The author provides a personal account of the scientific contributions of Thomas Budzynski, including the conceptualization of a psychophysiological foundation for psychotherapy, the development of a prototype neurofeedback training instrument, and the exploration of the potential therapeutic applications of twilight brain states.

In 1971, after finishing my PhD in biological and clinical psychology, I read two papers that captured my fascination: one was an unpublished manuscript of Tom Budzynski and Johann Stoyva, titled Biofeedback in Behavior Therapy and in Autogenic Training, introducing electromyographic biofeedback as an assessment and treatment for chronic muscle pain. The second was Peter J. Lang’s chapter in Allen Bergin’s Handbook of Psychotherapy and Behavior Change (1971), demonstrating that psychotherapy needs psychophysiological methodology in order to secure treatment success and document side effects and specificity.

Tom’s and Johann’s chapter marked a historic moment in psychosomatic medicine and clinical psychology: For the first time, a consistent psychophysiological theory (mostly Johann) was rigorously applied (Tom’s achievement) in the context of psychological treatment, namely, in systematic desensitization for tension headaches and other muscular pain. Each step in the stress-confrontation procedure was documented with frontal electromyography recordings, and patients observed and voluntary controlled the diminution of the muscle potential amplitudes. Finally, psychotherapy had arrived in physiology!

Electrified by these pioneering clinical experiments, I wrote a letter to both of them (if I recall correctly, Tom had just finished his PhD thesis in Johann’s lab), congratulating them for this intellectual milestone, asking them for permission to translate their work into German and to visit them in their lab at the Denver University Medical Center. Surprisingly, two other lovely German researchers, Pola Sittenfeld and Rolf Engel, a couple from Helmut Huber’s lab in Düsseldorf, Germany, were already there. They had discovered Tom and Johann a year earlier! The first day of my visit was spent skiing at Copper Mountain and drinking local Colorado beer in large quantities. The consequence of jet lag, immune suppression, high altitude, and drinking was a week of high fever and illness; Johann and myself were incredibly sick. Johann’s wife, Jane, kept us alive in their house at Boulder with unforgettable kindness and care. Tom visited frequently from Denver and entertained us with news from the lab.

This incidence marked the beginning of a lifelong close friendship and many exchange visits between our groups. In the 1980s, Tom was awarded a guest professorship from the Deutsche Forschungsgemeinschaft (the German National Institutes of Health). Together, we studied the effects of electroencephalography (EEG) theta-wave biofeedback on meditation and anxiety in our Munich and later University of Tübingen labs, after observing a substantial increase in alpha-theta power during successful fear desensitization, strengthening Tom’s twilight theory of the meaning of parietal theta activity.

Tom constructed one of the first neurofeedback devices, which became the standard instrument in various European laboratories. This device, which enabled theta and alpha neurofeedback, stimulated our interest and that of many others, in the clinical-behavioral consequences of EEG biofeedback, leading to the now classical studies on epilepsy and attention deficit disorder, which later became the most accepted clinical applications of neurofeedback.
Tom’s superb intellectual spirit (the engineer) merged with a deeply devoted and positive emotional character (the psychologist) formed the driving force behind his success. Beyond that, we embrace, in everlasting friendship and admiration, Tom Budzynski!

References