THE DELBRUCK PARADOX
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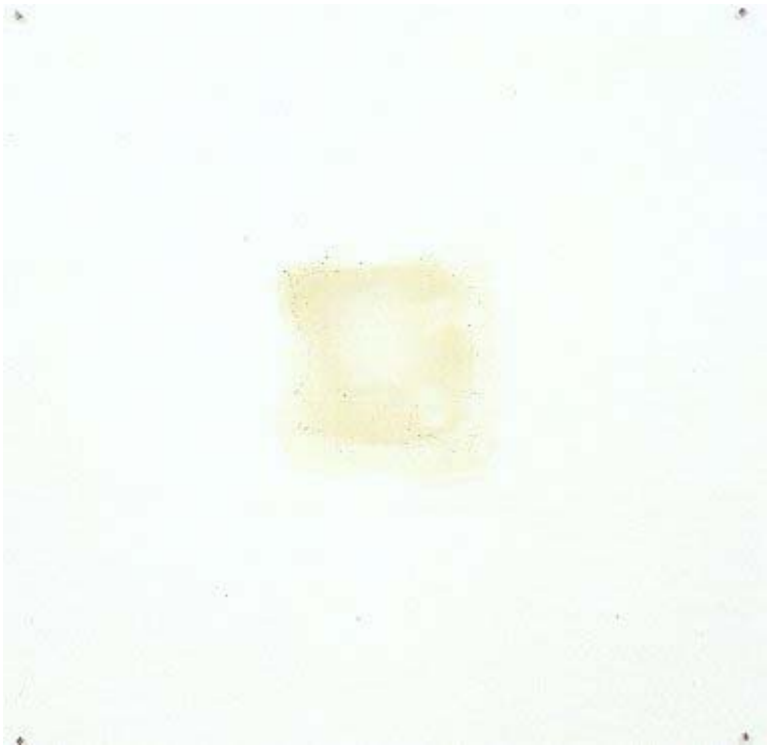

Oncogene, 1992, Agar X-gal, PITC, ecoli TB-1, synthetic

We are the first generation of artists to face the problem not of mortality, but of immortality. With the recent advances in biotechnology and computer science for extending life, artists of the 21st century are faced with both a leveling of artistic significance, and an expanded period of time for historical context. Civilization will need to create from this dilemma a less mechanistic world view than the previous industrial revolution has encouraged.

INTRODUCTION

No one dies anymore. According to Halley (1990), since the advent of photography, the dead have stayed on with us. Marilyn Monroe may well be leading a better life today as an ageless screen legend in artificial space than she would have enjoyed as an aged recovering alchoholic.

Given that we are already living in cyberspace (Benedikt, 1991) and in various forms of virtual reality, is it important that we should still try to distinguish between our "natural" and "artificial" lives? Some would postulate (Dietch 1992) that placing greater emphasis on our "artificial" lives gives the human species greater freedom and potential. This stance belies a viewpoint which still clings to the notion that life and matter may ultimately be explained in the simple terms of newtonian mechanics. A more enlightened viewpoint (Schwartz 1992) can see relativity theory as the natural conclusion of newtonian mechanics, and suggest that molecular biology is beginning to prepare us for a very different way of looking at life.

Max Delbruck, a founder of molecular biology, thought it paradoxical (Schwartz 1992) that the same matter as the matter of physics could behave fully in accordance with the laws of physics, and yet could not be accounted for by those same laws of physics. The answer, Delbruck felt, lay not in the continued snipping away of DNA fragments into common

particles, but in the recognition that by immersing oneself in a swamp of living tissue one would be able to observe new paradoxes and new laws of nature rising to the surface.

METHOD AND MATERIALS

We have recently applied this same experimental outlook to painting. With a few simple laboratory procedures a suite of paintings were grown from single-celled organisms which had been genetically altered to produce colored enzymes, or protein combinations that reacted with genetic trace dyes. The work was completely transparent when painted, a sensation rather like trying to paint on ice with melted snow. After a period of 16—18 hours, the growth was arrested by the removal of moisture from the plate. Air was sealed out with a synthetic resin, and the work entered a period of stasis.

The work, while stable, is neither "dead" nor "finished". It exists in a state of suspended animation, and at any time the resin might be removed, the plate scraped, fed, and placed in an incubation room to grow to a new stage of development.

The subject matter of the first suite of paintings was chosen to reflect various states of health; alive, immune, deficient, and succumbing, all are states as applicable to the bacteria as to humans. Next, paintings were grown of embryonic sections of early mammal developmental stages, gastrulation, paraxial mesoderm, and visceral arches.

RESULTS

The results, as Delbruck might have predicted, have been both revealing and paradoxical. Science may be the last remaining taboo in art. Many viewers report that they go to art to "get away" from science and technology, while others have such weak scientific educations that they assume that anything dealing with science must have some mathematics involved and they will therefore never be able to understand the work.

But even viewers who have never seen the work before, who have no prior knowledge as to the media, and who cannot recognize the subject matter, comment that "something is different here", and respond with a consuming curiosity to seek the answer.

The other odd result, even for the artist, is that the imagery is so alive that the mind seems unable to complete a topography of the piece. Memory proves unreliable as sudden appearances of new phenomena reveal themselves to be preexisting conditions when the painting is compared to the transparencies.

DISCUSSION

What kind of work does an artist produce with the burden of knowing that the completed work will be with us for all of time? Current technology renders Matthew Barney as immortal as Michelangelo. With a greatly extended lifespan, any heroic artist will now outlive her achievement. What avocation is meaningful when faced with the prospect of 135 more years? Or the prospect of continually renewed youthful bodily functions for the foreseeable eternity? What value then is material success? Or a place in history? Why bother to have children?

Following the example of Delbruck, it seems reasonable that the future will be no more "natural" than "artificial". Instead, the way we now create artificial objects will probably become more organic, and conceptual thought will become more integrated into everyday

perception. Many preconceived misconceptions are bound to fall away, leaving us with a civilization less humanocentric than the present western tradition. We must do away with our protein chauvanism if we expect to infect the world with art.

SOURCES

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Courtesy of Thomas Solomon's Garage, Los Angeles