

THE ANTI GROUP

Cybernetic research towards the melding of spirit and machine: an audio-visual prothesis



The Anti Group strictly speaking is not a group, but a collection of individual psychophysicists working under the code name of TACC. Our primary concern is with the advancement of consciousness applied via the use of computers and audio-visual technology. Our last recorded works were concerned with ASB audio stimulation of the brain, particularly our pieces under the title "AAA" (Audio Alpha Activity—there is a more concise approximation of this test at the end of this article). These recordings are available as "Meontological Research Recording Record 1" and "Meontological Research Record 2—"Teste Tones". Presently, we are engaged in research towards record number three in the series, which will take our research further into the role of frequencies and rhythms, particularly the codification of rhythmic structures employed in Voodoo rituals to attain trance states. The main point of the work, however, will be based on the pioneering experiments conducted by Michael Bertiaux, currently residing in Leogane, Haiti, where he works with "La Couleuvre Noire". Bertiaux has developed a system of esoteric engineering—a form of metamathematical reality. He has also constructed machines capable of receiving impulses from trans-Neptunian areas of space. The Meontological series is based on Bertiaux's neologism MEON. Ontology is the science of the metaphysics of being—MEONTOLOGY, therefore, goes beyond this to a fourth-dimensional extension of parapsychology, and concerns areas beyond current maps that seem to have existed anterior to modern man. Its references to the expansion of consciousness make it all the more relevant in light of ESB developments, BFT, Cyberspace, and virtual reality.

It is interesting to note that as early as 1970 David Rorvik notes that:

"... it is possible to stimulate selected parts of the brain sequentially to create various states of mind. This suggests that artificial experiences might eventually become available to the consumer. It is possible to visualise 'Dream Machines' that would replace television and cinema. Even the average household might one day be equipped with such a device: a small console linked to a central computerised memory or experience bank connected to the consumer's electric terminals. Then, the tuned-in consumer would only have to dial the code number of the desired experience..."

The same sort of "Library of Vicarious Living Experiences" visualised for the turn of the century has been imagined by Arthur C. Clarke at the end of his book, "Profiles of the Future". Clarke states that:

"... artificial memories, if they could be composed, taped, and then fed into the brain electronically ... would be a form of vicarious experience far more vivid (because of its affectation of all the senses) than anything that could be produced by the massed resources of Hollywood. They would indeed be the ultimate form of entertainment—a fictional experience more real than reality..."¹

Robert Anton Wilson notes in his article "The Sexual Domestication of the Four Brains Biped", that the fifth circuit of the brain defines "Cybersomatic Intelligence"—the capacity to expand, integrate, rewire and hedonically engineer all the previous imprints in terms of direct bodily sensation. The first scientific study of this circuit. "Cosmic Consciousness" by psychiatrist R. M. Bucke, proposed that this was a new evolutionary development, not a pathology, and seemed to be statistically increasing in recent centuries.²

In fact, Philip K. Dick in his short story, "We can remember it for you Wholesale"³, recently made into the multimillion dollar epic, "Total Recall", is totally concerned with the concept of memory experience brain implants in future societies. "A tangible reality programmed by technicians. An economic variant for those who cannot afford the real thing."

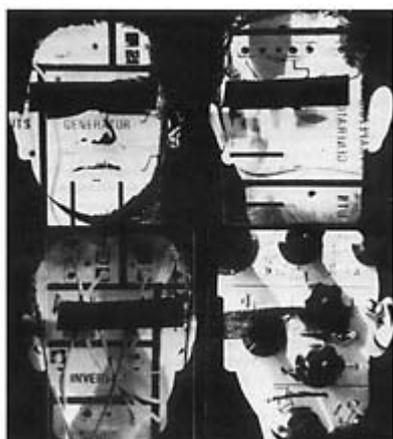
The idea of memory stored within the brain goes back to classical times. Stimuli falling on the sensory organs produce disturbances in the brain, which cause the perception of the stimuli. The disturbances leave behind traces, minute changes in the structure of the brain. As a result of these changes, brain activity becomes more likely to follow the same paths again in response to stimuli that are similar, or whose traces are intermingled or "associated" with those of the first stimulus.

In the 17th century, Descartes proposed a hydraulic version of this theory based on the assumption that nerves are hollow and conduct a flow of "animal spirits". Sensory nerves contain delicate threads attached to valves within the brain, the opening of which releases animal spirits which pass through the nerves to the appropriate muscles. Descartes in fact invented the concept of the reflex: animal spirits are "reflectal" in the brain, and pass back to the muscles.⁴ Descartes' ideas are echoed in modern theories of Synaptic Modification.

Pavlov's famous research in conditioned reflexes greatly strengthened the traditional concept of "traces". Pavlov himself was reluctant to claim that reflex arcs depended on specifically localised traces within the cerebral cortex, because he found that the conditioning could survive considerable surgical damage to the brain.⁵

Modern theories usually rely on computer analogies, the central model of which is coding, storage and retrieval. Karl Lashley considered the possibility that memories might not be stored inside the brain at all. He suggested that rather than localised traces, there must be multiple memory traces throughout the entire functional area of the brain. He thought that this indicated that;

"... the characteristics of the nervous network are such that when it is subject to any pattern of excitation, it may develop a pattern of activity reduplicated through an entire functional area by the spread of excitation, such as the surface of a liquid develops an interference pattern or spreading waves when it is disturbed at several parts."



He suggested that recall involved some sort of resonance among a very large number of neurons.⁶ These ideas have been carried further by his former student Karl Pribram, in his proposal that memories are stored in a distributed manner analogous to the interference patterns in a hologram.⁷

Analogous experiments have shown that specific memory traces cannot be localised. This has led to the seemingly paradoxical conclusion that "memory is both everywhere and nowhere in particular". Not only have the hypothetical memory traces proved to be spaciouly elusive, but their physical nature has also remained obscure.

The idea of specific RNA "memory molecules" were fashionable in the 1960s, but have now more or less been abandoned. The theory of reverberating circuits of reverberating electrical activity giving a kind of "echo" may help to account for short term memory over periods of seconds or minutes, but cannot plausibly explain long term memory. The most popular hypothesis remains the old favourite that memory depends on modifications of synaptic connections between nerve connections in a manner still unknown.

The electrical evocation of memories has been conducted by Wilder Penfield. Stimulation of the secondary visual cortex gave rise to complex recognisable visual hallucinations, e. g. flowers, animals, families, people and so on, and in epileptics when some regions of the temporal cortex were touched—some patients recalled appropriately specific memory sequences—for example, an evening at a concert, or a telephone conversation. The patients often alluded to the dream-like quality of the experiences.⁹

The electrical evocation of these memories could mean that they were stored in the stimulated tissue as Penfield initially assumed; in that it could mean that stimulations of that region activated other parts of the brain¹⁰ that were involved in remembering the episode—but it could also mean that the stimulation resulted in a pattern of activity that tuned into the memory by Morphic Resonance.

Penfield, like Lashley and Pribram, gave up the idea of localised memory traces within the cortex in favour of the theory that they were distributed in various other parts of the brain instead, or as well. The advantage of this hypothesis is that it accounts for the recurrent failure of attempts to find these traces. The disadvantage is that it is untestable in light of formative causation. The elusiveness of memory traces has a very simple explanation—they do not exist. Rather, memory depends on morphic resonance from the patterns of activity of the brain. We do not carry all our memories inside our brains. If we are influenced by morphic resonance by particular individuals to whom we are in some way linked or connected, then it is conceivable that we might pick up images, thoughts, impressions of feelings from them either during waking life, or whilst dreaming in a way that would go beyond the means of communication recognised by contemporary science. Such resonant connections would be possible even if the people were thousands of miles apart.

Is there any evidence that such a process actually happens? Perhaps there is, for such a process may be similar to, if not identical with the mysterious phenomenon of telepathy.¹¹

There is a wealth of anecdotal evidence for the occurrence of telepathy¹², many people claim to have experienced it themselves¹³, and it has been detected in many parapsychological experiments.¹⁴ This evidence, of course, is much disputed, largely because from the conventional scientific point of view, telepathy, like the other alleged phenomena of parapsychology is theoretically impossible. By contrast, in the context of the theory of morphic resonance, it is theoretically possible.

On the other hand, Carver Mead¹⁵ is using silicon as a medium to design nervous systems—the networks of neurons, axons and synapses that shape sight, hearing and touch. Silicon would come to its senses—or more precisely, the senses would come to silicon. Traditional computer chips are not up to the challenge of replicating the senses, which, if you think about it, only makes sense because we do not see and hear like computers do. By contrast, Mead's chips are analogies of the real thing. He has crafted synthetic neurons into a silicon retina that can see, not like a movie camera, but like an eye. He has designed a silicon cochlea that hears not like a tape recorder, but like the ear. In fact, it is now being considered for cochlea implants for the profoundly deaf.

Other neural network chips emulate memory—what is more, these chips do not need to be programmed—they can learn from experience.

"We can already do some pretty amazing things", says Mead. "This gives you a way to deal with the natural world ..."

Even today, some of these neural network chips can do things that would stump a CRAY supercomputer. Even if digital computers always remain the high-speed calculator of choice, just as movies and television have become the mirrors of culture and society, the emerging generation of neural netware may become the new mirrors of the senses and of thought.

What does the future of computing look like, then? The computers are based on biological models of thought instead of computer models!

These are not speculative questions—these are the questions this new design metaphor creates.

References

¹ "As Man Becomes Machine"—David Rorvik: Abacus 1975.

² "Neuropolitique"—Timothy Leary

³ "The Preserving Machine"—Philip K. Dick: Pan 1972

⁴ "From Darwin to Behaviourism"—R. Boakes: Cambridge University Press 1984

⁵ ibid

⁶ ibid

⁷ "Languages of the Brain"—K. H. Pribram: Prentice Hall 1982

⁸ "Scientific American"—Boycott 1965

⁹ "Speech and Brain Mechanisms"—W. Penfield and L. Roberts: Princeton University Press

¹⁰ "Strategies in Studying the Cell Biology of Learning and Memory"—S. P. R. Rose

"Neuropsychology of Memory"—L. N. Squire & N. Butters: New York Guilford Press

¹¹ "The Presence of the Past"—R. Sheldrake: Fontana

¹² "Telepathic Impressions"—Stevenson: University of Virginia Press

¹³ "Journal of the American Society for Psychical Research"—Palmer

¹⁴ "Handbook of Parapsychology"—B. B. Wolman

¹⁵ "Analog VLSI and Neural Systems"—Carver Mead

TAG COMMUNICATIONS AN EXTENSION OF THE CENTRAL NERVOUS SYSTEM

THE OCCULTATION OF TECHNOLOGY

Our work could not be summarised by any singular tag or label, areas of diverse yet unconnected chords are integrated into the TAGC Research Project.

If we were to use any singular term to describe our work we would employ the term devised by Michael Bertaux, his neologism "Meontology". Basically, Ontology is the science of the Metaphysics of being, "Meontology" therefore goes beyond this to a science of "Non"-existence and states of "Non"-being, a magical, 4th dimensional extension of Parapsychology to a realm of measurable and controllable phenomenon. A 21st century technological and parapsychical Alfred Jarry, our work is a gradual research programme, investigating the possibilities of these ideas by blending the knowledge of ancient control systems like magic in its profane science, with the 3-dimensional material of technology. We aim to illuminate our own and other peoples' works in this area.

In terms of sound output we are trying to approximate and create audio techniques that affect the being in a physiological, psychological and Meontological sense.

SONOLOGY FOR THE SYNAPSE

Accelerated Audio Alpha Activity was designed as an instrumentation of transformation through applied concentrative technique, AAAA is the synthesis of an audio formula, not a musical composition. The formula is composed of music sound syllables and specific vibratory pulses, whose inherent properties encourage a concentrative state opening the psychic fields, and instilling a temporary alteration of consciousness under certain conditions.

The patterning of these mutable syllabic repetitions encourage brain waves to pulse in the Alpha-Theta region. The region of Alpha and Theta are the frequencies associated with dream-like hypnotic states. By producing an Alpha/Theta ganzfeld (a specific stabilized stimulus), AAAA magnifies these frequencies, enabling them to take predominance in all areas of the brain (areas which are normally utilising a variety of frequencies associated with day to day consciousness), the most profound effect occurs when Alpha and Theta take precedence in the visual cortex, for this reason we recommend the use of both headphones (to enhance the Alpha stereo patterning) and the simultaneous use of loudspeakers (to enhance physiological vibratory transmission, sit near to speaker, increase bass response and volume). We also suggest the simultaneous use of either stroboscope or Dream-machine, flickering/flashing between 7–13 pulses per second, this will encourage Alpha in the visual cortex when eyes are closed, though simply closing the eyes will enhance the experience, Alpha response increases with closed eyes (although we leave it to the listener to find their own maximum concentrative form). Listeners may also experience audio hallucinations created by the re juxtaposition of the syllabic repetitions, the nature of which differs between individuals, the phonetic alterations also have no language barrier, though their source is the English language.

The techniques employed by TAGC in the construction of AAAA are drawn from both occult and scientific sources. In recent years science has been concerned to find out whether restriction of awareness to a repetitive stimulus results in expanding inner perception, a paradox of "Change through Repetition".

Experiments show that when a person is subjected to a short cyclic repetition of external stimulus, the subject loses contact with the outside world and simultaneously establishes contact with his inner world. The achievement of this inner concentrative state has been practised by Indian Tantrikas for centuries and recent scientific investigations have revealed this practice to be a direct method of inducing a 'High Alpha State'. During the practice of Kundalini Yoga, attention is focussed in a state of 'One-Pointedness' by means or repetitive stimulus, it is repetition of sounds that ultimately incur the creative Alpha state. In consequence, experts conclude that meditation is neither 'esoteric' or 'Mysterious', but is a 'practical technique' which uses experiential knowledge based on the actual mechanisms of the nervous system and hence is within the scope of practical applied technology.

