

from the author of

MEGATRENDS

JOHN

high tech high touch

TECHNOLOGY AND OUR SEARCH FOR MEANING

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Visualizing the Inner Body Microscopically

DNA IMAGING

Molecular photography captures a world invisible to the naked eye. Today high-tech imaging machines have opened the mysteries of the human body, allowing visual access to microscopic elements—DNA, molecules, and cells. Many specimen artists are delving into this new visual world, some with political motives and some because of the wonder it inspires.

As the double helix becomes a turn-of-the-century icon, one of the favorite new images of these artists is the DNA “fingerprint,” which looks like supermarket bar code meets IBM punch card. According to artist Gary Schneider, whose recent work includes his *Genetic Self Portrait*, DNA fingerprints are not biology but rather information. Two works of his high-tech, self-portrait installation are black-and-white DNA fingerprints toned slightly to a muted red, called *The Mitochondria DNA* and *Gene SRY*.

Schneider, who has been “seduced” by the microscope since high school biology class, grew from painting, performance art, and filmmaking to scientific photography in the late 1980s. After conceiving the idea of this genetic portrait late in 1996, he sought out scientists who would work with him to create what would become fifty-five images that range in size from a tiny three- by four-inch image of a Y-chromosome to a huge nine- by seven-foot mitochondria gene. The tones of the photographs, which he carefully crafts in the darkroom, are subdued, earthy, and less adorned than the more common enhanced and manipulated scientific images. There is a straightforward honesty to his work. His “imperfect” specimens—a crimped gray facial hair, junk DNA—detailed and enlarged, are arrestingly human.

Also included in his portraits are those parts of the human body that are frequently used in forensic sciences. His show included photographs of his hands (the old-fashioned fingerprint), his teeth (dental record matches), retina (new laser identifying technologies), blood (murder scene), and sperm (sexual assault cases).

Schneider, who has an "anxious excitement" about the new technologies, wonders how this new information will be used in the future. He sees this work as "a kind of preparation" for the future as these technological discoveries become more integrated into our lives. "I'm not a political animal, particularly. But I feel like all aspects of this new world need to be discussed all the time," says Schneider.

Bill Ewing, director of the Lausanne, Switzerland, Musée de L'Elysée (which will devote the year 2000 to themes of the human body), understands the power of applying an artistic context to a highly politicized subject. In 1998 he asked Schneider to re-create the genetic self-portrait installation planned for the Santa Barbara Museum of Art. Ewing felt that the show would set a context for a referendum on agricultural genetic engineering that was up for vote in Switzerland. The show was widely covered in the Swiss media, and the pro-genetic engineering referendum passed with a cautious yes.

For Schneider, exposing his genetic material so dramatically and publicly addresses a recurrent political theme in his life. Raised in South Africa, the specter of an oppressive police state has always been with him. Much of his work addresses that anxiety. Genetic privacy is difficult to protect, so "why not just throw your DNA out there?" He continues, "It's a totally exposing portrait from the fingerprints of my hands all the way to my semen." And while average gallery visitors may see Schneider's portrait as one that could very easily be their own, to scientists nothing could be more private or more individual. "As a scientist," said Harvey Herschman of UCLA, "I'm familiar with each of these techniques—the retinal scans, DNA sequencing, chromosome swatches, micrographs of cells. Despite the fact that I'm familiar with all those techniques, the idea of representation of all of these things from one individual had never hit me. This is like standing naked but raised to the highest power. Not only are you naked at the surface, but you're naked all the way through from the level of macroscopic down

to the level of atoms. Each observer sees Gary at every level of his body. To me it would feel like—if it were mine—I was being exposed. That's the sort of emotional response I got from this work."

His exposed DNA actually became a concern. While Schneider was in the process of creating the work, his backer worried Schneider might lose his health insurance if he pursued the idea of looking for a hereditary cancer susceptibility gene (due to his mother's death from the disease). Schneider felt it was all part of the process and went ahead, but the results of an abbreviated test were inconclusive. With respect to genetic discrimination, Schneider has almost literally become the canary in the mine.