

# **Shutting Down the Noise**

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My 60 years of scientific investigation became focused on what the EEG could teach us about brain functions, and how we could utilize operant conditioning and functional knowledge to harness this information. I set out originally to study the basis of the concept of internal inhibition and found that a combination of a behavioral and neurophysiological approach best served my purposes by identifying and comprehending a basal forebrain inhibitory system that also seemingly serves as the mechanism projecting SMR activity to the sensorimotor cortex and resulting in its unique EEG manifestation.

This has led me to resist the growing emergence of theoretical mathematical imaging, human brain stimulation, and other new, sometimes too expensive technical toys. Years of studies clarifying the neurophysiology and behavioral correlates of EEG rhythmic patterns, have provided a valid understanding of their thalamo-cortical origins, and reliable concepts of what functions they reveal. Directed neurofeedback has contributed significantly to these advances by providing a straightforward means of assessing underlying patterns and interactions related to these functions, and providing for the possible need for modification through operant conditioning.

We are working today on a new software program and database with Thought Technology to provide specifically for the efficient and appropriate application of this approach. We have developed the empirical basis for this program in other studies that we were not able to review here.