

Useless Programs, Useful Programmers, and the production of Social Interactive Artworks: Interview with Scott Snibbe

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Abstract

Scott Snibbe, who holds Bachelor's degrees in Computer Science and Fine Art, and a Master's in Computer Science from Brown University, creates electronic media installations that directly engage the body of the viewer in a reactive system. His work has been shown internationally at venues including the Whitney Museum of American Art's Artport (New York), Eyebeam (New York), and The Kitchen (New York); the InterCommunications Center (Tokyo); Ars Electronica (Austria); The Institute of Contemporary Art (London); and the Yerba Buena Center for the Arts (San Francisco). He has been awarded a variety of international prizes, including the Prix Ars Electronica, and a Rockefeller New Media Fellowship. Snibbe has taught media art and experimental film at Brown University, the San Francisco Art Institute, the Rhode Island School of Design and UC Berkeley. He has held research positions at Adobe Systems and Interval Research. His works are designed to have specific social effects: to create a sense of interdependence, to promote friendly interaction among strangers, and to increase viewers' concentration. Roberto Simanowski talked with him about kids, parents, Buddhism, benches and walls.

dd. Why and how did you become an artist in the field of digital art? What was the link to art? What was the link to digital media?

SS: My parents were both sculptors engaged with technology (at that time, in the 1970s, this meant plastics). I grew up with a shop and no television – our entertainment was making things. I knew I wanted to work with art and technology since I was 4 years old, combining broken can openers with Lucite. When I saw an Apple computer running Logo in middle school I remember being completely entranced with the shade of orange that it drew. I got a computer when I was eleven

and was programming interactive graphics even back then – at that time, when you bought a new computer, you would turn it on and there would just be a flashing cursor – the computer just came with programming manuals and that was entertainment.

As an undergraduate, I studied Art and Computer Science at Brown University and experimental animation at the Rhode Island School of Design. Then I received a Masters' degree in Computer Science from Brown. During my school years, I was trying to make interactive computer experiments that combine the hard-edged, emotional abstraction of Oskar Fischinger's abstract animation with the visceral, body-centric work of Len Lye, pioneer of *direct cinema* – painting, drawing and scratching film to produce movies without a camera. I wanted to find a way to use my body to interact with dynamic media inside the computer. Often, these experiments were my way of making my Computer Science assignments less boring: no matter what the assignment—sorting, compilers, databases...—I would make an abstract, visual, interactive program to test each assignment to reveal the results in color and movement.

Before I considered my interactive experiments as “art”, I jokingly referred to them as “useless programs”. Programs whose sole purpose was to tickle the mind, to open possibilities, particularly to show the computer screen as a blank dynamic canvas of infinite possibility, rather than a cluttered simulated office with fake “windows”, “folders”, “desktops”, etc., which seemed needlessly limiting: imagine the computer screen as a movie – would you really want to compose the frame in this way with icons and folders? I found the “hero” of this movie in the cursor – the one place where your body appears on the screen; this character had life, personality, unpredictability, and was different with every person who sat down. It became the central figure of my first experiments with recording hand gestures and became the “Motion Phone”.

I did not realize these experiments were “art” until I showed them at SIGGRAPH 1995 and several curators invited me to art shows, particularly Ars Electronica, which changed the course of my career, now that I knew my hobby had an audience and name. Once I began showing in museums, I realized that the primary way anyone engages with art is by approaching it with their whole body. I then aspired to create artwork that is engaged entirely this way – by walking and moving through an “aware” space that responds to you. *Boundary Functions* was my first artwork that operated in this way, drawing lines between people as they walk on a large floor, lines that demarcate their ever-changing personal space.

dd: Digital art (or new media art) is an intriguing hybrid combining two fields that, despite occasional influences and alliances, have always represented quite different interests and perspectives on reality. In light of the technological revolution in the 19th century, artists had complained that their role (and

popularity) in society is being taken over by the engineer. Does digital art reconcile art and technology? At whose expense?

SS: I am not sure about this. My own engagement with digital art has, in general, little to do with technology. Thematically, the work is about interdependence, perception, social interaction, attention, awareness, concentration, metaphor, and spirituality. What seems to make the work successful is that viewers are unaware of the technology. And I believe this is the characteristic of most successful artwork – to transcend the medium, becoming more purely the idea being transmitted.

On another note, art and technology indeed are in an intertwined dance. Van Gogh's paintings were only made possible by the innovation of putting paint in tubes so that the artist could go out into the wilderness and spontaneously experiment with color. These interconnections continue today, for example, with Richard Serra's Torqued Ellipses which are only possible due to specialized, monumental steel fabrication technologies. As time passes we forget that these are technologies – as soon as something becomes available in the hardware store, it moves from the innovative to the quotidian.

Working as a combination of artist and software engineer is really like being two people. As the artist I will conceive of the work and let my mind range widely, often having no idea how I will create the work, in some ways like a scriptwriter. Then, working as the engineer, I become a faithful servant to the artist, trying my best to achieve the artist's vision and adding some small details of the "performance" based on my experience and intuition, like an actor. The minds are so different for the two processes that this is the only way I can work.

Now that I have software engineers working with me, I am more and more comfortable purely using language to get across my message. Based on a sketch and some talking and hand-waving, a good engineer can get 95% of the vision we're shooting for. Then I step in for the last 5% and make some subtle programming adjustments dealing usually with timing and pacing. This is directly analogous to a traditional artist's assistant who will prepare canvases, paint rough blocks of color, and so on. With really good communication even that is unnecessary – just using language to explain the necessary changes. I've just completed the first piece done this way – where my engineer built the whole project from start to finish with only my verbal feedback.

dd: Could you describe the way of a project from its beginning to its exhibition? How do you get an idea for a project? With whom do you discuss it? How do you realize it? How do you get it presented to the public?

SS: An idea begins, always, away from the computer. Walking, thinking, on a plane, talking to a friend, or even in meditation or on retreat. It generally comes entirely and all at once. I will then sketch the idea in my sketchbook. If it still seems interesting

after a few months, I will then move towards a visualization of the proposed piece. I'll create, or have someone create for me, an illustration that shows *exactly* what the piece will look like. Often down to a real person in a projected space. And underneath it some copy, written like gallery copy, which describes the work as if it's complete. I've found that curators and anyone besides my closest colleagues need to see exactly what the piece will look like in order to evaluate it. I will then often let this sit, sometimes for years. From time to time I will show the proposal to friends, colleagues, curators and my staff to see what they think of the idea and get feedback. Eventually, someone likes it enough to invite it to an exhibition or commission the piece.

Lately, I have also been working more and more collaboratively with my studio staff when we receive a commission. I sit down with all of the staff and we discuss the needs of the client and the conceptual basis of the piece. Everyone is invited to contribute ideas freely and we have a lot of fun. After this process, I take all my notes and distill the ideas into a single concept, write up the notes, and produce, or have produced the illustrations and proposal describing the work.

I am part of an artist's group that meets quarterly and includes Jim Campbell, Lynn Kirby and a couple of other media artists based in San Francisco. The common bond is that we're all filmmakers who work in fine art. Our group has strict parameters. The biggest is that for the most part we *only* show work in progress – so that there's a genuine chance for the group's comments to impact the piece before it is complete.

Most of my ideas come from what I have been inspired by in other artists and writers. My primary influence is experimental film and animation which strongly determine my aesthetics, movement and conceptual approach. In terms of ideas, most of my work is inspired by spirituality – especially notions of interdependence, love, compassion, humor, social engagement, transcendence, awe, wonder, profound surprise. I don't know if you'd consider humor spiritual, but I do – humor breaks down people's boundaries so that they can be completely open to what comes next, whether or not it is part of their familiar world view. I like to create moments that are so powerful that you completely forget your sense of self and literally become the experience. For a short while you forget the past, stop anticipating the future, and become completely present.

My work is realized through a straightforward process. I am a professionally trained software engineer – I learned the most about this discipline when I worked at Adobe – so we just follow standard engineering discipline. I have a large library of code that we build our pieces upon, and we use all the standard software methodologies of quality control, object-oriented programming, etc.

In terms of public presentation we have two avenues. The first is through temporary exhibitions that come to us requesting work, such as galleries and museums. These

we have a process for fulfilling using my staff – I have staff members in a few locations around the world to make it easier to install without too much travel – people in London, Northeast US, Los Angeles and San Francisco. We also sell pieces to clients worldwide and these are more actively marketed. We will pursue referrals and leads through colleagues and various professional or artistic meetings, speaking at length over the phone and email to understand a client's needs and fulfill them with a social interactive artwork. It takes quite some time to get these commissions and requires a very careful process of listening and understanding the client's needs and values.

dd: Can one live from making interactive art? Or to put it this way: Is there a market for such kind of art? Who wants to buy interactive installations and why?

SS: In general, I would say that for an individual artist it is very difficult, close to impossible, to make a living creating interactive art. Due to the high costs of this type of work, the clients of interactive art expect a relationship like that of a software company to provide support and customer relations to them and to provide assurances that their work will keep on working and be upgraded as technology changes. There is a growing market for this type of work because it is so emotionally satisfying – you would never see someone jumping up and down in front of a painting in a lobby (however sublime). However, that's one of the common reactions to our work! It's hard to make people excited and engaged in public space and that is the unique quality of my studio's work. People are hungry for a "third place" besides work and home to connect with friends and strangers.

dd: A special branch of new media art is interactive art. While in non-interactive art the audience looks at an object and thinks about it, in interactive art the audience is engaged on a physical level to generate or finish the artwork. Thus, the body plays a special role, maybe the main role, in experiencing the artwork. You once said: "The body thinks differently than the mind," and: "The process is the product. You don't have to think about it. It's an experience." How does the body think? And what does the mind think while the body is experiencing?

SS: When I was a child having just mastered language, I used to perform two thought experiments. In the first, I would look at my hand as I held it in front of my face, and speak to my hand, saying: "Hand, move!" The hand doesn't move. This I found peculiar. Learning language gives you profound and unique power – to say "no", to demand what you want, and so on. And yet you cannot control your body with language. How is it that we control our bodies? Through a strange and magical, maybe mystical process of simply being and doing. My second experiment also had to do with language. Though I call it my hand, if you look very closely it's impossible to find the border between the hand and the arm. You can't identify one cell that is "hand" and one right next to it that is "arm". Since this is certainly so (I've asked many a biologist since then), it calls into question the very existence of the hand. If you

can't say where it begins and ends, then can you really say it exists at all? Of course you do have a hand – it can pick things up, pat someone on the back, and so on. By its conventional function we can label it a hand – the word really refers to the functions performed by the hand, rather than any intrinsic “hand-ness”. And of course the hand is only made of non-hand elements – skin, bones, blood, hair, etc. The hand isn't the sum of the parts, nor is it any single one of them. These two ideas came with me as an adult and also were enriched by learning about Buddhist philosophy. When I became an artist I wanted to focus almost exclusively on these areas of exploration – how can I make a work of art that is experienced viscerally – perceived directly with the body in the same way that we inhabit space. And thematically, to explore this idea of *Emptiness* – how things are “empty” of inherently existing on their own side as object, hand, body, self, etc., but really composed of parts that have causes and only become a solid “thing” when labeled by a mind. Interactivity so clearly communicates this idea because an artwork is literally incomplete without the viewer's engagement.

What's funny about all this deep thought is that the result is often, literally, a joke. Kids immediately understand the work the same way they understand jumping into a swimming pool – effortless joyful fun. Adults start this way, in their gut, and then the piece bubbles up to their mind – first thinking about the social and spatial effects, then more and more about the philosophical implications. For example, with *Boundary Functions*, the first reaction of everyone is to step on the lines that are drawn between themselves and the other people on the floor. These slip away, of course, and that adds energy to the space, creating a social stirring. Then adults start to contemplate the meaning. What's inside those lines? My personal space. But it's only defined by others and changes without my control. What a funny name for something that doesn't even exist without my relationship to others – my “personal” space is really purely defined by an intertwined social relationship to others.

The body thinks differently from the mind. The body understands and feels. The mind analyzes. In making interactive work I often try to make the *process* the *product*. That what you are doing is what you are creating – completely intertwined and inseparable. The line between you and someone else *is* the relationship, constantly changing. Moving is doing is creating.

dd: Are you saying kids who just and immediately have fun understand the piece better than adults who contemplate its meaning? Don't you want your audience to understand the more philosophical or spiritual ideas that you are trying to communicate in the work?

SS: Oh, sorry! Not at all, quite the opposite! What I'm saying is that the pathway to understanding this piece begins in our body viscerally, then moves to the emotional, and then finally to the analytic. For a child, they often never get past the body and

emotional awareness. It's only through an adult's mature mind and education that the other ideas of the piece emerge. I'm quite confident that most adults have a satisfying intellectual experience with this piece. But the piece is an experiment and a question. They may well not come to the same conclusions I did about the piece's meaning. But I think they will all be contemplating the same questions – about boundaries, our bodies and personal space. And that's really the purpose. There is also an argument, too, that the kids *do* get the piece, but they can't articulate it the way the adults do. There is no way I could have articulated, or maybe even spoken to anyone at all about my "hand" experiments as a kid. But as an adult looking back at these experiments I have a phenomenological and intellectual framework in which to finally articulate something that I only felt viscerally and emotionally at the time. Here's a quote from Merleau-Ponty that inspired me greatly when I began this body-centric work:

"[Our body] applies itself to space like a hand to an instrument, and when we wish to move about we do not move the body as we move an object. We transport it without instruments as if by magic, since it is ours and because through it we have direct access to space."

dd: David Rokeby, also a prominent representative of interactive art, points out in his 1996 essay *Transforming Mirrors*: "The structure of interactive artworks can be very similar to those used by Cage in his chance compositions. The primary difference is that the chance element is replaced by a complex, indeterminate yet sentient element, the spectator." Both chance art and interactive art diminish the role of the artist in the process of creation. As Rokeby continues: "Whereas Cage's intent is to mirror nature's manner of operation, the interactive artist holds up the mirror to the spectator." Cage in his 1957 lecture "Experimental Music" praised the "purposeful purposelessness" of chance art as "an affirmation of life – not an attempt to bring order out of chaos nor to suggest improvements in creation, but simply a way of waking up to the very life we're living, which is so excellent once one gets one's mind and one's desires out of its way and lets it act of its own accord." As it is known, Cage's position is influenced by his interest in Buddhism, which is also true for other representatives of chance art such as George Brecht and Robert Filliou. You too show strong interest in Buddhism, its notion of emptiness and interdependence of all objects, physical or mental, and the worship of the incomplete and impermanence. Buddhism seems to be the key to understanding much of contemporary art and ideas. Could you tell us how Buddhism guides your work as an artist and how interactive art supports your philosophical or spiritual concepts?

SS: Before I became explicitly involved in Buddhism I was very interested in "ego-less" art. Art that falls outside of the art mainstream of an artist painting, filming, drawing, photographing, mutilating, and writing about him or herself and his or her friends and patrons. Film naturally falls into this category. I was always shocked

that “I did it for myself” is often the highest praise for a fine artist when talking about their own work. “How pointless!” I often think. In my own mind I can create infinite universes of light, transparent beings, infinite sources of love, worlds full of laughter, concerts on the moon, thousand-armed gods, the most beautiful and grotesque beings, etc. What is the need to physically manifest what so effortlessly appears to my mind? On the other hand, filmmakers are always considering their audience – how will this work make the audience feel, think and understand? So that’s my training and background – in film and all about the audience. In fine art there are some examples that influenced me. In particular James Turrell and Robert Irwin, who focused on creating environments that reveal that art is constructed entirely in our minds – creating works of art that change as your mind and awareness change, tuned by our mind’s continually shifting perception of space, time and our biology. Every image we see is not out in the world, but upside down, tentatively correlated stereo pairs in our retinas that our conditioning and neural programming then makes big guesses about. A scientist recently explained to me that there are an infinite number of solutions to the visual “puzzle” presented to our brain each moment. Our brain then does a statistical correlation to come up with the most likely interpretation that fits our past experience. That’s why we can be startled by a stick, thinking it’s a snake!

And here’s where Buddhism comes in because that is one of the canonical Buddhist examples of *Emptiness*. In this case, we see that whether we see a stick or a snake is not dependent on the outside world, but on our inner conditioning. So, given an infinite number of choices of how to perceive the world, as a Buddhist, one strives to condition oneself to see the world in a way that is both profoundly true and beautiful. True, in that the world is revealed to not be made of discrete, distinct objects, but an inseparable, ever-changing, interdependent continuum. Since all material and mental events are intertwined, we start to realize the insanity of self-centeredness. Thich Nhat Han said, “You are only made of non-you elements.” Bits of your parents, everything you ate, the air around you. We’re breathing in parts of our friends and family and strangers right now. And mentally everything we know came from somewhere else. I’m not using a single word I made up as I answer these questions, nor really any idea that’s uniquely mine. Accept this and life becomes blissful. It only makes logical sense to live your life with as much love and compassion for others as you can. Happiness comes from benefiting others, and suffering from thinking about yourself. The Dalai Lama says, “If you want to be selfish, by all means do so. But be intelligently selfish. To bring yourself true happiness, cherish others”. So what a wonderful view in Buddhism – an intellectual mystical understanding of reality, that leads to common sense logic to be a kind and loving person. And you still get to have a personality, friends, chocolate cake, whatever. Just do so with a sense of profound generosity, gratefulness and love.

dd: If I understand you correctly, you see interactive art as selfless art that does not impose the artist's perspective on the audience. What if the audience *wants* to be exposed to the artist's idea? What if the audience expects the artist to come up with a specific perspective to engage with?

SS: It's not intrinsic to interactivity to be selfless. And I hope you don't misunderstand me to think that I have personally achieved any level of selflessness – it's just that I'm interested in the perceptual and social as my realm of artistic inquiry. A close colleague of mine described my work as "generous" which I was very flattered by and I think is a great way to express my overall artistic philosophy.

It's completely possible and there are many examples of interactive works that portray the entire spectrum of artistic inquiry beyond my narrow interests – sublime beauty, obsession, fashion, politics, confusion, anger, violence, self-observation, portrait, narrative, poetry, abstraction, etc. I dip my toe into some of these areas too. This is a new medium with the same possibilities as any. Camille Utterback's work is a wonderful example of an abstract painter's engagement with interactivity. Her sublime and beautiful abstract aesthetic is created and overlaid on the movements of people around her works to create, for example, futurist visions of time in *Liquid Time*, or social abstract expressionism in her *Untitled* series.

dd: *Deep Walls* is a piece that consists of a camera and a rectangular screen which is divided in 16 smaller rectangular screens. The camera records the projected shadow of the viewers who move in front of the screen, and each of the small screens plays one of those recordings over and over until a new recording replaces the oldest recording. How did you get the idea for this work?

This work was inspired by two main sources. The first is a book by architect Christopher Alexander called, "A Pattern Language". This book is like a bible of ideas for ways that people can live in space that brings them meaning and satisfaction. The book is divided into "patterns" from the small (where to place furniture) to the large (how to build cities). One of the patterns in the book is called "thick walls". An idea for interiors where walls are thick and "carveable" so that people can gradually modify their own environments – cutting shelves, doors, windows, etc. Gradually the contents of the house and the inhabitants' ideas and possessions are absorbed into the walls. I took this as a metaphor for *Deep Walls* where what happens in space gets immediately recorded onto the walls themselves – a space where a wall absorbs the ephemeral activities in front of it. In the morning at SFMOMA I found this piece filled with sixteen images of a janitor mopping the space in front! A perfect use for the piece – a structuralist masterpiece created by the museum staff. Which brings up the second influence: structuralist film. Films from the 1970s such as Ernie Gehr's *Serene Velocity* that present a sometimes phenomenally "boring" yet also experientially powerful effect on the viewer. Structuralist films are often said to "be something" rather than a picture of something. An experience of their own,

rather than a fantasy of somewhere else. I wanted to make an interactive artwork with these same qualities. And also some of the aesthetic aspects of this movement such as minimalism, long takes, contemplative aspects. However, I also like to add a large dose of humor and joy. Sometimes people say my work is more like a joke about minimalism. But really they are minimalist jokes.

dd: So, you intend to produce work that is structuralistic without being boring? A kind of double-coded work that can be experienced and enjoyed on the surface level of physical interaction as well as on a deeper level of cognitive interaction?

SS: That is truly hilarious. I think the simple answer to your question is yes. For someone like me who is generally very much caught up in the mental realm, and enjoys concentrating, thought experiments, meditation, these structuralist films are fantastically engaging. However, the majority of people, I think, are very much rooted in their bodies and so my work is an attempt in many cases to explore the same ideas as structuralism, but to deliver these ideas kinetically through the body rather than through a contemplative experience.

dd: In one of your papers you state the intent to make a piece work on different levels of experiencing art: the kids just having fun, intellectuals looking for the intellectual end and the emotional person getting a more spiritual message from the piece. What would be the level of experience of the kid, the intellectual, and the emotional person with respect to *Deep Walls*?

SS: For a child, *Deep Walls* is a playground to experience for hours (and what a great break for the parents). A visceral lesson, a way to make a movie with one's own body and friends. The intellectual analyzes the structure and begins to reflect on time, space, geometry, and the shadow. There should be a bench nearby because these thoughts can go all the way back to Plato and all the way forward to the end of our own brief lives, or the universe itself. Repetition, music, visual music, pattern, structuralism, Andy Warhol, celebrity, anonymity, time, eternity, impermanence. The reactions are nearly endless and it's so stimulating for me to listen to people's comments which are always varying. To the emotional person, the piece is usually about joy, delight, presence, immediacy, eyes shining bright with a sense of now. And a sense of warm engagement with friends and strangers. Sometimes also a sense of loss as memories quickly fade.

dd: You call *Deep Walls* "a projected cabinet of cinematic memories". Given that every recording is erased after 16 new recordings have been produced one could also consider *Deep Walls* a piece about oblivion, which attaches a rather pessimistic aspect (the intellectual level?) to this joyful (the kid's level?) installation. Do you want to reveal with *Deep Walls* how remembering turns into forgetting?

SS: I love your reaction to *Deep Walls* and its notion of permanence. The work deliberately rejects recording. I actually did try recording once and I reviewed the recordings. They stink! It's all about the situation. I remember a story once about Godard waking up in the middle of the night with a fantastic idea for a film. He quickly finds a paper and scribbles the idea. When he wakes up he looks at the paper. It reads, "Boy meets girl". This does not deny his experience. It was phenomenal at that moment, but that moment passed. All we have is the present. The past is gone, the future's not here yet. The present's the boundary of a wave, impossible to catch, but we are riding it. How do we become aware of the present? Well, lots of ways, but one is to make an interactive artwork in which the near past *briefly* remains – while hovering at that magical boundary with the present, our physical awareness of what just occurred. In our fascination we create more and more little pasts, yet in our excitement the old ones are overwritten, showing the ephemeral nature of our existence. If I let this piece record for a very long time, or gave viewers a database of recordings, they'd become anxious and obsessed, introverted and fussy. The point of these pieces is an emotional one and in order to keep this powerful joy and sense of presence, we must let go of the past!

dd. What piece are you working on right now? What would you like to do in the future?

SS: For some time I have been completing a piece about Mary Baker Eddy, the founder of Christian Science, which is known for its belief that we can heal ourselves without going to the doctor. It's a narrative silhouette "film" that is affected by, and advanced by, our bodies. As the piece moves forward, we see Ms. Eddy "discovering" Christian Science after a serious fall while ice skating. Your body plays a progressively more intimate role in the story as it advances, moving from catalyst to character. My long-term vision is to pioneer a new medium of interactive cinema – experiences that are as engaging as a movie, but in which people maintain their awareness of themselves and the people around them – a combination of profound fantasy and sincere presence. I would like my works to be source of joy, inspiration, and meaning for everyone that encounters them and to foster a more engaged, present and generous state of mind.

dd: How did new media change the hierarchy, system and concept of art during the last ten or twenty years? Do you have an intuition about new media art ten years from now?

SS: I do not think new media is currently a significant force in the art world, but rather a small sub-culture. It's populated by sincere, dedicated practitioners that are for the most part separate from the commercial, "fashion", desire and political arenas that dominate mainstream art. New media art is difficult or impossible to collect due to its size and ephemeral nature, so it doesn't receive the same marketing that more easily collectible work does. Current high museum culture is driven by publicists and

high-powered galleries that aggressively market their artists (many of them fantastic and deserving, of course!). New media is quite a special and beautiful subculture. New media art will probably become as ubiquitous as video art over the course of the next ten years and become established as a mainstream art form through the pioneering efforts of a few curators. It's usually the efforts of a few pioneering critics and curators that produce certain groundbreaking exhibits which canonize a group of artists and baptize the field. Christiane Paul at the Whitney is a great example. The "Bitstreams" show at the Whitney in 2000 was the first of these pioneering shows, which brought Jim Campbell's work to prominence and has helped to make him one of the first commercially successful new media artists. John Simon, Jr. is another fine example of an artist whose career has taken off. I would recognize both of them as among the very best in our field. Apart from them, the field is still young and not a major part of the mainstream.

dd: Shall we hope it becomes such a part? Would it be the end of its signature as avant-garde?

SS: As I learn in Buddhist teachings on impermanence: Birth is the cause of death. Meeting is the cause of parting. Beginning is the cause of ending. And being new and fresh is the cause of being old and tired! It's inevitable. If we can really accept this it's not at all depressing. It's fantastically beautiful to appreciate this moment of obscurity, newness or avant-garde right now and enjoy it fully. Better than to look back 20 years from now at today and recall in sad hindsight that these were the great times that we didn't appreciate then. On that note, thank you for the opportunity to answer such thoughtful questions, it was wonderful speaking to you. The causes for our conversation seem to be ending!

dd: Thanks a lot for the permission to bug a creator of interactive art with all the question an analyst of it carries around.