

## *Contemplating "Meart – The Semi Living Artist"*

Paul Vanouse, 2006

Is it alive? Is it intelligent? Is it creative? *Meart: The Semi-Living Artist* is a concrete focal point for these grand, gnarly epistemological questions surrounding contemporary neuro-science as well as the radically interdisciplinary study of ALife. How one answers these questions is practically a litmus test for world-view. In the case of "Is it intelligent?" a "Yes" tends to imply "reductivist", "No" tends to imply "essentialist", and "semi" ... places *Meart* in a vast, not easily definable, middle ground.

*Meart* is an apparatus composed of varied electronic and biological components, some local (at the exhibition site) and others remote. In the gallery, a pen-wielding robotic appendage sends video images to and receives impulses from an in-vitro culture of rat neurons via the internet. The neurons are housed in Dr. Steve Potter's neuro-science engineering laboratory at Georgia Institute of Technology. The simplified process follows. Video images (generated at the exhibition site) are sent to the laboratory. There, a device called a "Multi-electrode array" stimulates a network of thousands of neurons grown across the array. The individual array elements are capable of applying variable level electrical stimuli to correspond to pixel values of the incoming video image. Then the array captures minute electrical impulses generated by the neurons and sends this information back to the robotic appendage that translates these signals into coordinates from which to begin drawing an image. The progress of the drawing is monitored and compared with the original video image. Data representing this difference is then sent back to the lab to complete the feedback loop and this process continues until a threshold of marks on paper is reached.

Artist and theorist Simon Penny once stated that one goal for his artwork is to produce a "highly charged ambivalence" in the viewer. Caught between contradictory truths, the viewer is forced to re-evaluate his/her own preconceptions and beliefs. Similarly, *Meart's* creators have cleverly designed their thought-provoking apparatus to maximize cognitive dissonance. Its authoritative complexity simultaneously convinces us of its technological reengineering of cognitive processes, while also calling attention to just how far it has strayed from generally held conceptions of life, intelligence or creativity. *Meart* is the ultimate Cartesian dualism – a machine body completely removed from its brain and to complicate matters even further the brain has been reconstituted in vitro from its cellular components.

To view *Meart* is to witness a collage of contradictions. It offers us the actual biological substance of the thinking brain yet out of its biological context and system of developmental ordering. It offers us seeming proof of its responsiveness by two way signaling yet begs the question "is it merely a closed circuit in which captive neurons simply return electrical signals to the 'arm' that were previously sent to them via the camera?" Are the differences between the image sent and the image drawn by the arm merely low-level "noise" in the system or even configuration inaccuracies in the complex process? Or conversely, are the slight variances and exaggerations in the image sent to the neurons and the image drawn by the arm evidence of complex neural network beginning to form in the plated neurons?

What is visible to us as *Meart* in the space of public display is a visualization of and/or window into ongoing experiments occurring thousands of miles away in Dr. Potter's laboratory. The outcomes are

neither pre-defined, nor are their meanings fully understood. Indeed, any of the aforementioned skeptical questions place us as viewers firmly in the midst of vigorous scientific debates—a fact underscored by the “real-time” nature of the *Meart* performance.

In a larger sense, *Meart* is a window into our cultural moment. The emerging complexity of the internet has become a metaphor of the brain and vice versa. Psycho-pharmaceutical adverts promise us greater control over our own actions as if they were previously outside our influence. Electronic data can be transmitted thousands of miles in a fraction of a second, enabling managers on one continent to transmit orders to producers on another. Academic discourses describe our trajectory as of becoming “post-human” or “cyborg” positing a changing definition of subjectivity and a disintegrating notion of organic wholeness. Similarly, popular writings echo these ideas as they explore scenarios incorporating electronic implants, mind-enhancing drugs and artificial intelligence.

Like a work of science fiction, *Meart* stimulates broad inquiry into our own lived contexts. However, unlike sci-fi, it is not simply a representational text, but also an operational one. It cannot be dismissed as a mere illustrative flight of fancy, but must be interrogated as a concrete example. *Meart* is an “operational fiction”—a cyborg of representation and reality, art and science, and of course flesh and transistor.

MEART – The Semi Living Artist was developed by SymbioticA Research Group in collaboration with THE Potter Lab  
SymbioticA Research Group: Guy Ben-Ary, Philip Gamblen, Iain Sweetman, Prof. Stuart Bunt & Oron Catts.  
The potter Lab: Dr. Steve M. Potter, Douglas Bakkum