

## **INDIVIDUAL and CULTURAL IMPLICATIONS of BRAIN ACTIVITY MAPPING and TRAINING**

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Feedback changes any system to which it is added. From engineering we know that adding feedback to a mechanical or electronic system endows the system with new and often surprising properties. When American culture received the first televised feedback from the cultural activity known as war [Vietnam, 1970s], the culture was rapidly changed by that feedback in ways that surprised and displeased the government. When individuals receive Brain Activity Feedback, they can change in ways which give them greater objectivity, increased self-honesty, greater self-responsibility, more choices, and a *degree of freedom* from cultural conditioning, all of which changes can have surprising beneficial consequences. With appropriate Brain Activity Training, individuals can improve their skills and their abilities, and they can learn both how to have new desirable experiences [happiness, joy, vigor, contentment, love, compassion] and how to stop having undesirable old experiences [like anger, hostility, anxiety, depression, paranoia]. Indeed, people can learn how to change the core dimensions of their personality, by changing their brain activity, just as a computer's basic characteristics can be changed by loading a new operating system.

By changing their brain activity, people can change their behavioral characteristics and they can learn how to regulate almost any process in their minds and their bodies. An individual with such a range of capabilities is far outside the range of the cultural norms. The appearance of such individuals, even in small numbers, will have an enormous impact on established cultural values and cultural institutions, and will rapidly redefine our cultural beliefs about what is possible and desirable, and what is normal. A culture of consciously self-regulating individuals will bear little resemblance to any culture as we know it, and it is beyond our current abilities to fully imagine.

We know from physics that harmonic oscillators brought into resonance will exhibit "emergent properties", which are new properties which cannot be observed or inferred by study of the individual oscillators. An example would be tuning forks. You could study thousands of tuning forks and never find one that spontaneously started humming if it was stopped. But if you put the ends two tuning forks into small holes drilled in a little block of metal you now have a coupled system which can be in resonance. Here's how: strike each of the two tuning forks that are stuck into the block of metal so they begin to hum (oscillate). Then touch one of them to stop it humming. As you watch and listen the stopped tuning fork will begin to hum. This is an "emergent property" i.e. the restarting of a stopped tuning fork. The two tuning forks become a coupled system when they are inserted into tight holes in the block of metal. This allows them to come into resonance, and when one of the tuning forks is stopped, the vibrations (oscillations) coming through the block of metal from the other tuning fork, which is still humming, will restart the stopped tuning fork. This is an example of an "emergent property." Automatic restarting will never be seen in individual tuning forks, - only in coupled systems of tuning forks, which can be in resonance.

As the oscillations in different regions of a person's brain are aided by the neurofeedback technology in coming into resonance, there will also be emergent properties of mind. As brain scientists who are using this powerful new tool of brain activity feedback, we must prepare to accept as real, to carefully study, and to communicate to our culture about these emergent properties, these paranormal abilities which we will be assisting our trainees to develop. And beyond the individual paranormal mind skills, there will also be new collective mind abilities. Brain activity feedback can become the nervous system which connects together the human brains, which are the neurons of the Global Brain. A superconscious awareness emerging out of a neural net composed of suitably interconnected human brains will constitute a new stage of human evolution. We can speculate about how many people need to be connected together, and in what types of connections, to create a higher order noetic entity. Our research will discover the enabling details, such as the minimum number of brains required, maximum allowable transmission delay times in the interconnection network, required

bandwidth of the interconnections, etc. Once we can reliably create higher order collective noetic entities, we can attempt to measure the effective IQ of the collective superconsciousness thus formed, and we can begin to wonder what intentions our new creations will have.

All sentient beings have intentions, including continuity of consciousness. How will the collective conscious awareness "feel" about its "neurons" disconnecting from the network and going away to separate homes at the end of the day? Would the collective awareness view the departure of its "neurons" in the same way we view a brain tumor or would it be more like parts of the "brain" going to sleep? Dolphins sleep only one hemisphere of their brains at one time so that the awake hemisphere can take care of breathing in the water without drowning and the other hemisphere can then sleep. After a while the hemispheres switch and the other one sleeps. Is this type individual action by the "neurons" (people disconnecting from the global network of human brains to go sleep or play) to the detriment of the global "brain" and the consciousness arising in the global "brain" even a comparable example at our current level of integration? Can we even talk meaningfully about such things? By considering a few detailed examples of the transformations possible with brain activity feedback, we will begin to see the likelihood, of changes so rapid and so vast as to quickly produce alternative futures beyond our present comprehension or imagination. We shall also see the likelihood and the means (through use of the technology) for a correspondingly rapid increase in our abilities of comprehension and imagination.

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