The Work of Art in the Age of Digital Reproduction (An Evolving Thesis: 1991-1995)

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(An Evolving Thesis: 1991-1995)

Douglas Davis

THE AUTHOR ARGUES THAT THE WORK OF ART IN THE AGE OF DIGITAL reproduction is physically and formally chameleon. There is no longer a clear conceptual distinction between original and reproduction in virtually any medium. These two states, one pure and original, the other imitative and impure, are now fictions. Images, sounds, and words are received, deconstructed, rearranged, and restored wherever they are seen, heard, and stored. What has happened to the aura surrounding the original work of art, so prized by generations of collectors and critics? Digitalization transfers this aura to the individuated copy. Artist and viewer perform together. The dead replica and the living, authentic original are merging, like lovers entwined in mutual ecstasy.

I am adding my finger to your sentence.
You can feel it as you type now, on your hand, can't you?
—The Queen of Touch [1]

There is a police that is brutally and rather "physically" repressive (but the police are never purely physical) and there are more sophisticated police that are more "cultural" or "spiritual," more noble. But every institution destined to enforce the law is a police.
—Jacques Derrida [2]

The work of art in the age of digital reproduction is physically and formally chameleon. There is no clear conceptual distinction now between original and reproduction in virtually any medium based in film, electronics, or telecommunications. As for the fine arts, the distinction is eroding, if not finally collapsed. The fictions of "master" and "copy" are now so entwined with each other that it is impossible to say where one begins and the other ends. In one sense, Walter Benjamin's proclamation of doom for the aura of originality, authored early in this century, is finally confirmed by these events [3]. In another sense, the aura, supple and elastic, has stretched far beyond the boundaries of Benjamin's prophecy into the rich realm of reproduction itself. Here in this realm, often mislabeled "virtual" (it is actually a *realer* reality, or RR), both originality and traditional truth (symbolized by the unadorned photographic "fact") are being enhanced, not betrayed.

But the work of art is not only changing its form and means of delivery. By far its most provocative extension is into the intimate bowels of our body, mind, and spirit. Beside this, all changes, even the Internet, even our recent evolution into the World Wide Web, pale. No single element of the messaging now going on disturbs the guardians of traditional modernity more than this single fact. A few years ago, Frederick Jameson, the senior and singular Marxist art theorist of our day, finally accepted video as the real heat of contemporary art. But he complained, rightly, about its inability to foster communication of any kind.

Yet now we see communicative networks ribbing the globe. You and I, online, are strapped down—maybe—like Prometheus by a web of incisive personal signals. I have no doubt that Jameson and his colleagues will shortly proclaim that this new and highly intensive method of linking is improper material for high art. He won't be moved by "The Queen of Touch" (whose real name I don't know and don't need), who reached out to me one night when I was thinking about this piece. Art, in the traditional realm, is a commodity that must pretend to universality. It

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must reach out to touch many fingers, not just yours or mine.

Let us try to turn this objection back, and not only here, in this essay, which I invite you to amend, refute, or enhance, on paper or online. Let us act as well. When *InterActions,* a recent exhibition of mine, opened at the Lehman College Art Gallery in New York's embattled Bronx, I knew the WWW only from hearsay. As the weeks went on, I embraced it. I went to Geneva, where the Galerie St. Gervais allowed me to communicate with New Yorkers live over the Internet in a performance. Later, Lehman College Art Gallery imported the means not only to create a WWW home page but also to prompt direct responses from around the world. We hung both *InterActions* and a new Web-style exhibition out on the digital nerve system on December 8, 1994—they're still there [4]. And we decided to invite the world to compose its own sentence, perhaps the longest ever written (as well as the first that is truly multiple in authorship): thus its title, *The World's First Collaborative Sentence.* We opened the "sentence" to words, photographs, video, graphics, WWW links, and sound sent via the Internet, the World Wide Web, email, regular mail, and personal visits (children visiting the gallery in the Bronx, for example, are handed paper, pencils, video cameras).

As I write now, more than half a year later, the "sentence without a period" stretches at least a city block, if not more. At first we announced that when the sentence reached 3 miles in length—or February 15, 1995 (whichever came first)—we would stop it, temporarily, by typing in a period. When I followed through on our pledge in Warsaw, however, I knew it was wrong to stop the world—only God might take so final a step. On the next day, we unlocked the overnight conceptual gate. Now the "life sentence" will go on as long as the world continues to write and think.

You'll have to look hard in this collage of images, sounds, and words at any time, now or in the next century, to find a single *universality.* Each fragment, each image, each sound is unique, personal, quivering with the sense of self. My Queen of Touch—that is, the idea she represents—is taking over the world mind and splitting it apart. This is precisely what the work of art in the age of digital reproduction is trying to tell us. Can we understand and follow?

Infinite Forms

A word about the difference between analog signals and what might be called digital messages. Analog signals may be compared to a wave breaking on a beach, breaking over and over but never precisely in the same form. That is why copying an audio signal or video signal in the past always involved a loss in clarity. But digital bits, compatible with the new generation of tools that see, hear, speak, and compute, march in precise, soldierly fashion, one figure after another. This means that any video, audio, or photographic work of art can be endlessly reproduced without degradation, always the same, always perfect. The same is true for handmade images or words that can be scanned—that is, converted to digital bits.

But more to the point, each of these bits can be endlessly varied. My photographic self-portrait can be turned upside down, my ear can be chopped off, the background can be changed from black to gold—and this manipulation, like Ted Turner's colorized black-and-white film classics, will reproduce in this manner forever, millions and millions of times. My virtual self (that is, a three-dimensional working model of the author) can be transmitted even now from New York to Lodz, Poland.

Needless to say, these modes of address and interaction are charged with powerful social and psychological implications. In the end, they will touch each of us, as artists, photographers, filmmakers, video-makers, writers, readers, viewers, voters, consumers, managers. In a valuable early essay based upon research and interviews with humanists and social scientists at Stanford in 1984, Peter Lyman concluded that the cybernetic premise upon which computer programs were based led inevitably to the centralization of control:

> A computer is both an object, a machine, and a series of "congealed" social relations which have been embedded within the object: it is a tool which makes the work of writing more efficient; its software contains a cybernetic model of knowledge derived from technical culture which does not address the ethical and social issues which have been part of the project of qualitative social research; it is embedded within an everyday male culture of aggressive images of control which constitute a cultural barrier for some users [5].

As prescient as Lyman was about one direction that digitalism or politics might still take—in league with Derrida—he overlooked an equally powerful reverse direction. So did Benjamin and George Orwell. It seems clear as the century unwinds that the prophets of technocratic control, frightened by Hitler, by Stalin, by *1984,* overlooked the capacity of an educated elite (infused with the anarchic vitality of contemporary fine and popular cultures) to resist control naturally, without conscious intent. Our prophets further overlooked the sheer profit awaiting those inventors and entrepreneurs able to create sensitive, intuitive computer programs, among them HyperCard and QuickTime; videoconferencing software (just hitting the market as I write this) like Sun's ShowMe and the primitive but freewheeling CUSeeMe developed by Cornell University; and the complex of browers able to instantly access the World Wide Web (such as Mosaic and Netscape). Each of these programs in one way or another unlocks for the individual user a pluralist world of visual imagery, transmitted on demand and by personal choice.

These events empower imagination rather than reason, as new tools placed in the hands of people with open minds always have. No hard-headed determinist wuld have predicted, in the fifteenth century, the evolution of the printed word into concrete poetry or James Joyce's *Ulysses.* Marshall McLuhan himself did not detect the coming of CNN, C-Span, Ernie Kovacs, David Letterman, what we now call interactive video, or indeed the World Wide Web itself. But I do not doubt the potential for a ferocious backlash, already in evidence at this writing as the U.S. Congress considers whether and how to purge the

Internet of "indecent" messages. Derrida's warning must be heeded: the cultural police are with us again, refined down to subtle harmonies. Our task is to protect above all the higher, more complex realms of speech and action.

In this quest we ought to be aided by certain natural tendencies overlooked by Lyman and his colleagues. The instant access enjoyed by the Stanford researchers decades ago can be seen as a decentralizing movement, too. It leads some of us to argue that all information is potentially and morally free, that is, beyond government control or individual copyright. More than a decade after Lyman, libraries increasingly offer not stolid, imperious texts but fields of knowledge on a terminal with which the user can interact, revising and extending the central text. Potentially, the reader is now, as Lyman said in another context, the author [6].

The handmade arts of writing, drawing, and painting, normally presumed to be beyond digitization, are also affected, though in different ways. Now small personal computers able to respond to handwriting on a screen are available, at once reclaiming the hand and subjecting it to infinite replication. The moment a painting can be scanned, the original landscape, portrait, or color field can be altered or cloned in the manner of a vintage film. Already Ethan Allen, the furniture chain, markets paintings reproduced on canvas by laser-transfer technology acting on dutifully scanned bits.

Only the unwary mind would deny the further inevitability that a "neurasthenic" computer, programmed by humanoid codes (a fuzzy logic program, for example, such as those already used by the Japanese to run washing machines and park cars) will shortly *create* paintings from first stroke to last. Or that the rapid introduction of voice commands to a host of computerized functions, in cameras as well as word processsors, will open up an incalcuable range of sound structures, beginning with simple spoken commands. Urszula Dudziak's wonderful layered singing, using a digital tape recorder that allows every line of a song to invade the next line, pointed in this direction years ago. Virtual art is as certain a fixture of the Digital Age as the kind of virtual reality created by microprocessed programs that insert the user in a totally artificial universe through the medium of stereoscopic glasses and sensate digital gloves. Thus clad, we can walk, think, and feel the manmade world in virtually the same way we experience the "real" world.

Vision and Revision

Yet more is at issue here than simply reproducing or mimicking the art of the hand. The mind is at issue, too, most of all in the perceptions it will now inexorably bring to both art and life, to that sacred line between "original" and "fake." Often the forger—of Rembrandt, of Vermeer, of classical Greek and Roman art—argues that his work brings pleasure in the same measure as the copied master. A stylish gallery in New York called True Fakes, Ltd., openly indulges this thesis. On another level, all post-Dada vanguard art has seemed to defy the sanctity of the original. A truly provocative artist like Elaine Sturtevant, whose Warhols and Rauschenbergs often improve on the "originals," represents the other end of this pole, as does all critical theory that emphasizes mind rather than matter (or product).

The very act of deconstruction implies that the breaking apart and rearranging of the primal elements of art, or of the sentence, has its own singular value. Derrida's refiguring of the text is simply one obvious example. Another, the dominant mode in architecture of the past decade, is the collaging together of disparate orders taken from discordant centuries, as in Michael Graves's proposal to revise and enlarge the Whitney Museum. A third example is the digital rearrangement of photographic reality using a simple software program like Adobe Photoshop, now common coin for virtually every art student under 25. As William Mitchell points out in his recent book, *The Reconfigured Eye: Digital Images and Photographic Truth,* the early years of this decade marked the moment when the apparently truthful silver-based photographic emulsion gave way to the apparently deceptive computer-processed image [7]. Larry Friedman's Shakespeare Project at Stanford, which revises filmed or taped scenes, moving sounds and lines (as digital soldiers) from one pair of lips to another, is a consequence of this moment, as is the compact disc recently issued of Handel's *Messiah,* providing no less than *nine* "original" versions of the work, each track instantly available to the ear while a second track is playing.

By finding the means to transfer my early video works from analog to digital media, I can contemplate revisions on my computer that will allow me to change my mind, two decades later, about points where I erred long ago. This allows me to produce a "post-original original." Not long ago, using VideoFusion software, I revised the last few seconds of *The Last Nine Minutes,* the conclusion to the first artist's satellite broadcast, which I co-produced and performed with Joseph Beuys and Nam June Paik for the opening of documenta 6 in 1977. In the revision, I crash through the TV screen and land in your hands in a multiplicity of colors.

Digital video, the equivalent of digital audiotape or DAT, blurs the line between live and taped imagery. With a Sony 8-mm camera, it is impossible to *see* the difference between the live close-up of a face and a taped close-up, even after it has been transferred several times between camera and VCR. In New York, the Blue Man Group, an ensemble that has turned performance art into highly accessible theater, plays constantly on the ambiguity between "live" and "taped" through its use of a portable camera and a large, mural-sized screen poised on the lip of the stage. When members of the group disappear off-stage, the audience is never sure whether their antics behind the curtain, labeled "live" on the screen, are actually live or taped.

In QuickTime movies sent over computer networks and the phenomenon of video conferencing, we see yet further squeezing of now and then, here and there, real and artificial, original and manipulated. For example, the act of digitizing live long-distance video signals sent from Peking to Los Angeles allows us the luxury (or deceit) of distorting, toning, and stretching verbal

and visual messages as they are filed and stored on the computer terminal [8]. The work of a primal filmmaker like Dziga Vertov could be received, deconstructed or rearranged, then archived; later, if we wished, the original signal could be represented in the state first intended.

Compressing the video signal before transmission currently allows an even purer and cleaner signal to be sent over a dedicated phone line than can be sent via satellite or analog relay. This digitized signal can be stored or directly viewed on large, high-definition video screens by entire classrooms or auditoriums, providing visual access far beyond the scale of the computer terminal itself. Not far from my studio in New York's Soho, at the Here Arts Center, I can "dial" my colleagues in Moscow via the PictureTel teleconferencing system; the signal passes through a studio at Brown University in Providence, Rhode Island, that is linked to a Sputnik satellite and is received in Moscow, at the Institute of Space Research. When my Moscow friends respond, the signal reverses course, landing at Here for a minimal sum. Here, as in many other cases, There is Here.

William Mitchell's description of the implications of digital photography apply to all media transformed in this way:

> The distinction between the causal processes of the camera and the intentional process of the artist can no longer be drawn so confidently and categorically. . . . The traditional origin narrative by which automatically captured . . . images are made to seem casual things of nature . . . recited . . . by Bazin, Barthes and Berger, Sontag and Scruton—no longer has the power to convince us. The referent has come unstuck [9].

Persistence of Aura

I am not predicting that our culture will entirely embrace the purely technocratic meaning of the digital world. The great mistake of theoreticians in the past, as we have seen, was to ignore resistance, contradiction, inspired madness, and primal human cussedness. Walter Benjamin saw accurately the logical implications of mechanical reproduction. He ignored antilogic. He erred in assuming that the world would bow to logic, that the endless reproduction of a painting or a photograph would diminish what he called the "aura" of the original. As Sidney Tillim once pointed out in *Artforum,* nothing like this has happened [10]. We still bid wildly at auctions and employ armies of scholars to find the "original," the "authentic" masterpiece. Each fall, legions of artists, critics, and collectors flood hungrily into galleries and museums in pursuit of the new, or at least the illusion that something *different* is about to happen. As these legions increase, spawned by universal education, and as they turn to the computer terminal, where networked information allows contact with exhibitions and voices thousands of miles away, the search turns universal, eroding all lines between east and west, north and south.

In his quiet, quite incredible book *The Cultural Politics of Everyday Life: Social Constructionism, Rhetoric, and Knowing of the Third Kind,* John Shotter argues that identity, "a unique first-person 'I'," can only be defined in terms of social interaction [11]. At a moment when long-distance discourse, friendship, love, and lust are simpler than placing a telephone call was in my youth (I refer of course to the Internet "chat lines," public and private), the status of the first person rises in potential. My Queen of Touch could have reached me from New Zealand or New Guinea as easily as from Brooklyn. On the surface, Shotter seems to align himself with the Social Constructionists, engaged in framing an ideological position as rigid as Marxist determinism used to be or as supply-side economics was in the early 1980s. But the fact is that he sees this situation—of global discourse—as open-ended, verging on the third realm of knowing. None of us can say where these unprecedented links will end, or take us.

As I have worked to create a global classroom devoted to long-distance art, theater, and other media simultaneously connecting students in Poland, Russia, and the United States, all of those involved have tried to frame flexible goals. It is simply impossible to conceive of the papers, dialogues, and joint performances that will result from the bonding of these disparate societies, particularly now, when the swift ease of email seems certain soon to include the capacity to deliver both hypertext and exact renditions of vintage manuscriptions [12]. Certainly we will end with metaphors of unprecedented richness, asymmetry, and contradiction. Yet it is only through such figures that we will begin to refute the entrenched conviction that the world mind is one mind.

Twenty-five years ago, in a prescient essay, A. Michael Noll, an engineer then conducting theoretical research for Bell Telephone Laboratories, sensed the contradictory implications of the digital computer: its very dexterity, he predicted, would free many of us to indulge in spiraling, multifaceted, even chaotic patterns, not simple order or reproduction [13]. Now there is clear evidence of this reversal, following hard upon the world's refutation of Benjamin. Perhaps every dominant mode, or style, is rejected in the end. Even now, in an age when copying is high art, when the simple physical availability of vintage masterpieces is dwindling, when postmodern theories of assemblage and collage inform our sensibility, the concept of aura (if not of its material realization) persists [14]. Surely it must now be further transformed, simply to survive the technical assault brought on by the digital age. But transformed into what? Dematerialized idea? Symbol? Presence?

Of course these questions are impossible to answer definitively at a moment when the digital era is dawning. They are nonetheless pressing enough to warrant the hazard of a guess, informed at once by the elite culture, by vulgar analogies in the popular culture, and by the demographics of the century now coming to a close. If the clutch of tendencies variously described as "post-structuralism," "postmodernism," "post-avant-garde," and "appropriation" (together with a wide variety of post-painterly tendencies prefixed by "neo") have any single, unifying thread it is the discordant power of unique interpretation, or reinterpretation. When I deconstruct meaning, I recreate it within a subjective context that is inevitably unique, no matter how ordered or predestined. One night at the Astor Place Theater in

New York, chancing upon the Blue Man Group's *Tubes* show for the third time, I found myself saluted by name on the electronic message screen flashing in the middle of the proscenium stage shortly after I sat down. Later I learned that I had been detected by a computer program through the use of my credit card.

Granted, this is individuation employed either as wit or whimsy. But surely at Astor Place we can detect a stubborn resistance to technology's supposedly fatal inhumanity. Not long afterwards, I participated in a virtual reality panel at the Jack Tilton Gallery in New York. At no point did I detect from any of the artists present or—more significantly—from the audience a single gram of insensitivity to the phenomenological danger posed by immersion in a created world. When I predicted in the question-and-answer session that we would shortly see a call in the art colleges for courses in "real reality" to counterbalance the dictates imposed by "virtual reality," the audience agreed vociferously, surprising me.

But I shouldn't have been surprised, nor should you. My wish, everyone's wish is to find ways to increase the power of our subjective presence in the other reality, precisely as the painter orders his or her field. Jenny Holzer speaks directly for this contrarian impulse: "I haven't quite figured out how my worlds will look," she writes about the potential of virtual reality. "One thing I do want to explore is what happens when you fly through a floor" [15].

It is not so much the signifiers in each of these cases that matters as it is the signified, or the punch line to the joke, which is widely shared by our new audience. This educated (yet democratized) elite, mixing all classes, creeds, and colors, is now immense in both East and West. Gorbachev's *perestroika* revolution rode on its back, an overwhelming social fact ignored by our media and political strategists. Without hesitation, artist, audience, and publisher in each of the incidents described above embraced the individuating mark, not the erasure of presence that accompanies replication (the "copy"). It seems to me a reversal of Benjamin and Orwell to find digital technology so accomplished at providing that individuating mark. VideoFusion software allows me exquisite variations in video copying: now each issue of *The Last Nine Minutes* can subtly reorder pace, pitch, even the shades of red, blue, green, and white. And it is not only the reader-user envisioned by Peter Lyman who can alter books printed out on library computers. The proprietors of hand-held Newtons and Sharp Wizards will soon be able to call up entire videos and films as well as books on their hand-held screens. They will edit this information as they walk along and transmit the results, probably via a wireless Net, to friends and colleagues across the city, the nation, the world.

What begins to emerge in the first digital decade is a fine-grained sensitivity to the unique qualities of every copy, including the digitally processed photograph. Four years ago in Russia I found an old book in which the one-time owner had glued six copies of a photograph of a woman. Not one copy resembled the others, save in its sharing of a single, forgotten source. His work inspired me to continue copying in his book, in a myriad ways, images of Russian, Polish, and American women who had moved me, utilizing faxes, laser-jet printers, and Stylewriter II printers as copying modes. Similarly, for the past few years Lucio Pozzi has been reperforming his original performances in New York with the aid of the Dia Foundation, among other sources, never conceding the slightest indication to the audience that they are old or revised versions of an allegedly superior original. Each time he performs, the work is immanent for those in position to see it. The Roman numerals beside so many of our popular films *(Back to the Future II)* are vulgar signifiers of what I am trying to say: it is the repetitive copy that is dead, not the original. The one and the other are not separate.

My last example is harder to explain but central to my thesis. In 1971, not knowing entirely what I meant, I proclaimed in a manifesto for an early interactive television performance (in which viewers sang and shouted over telephone lines, creating participative "music" for our actions): Open a Channel to Every Mind . . . Let Every Mind Communicate with Every Other Mind [16]. In the few years that have passed since I first published the ideas in this essay you are now reading, we have witnessed a meteoric rise in the use of both Internet and World Wide Web. Though originally developed in the United States and Europe for scientific-military purposes, the Web has been joined by artists, writers, philosophers, inventors, salesmen, and lovers all over the world. What is already increasingly apparent—though totally unforeseen as recently as 1992—is that the moment when finally "everyone talks to everyone" is the moment when the inner self is liberated rather than chained.

Liberated for what purpose? Again I argue that we cannot predict this. In a 1994 opinion piece published in the *Rocky Mountain News,* I pleaded with the U.S. Congress, in considering legislation to advance the building of the Internet, *to leave us alone* [17]. Let anarchy thrive. Let our voices be freed from control, so that in interaction with each other, new modes of thinking, art-making, and deep personal touching can occur. I cited another element of the message I received from the Queen of Touch on a chatline in the middle of the night: "You may be the King of Words, but I am the Queen of Touch. Here is my hand . . . tighten your fingers" [18].

No one could have imagined this fanciful personal exchange occuring over the authoritarian computer as recently as 1984, when I recall countless voices warning against the consolidation of police-state power in technocratic hands. Nor could they have predicted any lines as moving as those described by Jon Katz, media critic of *Rolling Stone,* in the *New York Times.* Katz and many others, have found a deepening of personal exchanges on the Internet. Separated from each other by space and time, people find themselves able to say what often cannot be said face to face. Death is surely among these hitherto unspeakable subjects, as Katz discovered one night in early 1994 when he and others on a chat line received the following message:

My daughter has cancer. As some of you know, she is 8. In all the world I never conceived of all the sorrow I would feel at learning this, all the horror at watching her suffer so stoically through test after test. There is not a lot of hope just a lot of medicine. We are preparing ourselves for the worst.... I have decided to journal every day, those of you who can bear to read it. Feel free to answer, to offer sympathy, encouragement or whatever else you are feeling. Please feel free to check me if I am too sorry for myself or for her [19].

For these and various other reasons, the supposedly indomitable powers of mindless collectivization and reproduction, threatened throughout this century, do not seem at its end to be in the ascendant. Rather we respond to the reverse, which poses its own dilemmas. We reach through the electronic field of ease that cushions us, like amniotic fluid, through the field that allows us to order, reform, and transmit almost any sound, idea, or word, toward what lies beyond, toward the transient and ineffable—a breath, for example, a pause in conversation, even the twisted grain of a xeroxed photograph or videotape. Here is where the aura resides—not in the thing itself but in the originality of the moment when we see, hear, read, repeat, revise.

References and Notes

1. Queen of Touch, online message, America OnLine, Dec. 15, 1994.

2. Jacques Derrida, "AfterWord," in *Limited, Inc.* (1988).

3. Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction," in *Illuminations* (New York: Harcourt, Brace & World, 1968).

4. Both *InterActions* and *The World's First Collaborative Sentence* can be found at the World Wide Web address http://math240.lehman.cuny.edu/art.

5. Peter Lyman. "Reading, Writing and Word Processing: Toward a Phenomenology of the Computer Age," *Qualitative Sociology* 75-89 (Spring-Summer, 1984).

6. Conversation with the author, May 1992.

7. William Mitchell, *The Reconfigured Eye: Digital Images and Photographic Truth* (Cambridge, MA: MIT Press, 1992) p. 18.

8. "Three Cultures at Issue," a teleconference or global classroom planned for 1996, will employ these methods. Managed by the Center for Long-Distance Art and Culture at the Lehman College Art Gallery, it will also involve the Guggenheim Museum, New York; the Tretyakov Gallery, Moscow; the Russian State Univesity of the Humanities; the Center for Contemporary Art and Warsaw University, Warsaw; Lodz University and the Museum Sztuki, Lodz, Poland; and selected universities in Scandinavia and the Baltic countries. Its vital supporters and advisers include Takeshi Utsumi, Gary Welz, Peter Knight, Sun Microsystems, Apple Computer, and the U.S. Information Agency.

9. Mitchell [7] p. 30.

10. Sidney Tillim, "Benjamin Rediscovered: The Work of Art After the Age of Mechanical Reproduction," *Artforum* **21**, No. 5, 65–73 (May 1983).

11. John Shotter, *The Cultural Politics of Everyday Life: Social Constructionism, Rhetoric, and Knowing of the Third Kind* (Toronto, Canada: University of Toronto Press, 1993) p. 260.

12. See Julie Chao, "New Adobe Software Conveys Documents in Cyberspace," *Wall Street Journal,* May 5, 1995.

13. A. Michael Noll, "The Digital Computer as a Creative Medium," *IEEE Spectrum* **4**, No. 10, 89–95 (October, 1967).

14. Douglas Davis, *The Museum Transformed: Design and Culture in the Post-Pompidou Era* (New York, 1990) pp. 175–179.

15. Jenny Holzer, "Activity Can Be Overrated," *Through the Looking Glass: Artists' First Encounters with Virtual Reality*, J. Cirincione and B. D'Amato, eds. (New York: Softworlds, 1992) pp. 25–29.

16. *The Electronic Hokkadim,* jointly sponsored by the Corcoran Galery and WTOP-TV in Washington, D.C., funded by a small grant from the National Endowment for the Arts. The word "Hokkadim" is derived from the ancient African word "Hochet," which describes a ritual form of participative music.

17. Douglas Davis, "The Net Works," *Rocky Mountain News* (May 8, 1994).

18. Queen of Touch [1].

19. Jon Katz, "The Tales They Tell in Cyberspace Are a Whole Other Story," *New York Times* (January 23, 1994).

Douglas Davis is an artist, educator, author, and performer known as a pioneer in many fields of long-distance art. He has taught advanced media at more than 25 universities and art colleges internationally and was awarded a Fulbright fellowship for the fall of 1995 at the Russian State University of the Humanities, to teach a global classroom under the auspices of the new Center for Long-Distance Art and Culture at Lehman College in the Bronx, New York. His videotapes, performances, films, prints, and drawings have been exhibited at the Guggenheim Museum, the Whitney Museum of American Art, and the Metropolitan Museum of Art, New York, and elsewhere around the world. His *InterActions 1967–1981,* sponsored by Lehman College Art Gallery, is on view on the World Wide Web, along with *The World's First Collaborative Sentence.*