIFIC EVIDENCES

- Keng, Smoski, M., & Robins (2011) reviewed empirical studies: positive psychological effects on subjective well-being, reduction of psychological symptoms, a better emotional reactivity, and improved behavioral regulation.

It important to understand the nature and the mechanisms of action of yoga/mindfulness,

We are not dealing only with emotions, but with clearly structured learning processes, whose scientific roots have been shown by the research on biofeedback.



II.- Cognition and the effects of physical exercise

Elsa Gindler and **Heinrich Jacoby:** development of sensitivity and awareness through careful observation of the own body in everyday movements, in order to achieve an understanding of the own health and disease states.

“Sensory awareness”: Fritz Perls, Carl Rogers, and innumerous alternative movements.

The aim is to put the body processes under cognitive control, just like yoga and mindfulness.

Psychological effects of exercise/movement

Different kinds of movements produce different results at a psychological level.

Research evidences:

- 1) Experimental study compares effects of dance and exercise on neurocognitive functions (Kimura & Hozumi, 2012)
- Results:
- Cognitive function improves when participants dance with choreography.
- No effects when participants simply repeat dance elements.
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COGNITION MUST INTERVENE IN THE MOVEMENT IN ORDER TO HAVE AN EFFECT.

Psychological effects of exercise/movement: Research evidences

2) Review comparing structured dance vs. structured exercise on promote cognitive functions. Structured dance is more effective than other types of structured exercise. (Fong-Yan et al., 2024)

LEARNING DANCE SEQUENCES MAY CHALLENGE COGNITION

3) Experimental confirmation comparing effects of Tango, Waltz/Foxtrot, Tai Chi and No Intervention (Parkinson). Tango significantly improved the quality of life , but no significant effects of Waltz/Foxtrot, Tai Chi or No Intervention. (Hackney & Earhart, (2009).

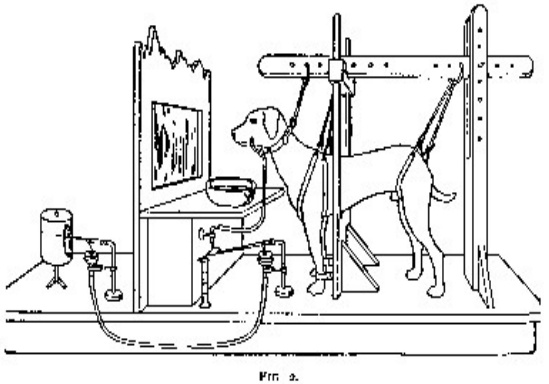
4) Recent review: All kinds of exercise seem to protect the cognitive function, but mind-body exercises are better: cognitively-engaging exercises such as Tai Chi Chuan, Baduanjin and Dance have a stronger effect than non-cognitively-engaging exercise (Biazus-Sehn, Schuch, Fi

POSITIVE EFFECTS OF BODILY MOVEMENT ON BODY AND MIND DEPEND ON THE EXISTENCE OF A COGNITIVE LINK

III.- Learning to control the body functions: The conditioning of internal states and biofeedback.

PAVLOVIAN CONDITIONING: A BODY FUNCTION (SALIVATING) IS CONTROLLED BY EXTERNAL STIMULI.

Next step: to control other body functions:



In humans:

Welgan (1977): Peptic ulcer patients learned to control acid concentration and pH levels in the stomach.

Budzynski, Stoyva, & Adler (1970): headaches.

Sterman, MacDonald, & Stone (1974): epilepsy.

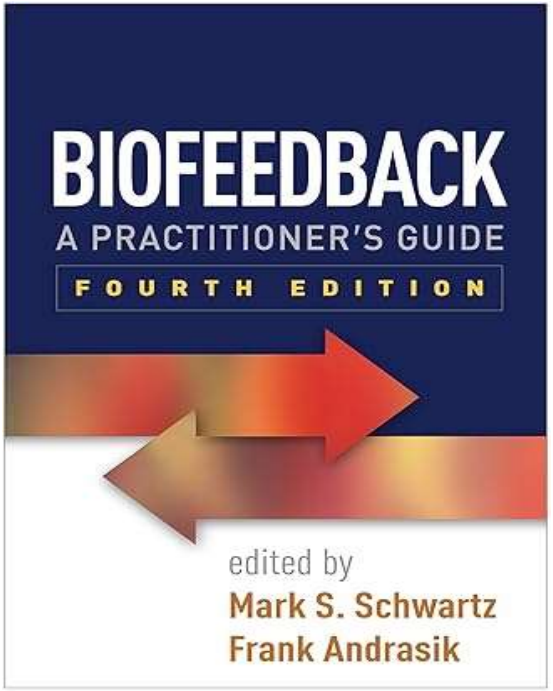
Benson, Rosen, Marzetta, & Klemchuk (1974): hypertension patients.

Black (1974): voluntary changes in the electrical activity of the brain (alpha rhythm), i.e. voluntary control of states of consciousness.

III.- Learning to control the body functions: The conditioning of internal states and biofeedback.

The way to explain the phenomena associated with yoga and meditation:

-Respiration rate and depth,
-Skin surface temperature,
-Cardiovascular reactivity,
-Neuromuscular issues
-Hypertension,
-Heart failure,
-Asthma and fibromyalgia (Schwartz, & Andra



The common visual displays and acoustic signals have been complemented with virtual reality or exergaming technology.

CONCLUSION:

Modern medicine: biopsychosocial model of illness: Health is not only a biological process, but at the same time a psychological process (Ogden, 2012).

Yoga, Mindfulness and Biodanza play a role!