# Simon Penny,
# "Embodiment in Digital Cultures"

The twentieth century saw art move from the canvas to the computer. Digital technology earned the status of paint, plaster, and pencil and became a mode of artistic expression. Since its birth, the digital arts have become a major influence in the art world and society as a whole. Graphic design and computer gaming are the two most common forms of digital art that have captured the attention of people in and outside of the artistic community.

The influence of computer-generated art on society awaits in-depth exploration. In April 2003, Simon Penny, an active digital artist, theorist, and professor of Arts and Engineering at the University of California, Irvine, spoke about the relationship between the digital arts and society at Cornell. Addressing Cornell faculty members and students, he emphasized the need for society to seek out the possibilities and intervene in the evolution of the digital arts.

Following an introduction by Franklin (Buzz) Spector, Art, Penny showed a video clip of the Sound Activated Mobile (SAM), a digital artwork made in the 1960s. SAM was a robot designed to move in response to movements around it. It was a piece of biomorphic technology, or a computational creation that resembles a living organism in appearance and behavior. A computer and two radar instruments dictated SAM's behavior. While the twenty-first-century audience chuckled at the video's outmoded discussion of SAM and the digital arts, Penny asserted that the robot is historically significant. SAM represents the second generation of computational and electronic artwork that still failed to garner respect from technological and artistic critics. According to Penny, SAM proves that "there is already half a century of intelligent electronic artwork behind us…though the art community has not documented its history."

Throughout his lecture, Penny demonstrated that computational art practice is not limited to the making of pictures. After discussing what SAM means to the genre of the digital arts, he showed a second video clip of a biomorphic creation. The audience watched transfixed as Dutch sculptor Theo Jansen's *Strandbeests* shuffled across a beach. Jansen builds the large animal-like creatures out of electricity tubes and empowers them through digital genetic programming—a computerized equivalent of the evolutionary process. Penny used Jansen's work to show that the digital arts means much more than computer animation and virtual reality games.
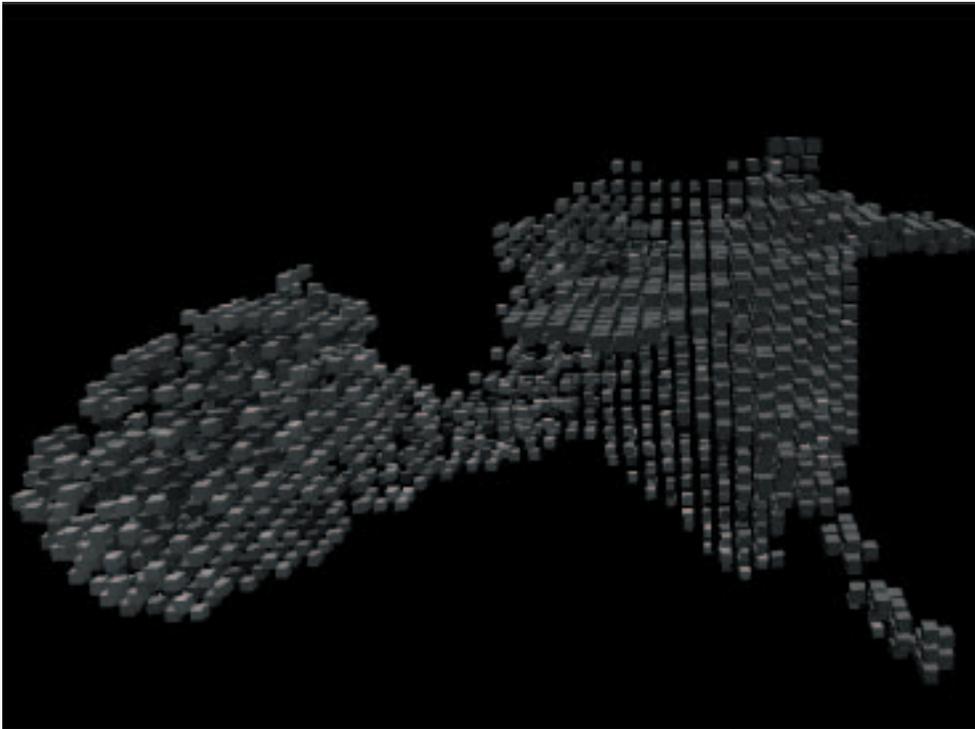
Penny championed the computational arts as a legitimate cultural practice that unites such disciplines as visual art, biology, computer science, and mechanical engineering. He argued that digital art possesses the power to impact society, saying that, "We are in the middle of a profound moment of cultural change. New cultural practices are emerging so fast that we can't keep track of them. … We're looking down the barrel of a range of new cultural practices that derive from science, art, and more."

Society needs to address the digital arts as a unique art form, according to Penny. The genre's ability to offer insight into the manipulation of behavior gives it power that most types of visual art do not posses. Computational creations often emulate real-world objects; for example, the digital keyboard mimics the wood and ivory piano. Penny wondered how society can influence the evolution of an artistic expression that bases itself on the manipulation of behavior. He asked, "Who is training people to do work in this new technological environment," and suggested that society needs to help the digital arts blossom into a rich and complex mode of expression. Penny is an advocate for the re-evaluation of artistic traditions to determine what kinds of art can better modern society. He proposed that universities take the lead in investigating the possibilities of digital art. With the assistance of academia, the computational arts can truly flourish.

Although Penny proclaims the power of the digital arts, there are many things that a computer cannot do. Penny acknowledged that the computer is oblivious to many of life's nuances, and reminded the audience that the "brain" of an electronic machine is limited to understanding linear codes of alphanumeric characters. He questioned attempts to build computational tools to remedy social needs and wondered whether the digital interface can deal with all social functions. Humans possess power that computers do not; people should continue to practice trades that require the dexterity of the human hand and mind rather than delegate all jobs to computational instruments. Urging people not to regard the computer as a cure for all of society's problems, Penny declared, "There are a whole lot of human activities for which the computer is no good."

Penny is internationally renowned for his contributions to the digital arts. He finished his lecture with a video clip of one of his best-known biomorphic creations, *Petit Mal: An Autonomous Robotic Artwork*. The robot, which resembles a bicycle, reacts to the movements of people in its immediate environment. It follows its viewers around an open space but backs away when they try to touch it. With *Petit Mal*, Penny endeavors to distinguish the depiction of three-dimensional digital creations from their behavior. While robots are often thought to be stoic and unapproachable, Petit Mal charms its viewers by pursuing and then shying away from them.

The goal of art is not to inform or to display, but to generate inquiry, Penny concluded. Before a work of art can promote thought, however, it must be perceived. Penny urged faculty and students "to get to know the digital arts," for only by becoming intimately familiar with the genre, "can we appropriately integrate it into society."

*Sheila Yasmin Marikar '05*

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**The Traces Project.** In Traces, a custom multi-camera infrared machine vision system generated a real-time body model of the user. This body model functioned as a three-dimensional "paint-brush" in a CAVE immersive environment.