This article summarizes projects and experiences the author shared with Thomas Budzynski over two decades of friendship and collaboration. Examples include a variety of sound and light stimulation systems, including Budzynski’s use of such devices in a clinical context; his Hemifield project; and subliminal audio techniques. The author discusses Budzynski’s role as director of research for SynchroMed, LLC, a small Seattle-based neurotechnology research and development company. His work there culminated in a two-university study of the effects of light and sound stimulation and GSR biofeedback on the academic performance of college students. Finally, some of Budzynski’s ongoing preliminary research ideas are described. These include high/low alpha ratios and their potential application to the enhancement of cognitive skills and Budzynski’s “brain brightening” concept, which used multifrequency flicker stimulation intended to evoke broadband shifts in electroencephalogram spectral activation.

I first met Tom Budzynski in early 1989 at a gathering hosted by Larry Paros (now the head of Neuro-Fitness, LLC, and a former op-ed columnist for the Seattle Post-Intelligencer). I had known of Tom Budzynski by reputation, having read “Tuning in on the Twilight Zone” in Psychology Today when it appeared (Budzynski, 1977). I was delighted to have the opportunity to meet him.

Larry invited me to his gathering because he knew that I had developed and released a programmable light and sound system in 1988, called the MindsEye™, which was intended for use by those seriously interested in experimenting with this technology. At the time of its release, a few preprogrammed light and sound stimulation systems had already appeared on the market (MC2™, Inner Quest™), and there were also one or two high-priced, manually controlled systems also on the market, such as the Synchro-Energizer™ produced by Denis Gorges. Unfortunately, most manufacturers were making a variety of claims for what the technology could accomplish, well ahead of any corpus of bona fide research, published or otherwise. This kept the technology firmly at the fringe of respectability for a number of years.

Tom and I quickly realized that we had a lot of interests in common, and he soon became a mentor and friend. We spent countless hours discussing his experiences with biofeedback over the decades, potential modes of action of light and sound stimulation on cortical processes, experimental design, and a host of other topics.

Not long after we met, I visited his office at St. Luke’s Medical Center near Bellevue, Washington, where he conducted talk therapy, biofeedback training, and his own private research using the then state-of-the-art Lexicor Neurosearch 24™ multichannel electroencephalography (EEG) system. To give a flavor of the sort of investigations he was undertaking, I should mention the Hemifield device, which he developed around 1987 with engineer Todd Stone. This consisted of a console with a variety of knobs, used to independently control the frequency and brightness of two red LEDs, set in the far left and right sides of an attached set of eyewear, while the user gazed at a dim green LED directly in front.

He hypothesized that because the far left visual field connects only to the right occipital cortex and vice versa, and the centers of both left and right visual fields connect to both occipital cortices, it should be possible to drive the two sides of the cortex at different frequencies. He eventually abandoned this hypothesis, though, because in his experience, this worked for only a few seconds before the two hemispheres “snapped back” (his words) to their initial state.

Tom had been using light and sound stimulation clinically since roughly the early 1980s, often as an aid for accessing repressed memories. He told me so many stories about his experiences with these techniques that I commissioned him to write a summary of research on light and sound and a clinical guide to using light and sound (Budzynski, 1991a, 1991b). In my opinion, these are still interesting and relevant reads for any clinician interested in using this technology.

One of Tom’s defining traits was an open-minded interest in a range of ideas often considered by his academic colleagues to be outside the mainstream. In fact, he was always most enthusiastic when exploring the psychological avant-garde. Yet his intellectual curiosity was always balanced by a keen desire to establish a basis for his ideas in the published literature and in clinical research. His knowledge of priming and subliminal technologies led to his bestselling The Subliminal Winner (with Denis Waitley), which was released on audio cassettes by Nightingale Conant in 1987 and is still in production (Waitley & Budzynski, 1987), as well as his well-known Revitalyzer (Budzynski, n.d.).
Tom was a keynote speaker at the Neurotechnology Forum, a 1-day conference on the topic we held in 1992, which also included Stephen LaBerge, Len Ochs, Anna Wise, and other experts in the field as speakers.

**SynchroMed, LLC**

In 1996, I established a small research and development company, with the goal of further refining the EEG-driven light and sound technology that we had developed for the Department of Education Small Business Innovation Research Phase I and II Attention Deficit and Hyperactivity Disorder studies with Harold Russell’s group, and to test a variety of novel protocols using light and sound stimulation. By happenstance, Tom had just completed a university contract and was between positions, and he agreed to take the position of director of research at SynchroMed, LLC, a role that he held for the next 2 years. We acquired a used Neurosearch 24 system and were off and running.

Using ourselves and our friends as initial test subjects, we began evaluating the EEG effects of binaural beats, dual binaural beats, multifrequency photic stimulation, differential effects of various light colors, band-limited stochastic clicks, and other potentially interesting light and sound stimulation protocols. This culminated, during the 2nd year, in a two-university study on the effect of alternating GSR biofeedback and light/sound stimulation on college academic performance. Helen Budzynski and then-master’s candidate Hsin-Yi (Jean) Tang coordinated the work at the University of Washington, while John Jordy ran the Western Washington University leg. Keith Claypoole, then director of the Neuropsychology Assessment Service at the University of Washington Medical Center, rounded out the group. This research was published as “Academic Performance Enhancement With Photic Stimulation and EDR Feedback” (Budzynski, Jordy, Kogan Budzynski, Tang & Claypoole, 1999).

Tom and I worked closely together in developing the protocol used in that study, while at other times I acted more as a sounding board, adding concepts at the “what if” level and finding related literature that he had not yet uncovered. For example, he was interested in the relationship between peak alpha frequency and IQ, and I’d bring him a theoretical paper from *Biological Cybernetics* on that topic. We were both consuming as many research papers as we could find, and I tended to split my weekends between the Health Sciences and Engineering libraries at the University of Washington.

He eventually developed a high/low alpha ratio model and accumulated preliminary experimental evidence for the ability of light and sound stimulation to shift that ratio toward higher alpha frequencies, a project that he worked on occasionally to the end of his life and that I hope others will see fit to carry further.

Tom was also developing his “brain brightening” concept during that time. The goal of this preliminary research was to utilize multi-frequency visual stimulation to elicit broadband EEG changes, to perhaps enhance cognitive skills, especially those affected by age-related cognitive decline. We evaluated several potential protocols at SynchroMed, using for example EEG changes from baseline and the Microcog test as metrics (Budzynski, 2000). Tom continued development of this approach after I had to shut SynchroMed down in 1998 (as it turned out, funding research and development can prove to be very expensive). It was sadly ironic that I had sent him a prototype employing a new brain-brightening protocol, which arrived the day after his unexpected death.

Tom and Helen moved across the Puget Sound to Poulsbo, where I visited them on occasion while still living in Seattle. In 2006, I moved to the San Juan islands, which at two ferry rides and a hundred miles is just a bit too far for a day trip, so I hadn’t seen nearly enough of either of them for the past half-decade. I will always miss the intellectual stimulation, camaraderie, and above all friendship of this pioneer, who always treated me as an equal, despite my lack of a PhD.

**References**


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