Early Influences
Catalog essay by Scott Snibbe
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In 1980, when I was ten years old, I attended a special daylong computer class at my California middle school. Awaiting us were Apple II+ computers, for which our instructor gave us a short course in the Logo computer language. Soon into the lesson, each of us created a glowing orange triangle on the screen, simply by typing short instructions. The surprising experience of translating text into image, and the pure, intense glow of that orange left me dumbstruck. At that moment I knew I wanted to make art with computers. A few months later, with hands numb from the woodworking jobs my father gave me to help raise the money, I purchased a computer and opened up the only documentation that came with it – the Applesoft Basic Programming Manual.

The only thing you could do with a new Apple computer straight out of the box was write a program. When you turned it on, a white rectangle flashed in the upper left hand corner. By typing "POKE -16297,0", you could turn the screen into a graphical display and, with Applesoft Basic commands, create shapes of that same orange from my first programming lesson, as well as purple, green, blue and red. I was a visual thinker, but the power of computers led me to learn at least half a dozen textual programming languages before I was eighteen. Using these languages, I embarked upon a long series of experiments in dynamic color abstraction and interactive graphics, though at the time I didn't have these words to describe what I was doing.

One evening when I was fifteen, my father insisted that I come with him to see one of his favorite movies, which was playing at a French library an hour away from our home. In the back room of a building filled with French books, a 16mm projector and a dozen folding metal chairs were set up in front of a small roll-up screen. When the lights went down, a black and white film of incredible poetry and mystery played. Hands plunged through liquid mirrors, gravity responded to emotional states, and a man effortlessly arose from his death, like a flower blooming in time-lapse photography. The film was Jean Cocteau's *Orpheus* (1949). It awakened me to the possibility of creating external representations of our own immaterial, internal worlds through cinematic effects. I had seen *Star Wars* and *Jaws*, but Cocteau's film had a deeper impact – revealing that everyday reality and meaning could be profoundly, revealingly, and suddenly inverted by breaking the laws of nature.

As an undergraduate at Brown University, I dedicated myself to the combined pursuit of art, cinema, and computers, and majored in both experimental animation and computer science. In my animation courses, I was introduced to two of the greatest experimental filmmakers of the 20th century. Both were pioneers not only in cinematic technique, but also in form and meaning. Oskar Fischinger pioneered purely abstract cinema. His films, such as *Study Number 7* (1931), were composed only of simple black and white forms. Yet while watching these films, I would become overwhelmed with emotion and a heightened sense of awareness, similar to the experience of hearing great music.

Similarly influential to me was Len Lye, who gave expression to a new genre of "direct" or "camera-less" animation. In his 1958 masterpiece, *Free Radicals*, Lye scratched marks through the emulsion on each frame of 35mm film, revealing the clear acetate below. Lye casually used his entire body in the process, rapidly moving down long strips of film. In the final edited film, these scratches became three-dimensional forms that twist and transform, fleeting in and out of existence to the accompaniment of syncopated African rhythms. The forms evoke actual "free radicals" – reactive molecules that are capable of causing large-scale biological damage. Lye's work portrays the infinitesimal entities that are ultimately the cause of both his and our own bodies' destruction.

I strongly wished to continue in the tradition of these two masters in my work with computers. Although my facility with programming languages had come a long way since Applesoft Basic, I was still frustrated by the distance between my body and the movement and imagery on the computer screen. One night, while laboring to program part of a short film, I wished for a way to create a more human quality to the movement. At that moment, idly moving the mouse, I realized that the cursor was the only part of the screen that exhibited any trace of life. For the first time, I focused solely on it – its movements were living, complex, and, looking at my colleagues' monitors, unpredictable. I saw that the mouse and the cursor were the media through which the liveliness of one's body could be represented on the computer.

With this insight, I began working on *Motion Sketch* (1990), which used the mouse to translate the movements of a viewer's hand into the movements of abstract forms and colors on the screen. *Motion Sketch* not only allowed viewers to make animations directly with their bodies, but also layered, recorded, and replayed their movements in short, one-second loops. These loops revealed the complexity of viewers' movements. The resulting "motion paintings" were the clear descendents of both Lye, who manipulated film directly with his body, and Fischinger, who established a language of abstract rhythm and animated counterpoint. My program used digital technology to transform these types of abstract animation from a recorded medium into a performance medium.

For my next project, I wanted to expand the use of this body-centric animation tool from solo performances to duets, trios, or even symphonies. I realized that the same networks that were transmitting emails between my fellow students could also transmit motion, and created *Motion Phone* (1995), a collaborative version of *Motion Sketch*. This new work became a social experiment to determine whether people could communicate solely through real-time, dynamic abstraction. I already knew such communication was possible between a filmmaker and an audience. I found out that the same was true among the general public, when I first showed *Motion Phone* at Ars Electronica 1996. This experience also revealed to me that networked, conceptual experiments could be presented as contemporary art.

This first presentation of *Motion Phone* also left me partially unsatisfied. I realized that viewers engaged most works in a gallery using their entire body. *Motion Phone*, however, required viewers to sit down and become lost in the interrelationship of their hand, the mouse, the screen, and other viewers. Their sense of the rest of their bodies disappeared

while consumed in this on-screen reality. I vowed that my future gallery works would utilize viewers' entire bodies and the natural interfaces of their bodies – their movements through space, and their physical, phenomenological awareness. I also began to think again of Cocteau's films, in which subtle changes to reality led the viewer to powerful conceptual and emotional experiences.

My first body-centric work, *Boundary Functions* (1998), not only engaged viewers bodily, spatially, and socially, but also was *about* bodies, space, and the structure of social relationships. The installation first presents itself to the viewer as an empty floor, 4 meters by four meters. If only one person moves around on this floor, nothing happens. If a second person walks onto the floor, however, a projected line precisely divides the floor space between the two people, and responds to their every movement. As more people step onto the floor, more projected lines are added to the floor, demarcating the area around each person that is closer to him or her than to any other person.The projected lines define each viewer's "personal space," and the personal space follows each viewer so long as he or she remains on the floor. The paradox of *Boundary Functions* is that the "personal spaces" that it portrays are socially constructed, so that any given viewer's personal space is defined by others, and its existence, shape, and size are beyond the viewer's control. Personal space therefore turns out to be completely defined by social relationships and not the property of an independent self.

With the aid of computer graphics and computer vision, *Boundary Functions* created an experience in which viewers not only lost their sense of these technologies, but also more importantly, lost their sense of themselves. Digital technology allowed me to first engage their bodies in an interactive process, then, to create a physically impossible augmentation of their reality, revealing the invisible relationships that already existed between the viewers. *Motion Phone* similarly augmented viewers' physical and social realities, though in this piece these augmentations were achieved through the recording, layering, and replaying of viewers' normally invisible hand movements on a socially dynamic canvas. Both of these pieces demonstrate how digital technology can directly reveal the immaterial, which is what began my fascination with the medium and what continues to drive my work today.

Scott Snibbe
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Stills from *Orpheus* (1949), directed by Jean Cocteau.
Source: Criterion Collection DVD
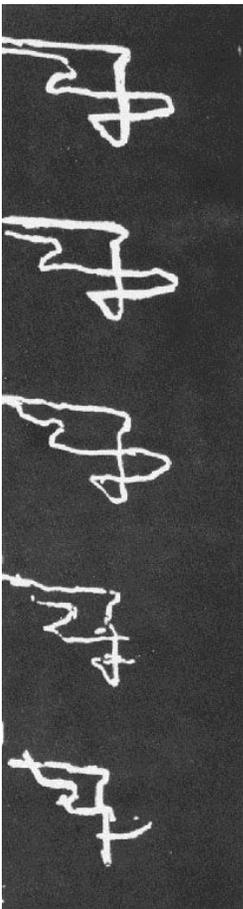
Sequence from *Free Radicals* (1958), by Len Lye.
Source: Figures in Motion by Len Lye. Len Lye Foundation. New Zealand, 1984.
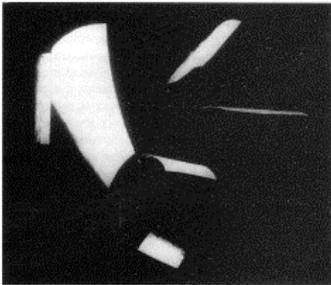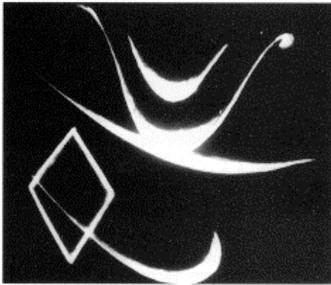
Study Number 7 (1931), by Oskar Fischinger.
Source: Experimental Animation: Origins of a New Art by Russett and Starr. Da Capo Press. New York, 1988.

Collaborative animation from *Motion Phone* (1995).
Source: Courtesy of the artist.
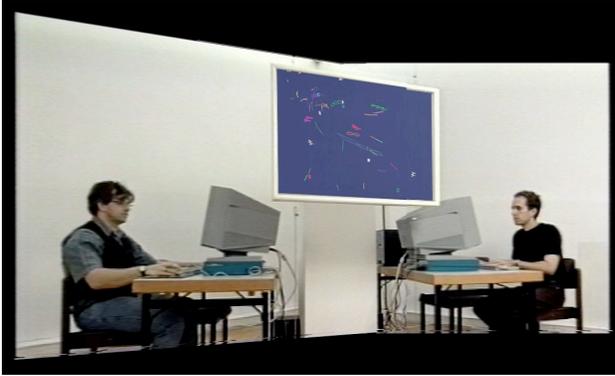
Motion Phone installed at Ars Electronica (1996).
Source: Courtesy of the Austrian Broadcasting Corporation.

Boundary Functions, 1998.
Courtesy of Tokyo Intercommunications Center.