

"Aperto" is a Flash Art "virtual" exhibition, curated to highlight the art currently being shown in a particular city or region. It will also soon be available for viewing on Flash Art's upcoming new Web site.



Rebeca Bollinger, Detail from Dorothy's Room, 1995. CD-ROM.

Technofornia

Peter Lunenfeld

"Technofornia" is a metalogue, a virtual exhibition about the virtual. It brings together the conceptual and the electro-mechanical, thus circumventing the problem endemic to technologized art — making it work. A virtual exhibition is also a way to elide the tiresome criteria usually used to evaluate new media (novelty, interactivity, and speed), opening up a space in which to address a more expansive set of questions.

"Technofornia" concerns the extent to which the computer has shifted or accelerated the inclusion of technological elements in contemporary art practice. California serves as a test site for these transformations, with two very different communities — Los Angeles and San Francisco — offering a range of work and, just as important, a shifting series of contexts for the reception of this work. That this state — larger, more powerful, and more divisive than most nations — should serve as the backdrop for this brand of practice is not surprising, as the computer is central to the Golden State's psyche. Silicon Valley birthed the personal computing revolution; San Francisco's Digital Gulch is awash with twentysomethings who have given up slacking to

open electronic design studios; and Hollywood executives have decreed that the future of entertainment is inextricably tied to the computer, though few of them could explain why.

This "Aperto" segues from the material to the portable to the immaterial. It opens with a series of installations — objects and site-specific experiences which the culture easily constitutes as art. It moves to a selection of artists' CD-ROMs — portable media sources that blur the boundary between object and experience. And it concludes with the World Wide Web — dematerialized sites accessible from anywhere in the wired world.

Jennifer Steinkamp's lush imagescapes immerse viewers in shimmering fields of color and form. Her site-specific projections are predicated upon a finely focused production process, which involves 3-D modeling of the exhibition space, the rendering of animations on high-end hardware, the melding of image and sound, and finally the transformation of inert white walls into extruded, pulsating abstractions. *Swell* (1995) evokes the "pure" filmmaking of Paul Sharits, and the optical trickery of the light and space movement,

but there is also a feminist edge to the work that addresses the gendered conditions of space and vision.

Sara Roberts' *Elective Affinities* (1994) is one of the most elegant and successful artworks to incorporate interactive narrative structures. The exhibition is confusing at first: in front of a wall-sized projection of a moving roadscape there are four large black pedestals, with four translucent faces floating above

them. As the viewer walks from one face to another, she triggers switches bringing up interior monologues from each. After two or three "encounters," the viewer comes to realize that these are characters in a series of romantic triangles, and that Roberts has created an idealized voyeuristic experience — a road trip in which what is heard are the characters' intimate thoughts about one another. *Elective Affinities* draws from Goethe's little read novel of



Sara Roberts, Installation view of *Elective Affinities*, 1994. Photo Ira Schrank.

the same name, daytime soap operas, and America's romance with the automobile to create an interactive, televisual melodrama of remarkable intensity.

Mike Kelley is known for his engagement with the abject and the profane, but his work also investigates the arena of technology. In a solo show in LA, Kelley created a mixed media installation of painting, electronic objects and sound pieces that evoked the miasmatic world of UFO conspirators and alien abductions (all works 1994). The walls were hung with round panel paintings on aluminum, looking like nothing so much as alien battle standards. Some of these were outfitted with antennae and hardwired to boom boxes, which sat on the floor broadcasting intermittent, otherworldly sounds. The rest of the space was filled with the sort of home-brewed mechanical contrivances with which Kelley made his reputation, but this time the objects evoked the

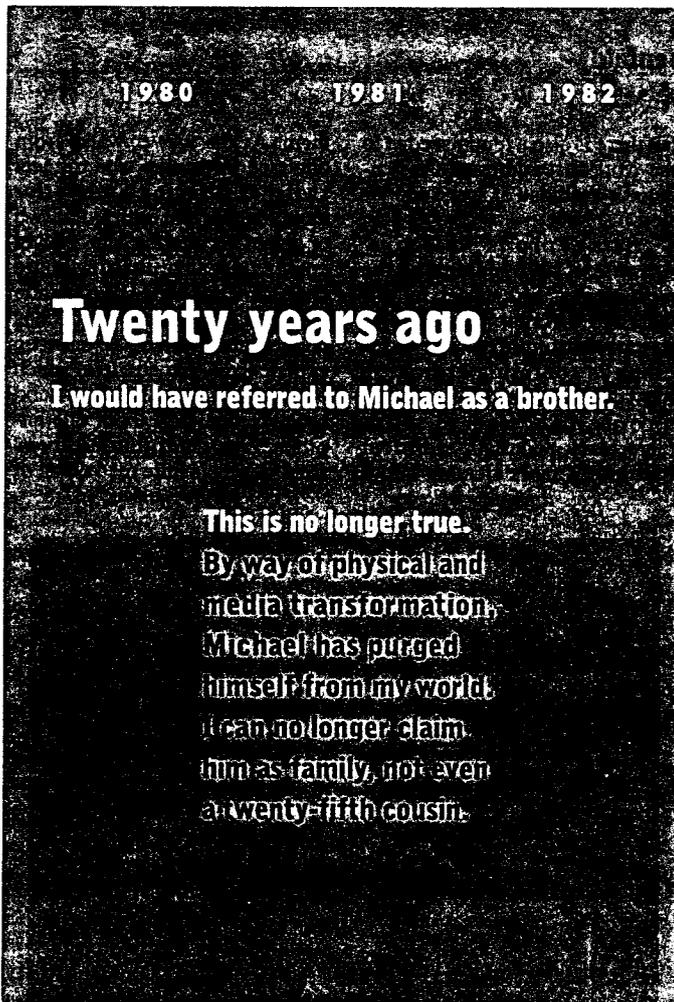
pseudo-science of ufologists and other investigators of parapsychology. The show embodied the chiliastic irrational, but here the fascination with endtimes played itself out within the realm of farcical technologies and the science-fictional imaginary.

Rebecca Bollinger's *Dorothy's Room* (1995) is a CD-ROM which explores the use of three dimensional software (here, "Quicktime VR") to reflect and estrange architectural space. The piece refers to Dorothy Draper, who designed the interior of San Francisco's famed Fairmont Hotel in the 1940s. The vast expanse of carpet in the Fairmont becomes a texture map to flow through and around; the people and furniture in the lobby function as disruptions in the decorative abstraction; and the fact that nothing "happens" in this CD-ROM is precisely the point.

If *Dorothy's Room* evokes the stately past of Northern California, then Todd Gray's



Mike Kelley, Installation view, 1994. Courtesy Rosamund Felson Gallery, Santa Monica, CA.

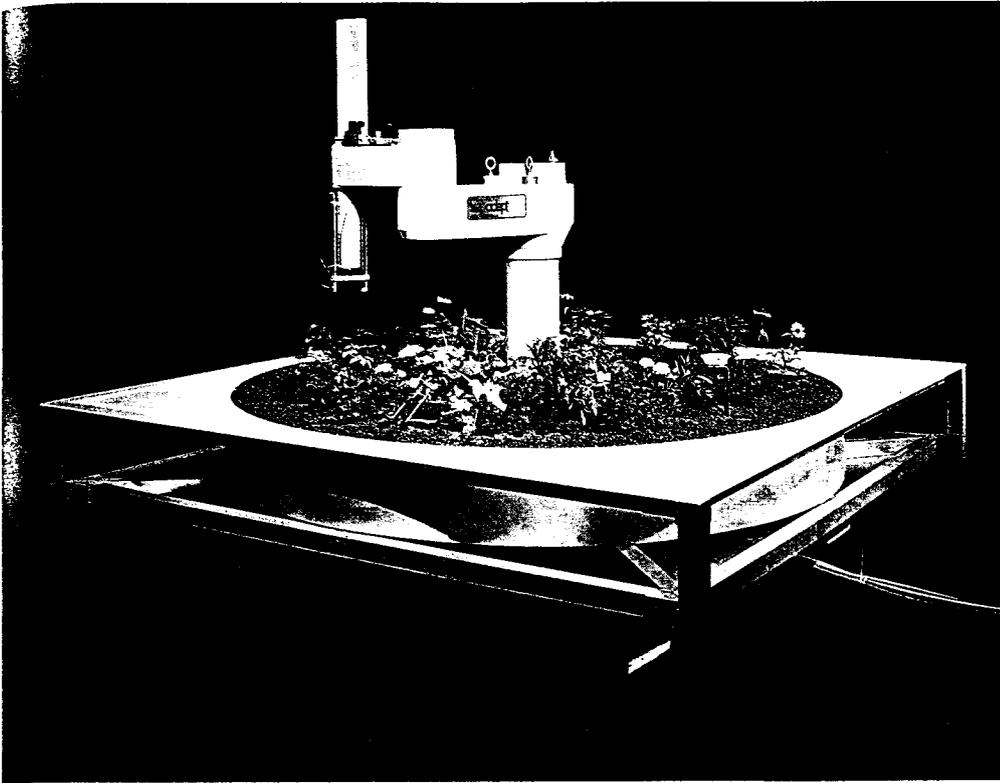


Todd Gray, Detail from *Michael Jackson Reconsidered*, 1996. CD-ROM.

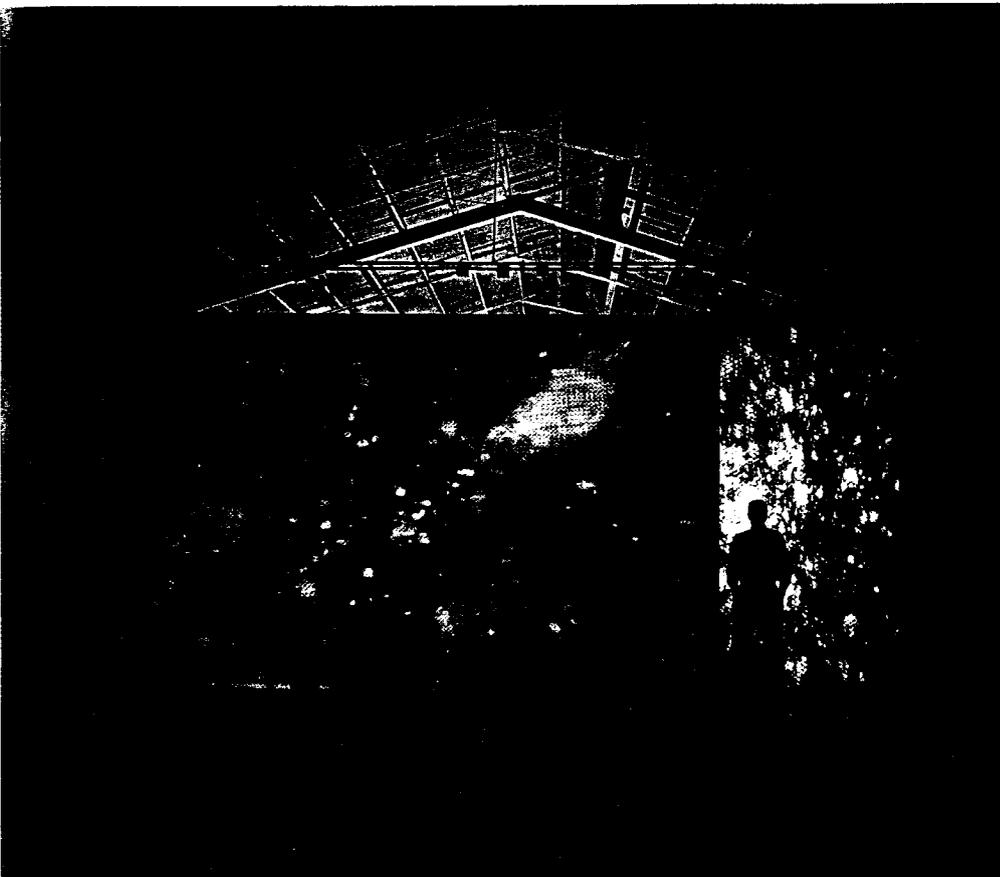


Ken G
Photo I

Jenni
Cour



Ken Goldberg, Installation view of *The TeleGarden*, 1995.
Photo Robert Wedemeyer.



Jennifer Steinkamp, Installation view of *Swell*, 1995.
Courtesy ACME, Santa Monica, CA.

Michael Jackson Reconsidered (1996) is immediately identifiable as an orchid from LA's media hothouse. His CD-ROM draws from the archive of images he amassed while working as the King of Pop's personal photographer through the 1980s. Gray conflates the hysteria of new technologies with the hysteria of celebrity, using non-linear technologies to juxtapose the on- and off-stage worlds of entertainment capitalism. He contextualizes these images within issues of realness, blackness, and the thirst for assimilation.

The CD-ROM can function as a souvenir from "Technofornia," but the Web makes the very notion of a show based on locality a moot point. In the *TeleGarden* (<http://www.usc.edu/dept/garden/>) (1995), Ken Goldberg embraces the paradox of immaterial physical environments. A UC Berkeley roboticist and artist, Goldberg (with a team including Joey Santarromano, George Bekey, Steven Gentner, Rosemary Morris, Carl Sutter, and Jeff Wiegley) created a small plot of petunias, peppers, and marigolds, installed a robot arm to seed and water the plants, and rigged a live video feed to keep watch. In linking their garden to the World Wide Web, and creating an intuitive interface for the control of the arm and camera, Goldberg and the others transformed what most would consider a fit of over-engineering into a subtle rumination on the nature of the commons. Anyone with a Web browser can access the site, and the rights to water and plant are given to those willing to make their e-mail public to others in the co-operative.

The emerging digital culture has to this point been more conducive to systemic analysis than critical writing about individual art works. "Technofornia" is a step towards delineating objects, spaces, and sites worthy of consideration in their own right, rather than simply as manifestations or harbingers of things to come.

Dr. Peter Lunenfeld, a member of graduate faculty of the Program in Communication & New Media Design at the Art Center College of Design, is the founder of mediawork: The Southern California New Media Working Group. He is the editor of The Digital Dialectic: New Essays on New Media (MIT Press, forthcoming).



Journal of Film and Video

Volume 46, Number 1 Spring 1994



Fig. 7



Fig. 8



Fig. 9



Fig. 10



Fig. 11



Fig. 12

“THERE ARE PEOPLE IN THE STREETS WHO’VE NEVER HAD A CHANCE TO SPEAK”: JAMES BLUE AND THE COMPLEX DOCUMENTARY

PETER LUNENFELD

Tangled Up in Blue

The “immediacy” of television is much discussed and rarely achieved. Television too often fulfills its local public service requirements with off-hour, well-meaning panel discussion shows, which are, in essence, studio shots of talking heads. Local prime-time documentaries are often no better—devolving into excuses for mediocre star journalism. James Blue was one of the very few mediamakers able to see past the limitations of nonfiction television as it is constituted by the market and thereby offer hope for the medium.

An award-winning narrative and documentary filmmaker and a brilliant teacher of media, Blue developed a new form for local television in the late 1970s. He called his work “complex documentary” because it was a process-oriented form of production involving high levels of reflexivity, formal experimentation, and audience feedback. Blue’s friend and colleague Gerald O’Grady points out that “‘complex’ referred to the nature of the subject, multiple social, economic, and cultural forces all overlapping and impacting at once, necessitating someone’s sorting them out and putting them into a structure that would reach an audience.”¹

Peter Lunenfeld is on the graduate faculty of the Art Center College of Design in Pasadena, CA. He teaches the history and theory of imaging technologies.

Copyright © 1994 by P. Lunenfeld

In the last interview before his death in 1980, Blue addressed the narrow focus of his television documentaries. Asked why he worked on parochial questions rather than on larger issues for national distribution, Blue responded: “I don’t think the national documentaries teach us much of anything, because they’re too general. They have to be too general” (Bannon 12). To tighten the focus of television documentary, Blue created a forum for area residents to express their problems and aspirations personally—in other words, to exploit the medium’s capacities for intimate engagement.²

The Complex Documentary

In 1977, Blue completed *Who Killed the Fourth Ward?*, a three-part series about the neglect and decline of a poor African-American neighborhood on the outskirts of downtown Houston. Instead of constructing the series around a predetermined agenda, Blue treats the demise of the neighborhood as a mystery. For Blue—a white, nonnative resident of Houston—the situation was in fact a mystery. He announces early on that the work is not intended to be an exposé, or to be taken for the whole of the truth; it is, instead, a story about forces and processes. Here, Blue refuses to function as an omniscient director of the action; he becomes, first and foremost, a witness.

The function of witnessing is vital because it supports the theoretical preconceptions of the complex documentary itself. Blue

and the film crew discover the boundaries of their documentary only after interviewing those facing difficulties on the one hand and those setting policy on the other. Besides shaping the basic structure of the work, the detailed interviews offer a chance for people to be heard: "There are people in the streets who've never had a chance to speak." Blue helps these people find their voices.

Blue followed *Who Killed the Fourth Ward?* in 1979 with *The Invisible City*, a collaboration with Adele Santos, then professor of architecture at Houston's Rice University.³ *The Invisible City* concentrates even more closely on questions of process, making it a more accomplished complex documentary than its predecessor. Once again, Blue eschews a grand topic, looking rather at the incipient housing crisis in Houston toward the close of the 1970s. In part an outgrowth of the concerns raised in *Who Killed the Fourth Ward?*, *The Invisible City* is a prescient analysis of what was to become one of the nation's major controversies in the 1980s—homelessness in the midst of seeming affluence.⁴

When Blue made *The Invisible City*, Houston was still in the midst of the oil and construction boom that busted by 1982. It is a measure of his instincts and savvy that he was able to convince Houston Public Television to air this five-part series on urban housing in August and September 1979 in the midst of what seemed to be the best of times.⁵

If we were to categorize complex documentaries by their homological relationships to other television forms, *Who Killed the Fourth Ward?* would be considered a detective story, complete with Blue acting the role of Inspector Columbo, and *The Invisible City* would be a phone-in talk show, an interaction between a host, a panel, and the viewers at home. *The Invisible City* is about collaboration, both creative and interpretive.

Very few documentaries are wholly products of a single vision. Instead, they are collaborative projects, between the director, cinematographer, editor, and so on and, very often, between makers and subjects. *The Invisible City* focuses on the means by which a documentary collects, sorts through, and renders meaning from information. Blue began the process of making the documentary by announcing its theme in various community centers and media outlets. He then went out to talk with those people who had contacted him with ideas and complaints. It was only after this stage that he began filming interviews and gathering the materials that were then edited to create the opening installment. At the close of the first show, there was a number for viewers to contact with comments, suggestions, and critiques. The next program was constructed by following up on the leads callers offered. All the programs that followed pushed hard against their deadlines, so that postproduction continued right up to air times. The series showed Houston a side of itself that it may not have wanted to admit existed and served as a warning to those who looked to Houston as a beacon—Northeasterners who saw the city as the last haven of the jobless, and city planners who touted Houston as the model of laissez-faire growth.

Blue developed a sophisticated understanding of the nonfiction form through a combination of study, practice, and teaching. Throughout the 1960s and 1970s, he interviewed other documentarians in radio, video, and print.⁶ His production experience was vast, ranging from shorts to feature-length documentaries and narratives, and from boutique work for Hollywood productions to ethnographic studies of African tribes. Blue made films independently, under the auspices of the U.S. Information Agency, within university environments, and in media access spaces.⁷ Blue was still developing the complex documentary, both in theory and in practice, when he died in 1980. Nonetheless,

this nonfiction television formulation was the single most important contribution of his long and varied career.

To laud *Who Killed the Fourth Ward?* and *The Invisible City*, two obscure television documentaries, at the expense of Blue's Cannes Critics' Prize-winning narrative, *Les Oliviers de la Justice* (1962), or the Academy Award-nominated documentary, *A Few Notes on Our Food Problem* (1968), is obviously polemical. Regardless, it is extraordinary that a filmmaker with Blue's credentials would direct the full range of his energies, craft, and talent toward developing television documentary aimed at local audiences about local problems. It is more extraordinary yet that these two complex documentaries are so involving on formal and narrative levels.

As I will continue to emphasize, however, the complex documentary exists on many levels. *Who Killed the Fourth Ward?* and *The Invisible City* must not be regarded simply as self-contained documents. They are, as well, methodological treatises, exemplars for both university-based media education and community-driven access spaces. Therefore, the complex documentary must be analyzed within its particular matrix of production, distribution, and consumption. The complex documentary's key innovation is the creation of three interlaced and nested levels of self-reflexivity: (1) within the work's formal construction of visual style and narrative coherency; (2) in its foregrounding of the conditions of production; and (3) in its encouragement and incorporation of subject and spectatorial feedback.

This interlaced self-reflexivity not only transmits informational content; it dismantles viewers' collective misconceptions about how documentary films are made. This reorientation, in turn, serves a deeper purpose: the complex documentary offers the viewer a strategy for looking beneath the seamless surface of other sources of (mis)information broadcast on

television. While acknowledging Walter Benjamin's aphorism that "it is inherent in the technique of film . . . that everybody who witnesses its accomplishments is something of an expert," the question is always to what degree and what effect (231).

Beyond Formal Construction

For Blue, it was vital to demonstrate the nature of the filmmaking activity both to the audience and to those directly affected by the material. "If you can't show the event as it is, if you've got to tamper with it to give it significance, then you've got to say what you are doing" (Bannon 11). While self-reflexivity in documentary has been much commented on, the primary focus has been on formal elements at the expense of the specifics of practice and reception. In "The Voice of Documentary," Bill Nichols cites *Who Killed the Fourth Ward?* as one of the films "instrumental in formulating issues of self-reflexive documentary" (62-63, n2). Concerned with creating an overarching theory of the form, Nichols catalogues styles and their "distinctive formal and ideological qualities" (48). These include the by-now familiar tropes of Griersonian direct address, the "transparency" of *cinéma vérité*, and the testimonial style of the "witness-participants" films of the 1970s. Yet the complex documentary demands consideration of the conditions of production and the particularities of the viewing experience alongside the exigencies of form. Even a cursory analysis of its visual style reveals Blue's attention to questions of process.

Sound technicians are visible in shots, boom mikes hang in view during interviews, and focus and mike checks are left in the final edit. Throughout *Who Killed the Fourth Ward?*, Blue continually inserts into the narrative just those "accidents" that work to disrupt the false unity of other kinds of documentary. Yet Dziga

Vertov (and even the Dziga Vertov Group) notwithstanding, it is now very difficult to claim that any particular formal strategies of media-making, even self-reflexive visual styles, are in themselves inherently progressive. Audiences have become inured to the *faux-verité* of the nonfiction telecast. The occasional handheld "investigative" pieces on tabloid shows such as *A Current Affair* rarely contribute to deepening the spectator's reception of the material. And, as critic Jay Ruby points out, such "accidents" have become simply "signs of the direct-cinema style," clichés of the documentary movement (73).

With the advent of *The Invisible City*, Blue moved beyond constructing merely a "self-reflexive" look, concentrating on the relationship of the work to its audience, incorporating interactive feedback, and reflecting these processes through the construction of whole episodes rather than simply at the level of the composition of the shots. Blue strived to incorporate stylistic reflexivity within the overall narrative structures of his complex documentaries. This is most evident in a sequence covering the deteriorated physical state of housing in outlying Houston neighborhoods. Blue creates an accelerated visual montage of the decrepit housing by displaying a different house every four frames. These visibly decaying structures are juxtaposed with a deterioration of the soundtrack's voice-over. The narration, which at first lays out the facts and figures concerning the decay of the city's properties, then degenerates into silences interspersed with split-second sound samples.

As Blue acknowledged, this sequence owes much to the avant-garde flicker films of Paul Sharits, which concentrate on the fragility of the sound/image matrix.⁸ The lightning speed of the visual montage, in combination with the unexpected breakdown of the voice-over narration, foregrounds for the spectator the disaster of

Houston's housing in ways that a more conventional documentary would and could not.

There are express political and aesthetic purposes in Blue's references to technology. Throughout *The Invisible City*, he cuts to shots of himself sitting in front of a 3/4" videotape deck inserting and ejecting cassettes. Blue positions himself this way not to show off his technical gadgets, like the brief long shots of the network news anchors surrounded by monitors and teletypes on their sets, but to break down the sense that documentary shows an objective, "god's-eye view" of the world, free of human modifications. Blue also has an explicit narrative function in mind with this incorporation of technology: "We start out with the notion of a field of videocassettes, and retrieving coexisting data, rather than simply dealing with a linear structure" (Bannon 13).

Blue's conscious positioning of himself in front of the tools of the television documentary maker's trade is reminiscent of Edward R. Murrow's set on *See It Now*. In the famous March 9, 1954, episode on Senator Joseph R. McCarthy, Murrow sits in front of monitors and a tape recorder cueing film and audio clips; Murrow even points to a stack of newspapers to buttress *See It Now's* attack on the inconsistencies and bullying tactics of the junior senator from Wisconsin.⁹

Historical antecedents aside, Blue plays with the expected form and style of the television documentary in ways that Murrow never did. Blue was deeply troubled by the conventionalized presentation of nonfiction work on television. He developed a philosophical and aesthetic stance against documentary work which created an air of studious objectivity and apparent balance through narrative strategies of containment.

To understand the difference between Blue's achievements and standard televi-



In *The Invisible City*, James Blue cuts to shots of himself in front of a 3/4" videotape deck inserting and ejecting the cassettes that contain the visible evidence for his complex documentaries.

sion practice, one need only look at the television documentary in its most popular form in America—*60 Minutes*. *60 Minutes* is the most successful documentary forum on television in terms of ratings and public recognition. The show fulfills the ambitions of its creator and executive producer, Don Hewitt, "to package sixty minutes of reality as attractively as Hollywood packages sixty minutes of make-believe"—especially if "attractive" is defined by percentage of market share and the question of "reality" is left unasked (27).

60 Minutes's standard operating procedure is to select a subject with a strong vision of the final product already in mind and to generate preproduction scripts and outlines based on research put together by an experienced staff. The actual shooting involves collecting the necessary visual and aural documentation to bring the production in on time, to support the segment's preordained thesis, and to make

the network correspondent appear tough and compassionate. The footage typically includes limited interviews with the "victims," to justify the show's nobility of purpose, and interviews with the "perpetrators," who conveniently expose their guilt on camera. The segment thus concludes with a payoff justifying the viewer's involvement in the show.

Blue's notion of the complex documentary stands in opposition to the practice on *60 Minutes* because Blue is interested in the process of moving more than he is in moving toward an end product. The complex documentary calls for the maker to do more than simply choose an area to investigate, film prearranged interviews to buttress a thesis, and then assemble and edit the final work. It is essential for the maker to reassert to the viewer the nature of the media-making activity itself. Blue, in his own words, was "moving more and more towards how to solve the problem of

transmittal of complex notions, and less towards recording events" (Bannon 11).

A Narrative of Process

As mentioned earlier, *Who Killed the Fourth Ward?* is a narrative of discovery, a mystery. But this mystery does not conclude with a grand revelation. No truly complex situation can ever be so tidily solved. The lack of closure in Blue's complex documentaries was a response to the experience of making the portrait film *Kenya Boran* (1974), a collaboration with ethnographer David MacDougall. The two filmmakers were searching for a single event that dealt with "one or two people, which would reveal to us the whole pain of modernization." Yet by the conclusion of shooting, Blue learned a lesson that he brought with him to his television work: "trying to find that one event, what we were really asking for was a Greek tragedy, which would have all the unities right there in front of you. But you can't do that in the real world" (Bannon 11).

Who Killed the Fourth Ward? is emphatically about the real world, about "what forces are at work." Concentrating on these political, social, and economic processes allows the discourse to move beyond simplistic dichotomies—question/answer, cause/effect, victim/villain. The complex documentary offers a model for those who work within the legacy of direct cinema without relying on what Stephen Mamber identifies as the "crisis structure" of so many of that movement's documentaries.

In discussing the early Drew Associates work for television, and specifically films such as *On the Pole* (1960), *Primary* (1960), and *Jane* (1962), Mamber analyzes three justifications for structuring documentaries around a specific moment or series of crises: first, to lessen the subjects' awareness of the actualities of filming; second, to reveal the "true" nature of

the subject under pressure; and third, to ape the logic of traditional dramatic narrative's arc of development, crisis, and resolution (Mamber 71).

The problem with the crisis structure is that it is not well suited to the discussion of ongoing problems and processes. Taking the three primary concerns of *Who Killed the Fourth Ward?* and *The Invisible City*—homelessness, laissez-faire urban planning, and gentrification—and conceptualizing them in terms of crisis may maximize the drama but not without minimizing understanding. Crisis necessitates closure in terms of cataclysm; the complex documentary argues for something less spectacular: a plodding movement toward awareness, and even change. It is the concentration on process, rather than the discrete action or event, that makes up the core of the complex documentary and that prompts Blue to abandon the pat conventions of narrative.

Reception/Response/Incorporation

Blue encourages self-reflexive reception; his hope is that spectators will react to the material instead of passively absorbing it. To this end, he offers viewers models of active spectatorship within the narrative, while incorporating viewer response into the very structure of his complex documentary. His strategy is to find knowledgeable people to offer input and to react to the material he collects. This process is refined from the first to the second complex documentary.

In *Who Killed the Fourth Ward?*, Blue concentrates this function in a single individual, Tom Wright, an African-American journalist with roots in the ward. Wright is adamant that a coordinated conspiracy of the rich and powerful is under way to eliminate his community. Wright is Blue's navigator through the Fourth Ward and is often the only point of contact between the film crew and the community. Wright



In *The Invisible City*, residents of a Houston neighborhood talk after a flood.

is certain that if he and Blue can expose the guilty, they will be able to mobilize the community. Notwithstanding Wright's good intentions, he is under the misapprehension that the documentary will come to triumphant closure. Blue, however, is always aware that Wright's opinions and attitudes are heavily influenced by his closeness to the situation. Tom Wright's intense involvement points to a danger the documentarian must face—that well-motivated subjectivity is just as distorted as "balanced objectivity."

In *The Invisible City*, Blue moves beyond the use of an individual guide and instead assembles a group of people to analyze the footage and to offer their subjective analyses of the evidence. This group functions as a collection of fact checkers and discussants—advisers, who in turn become a part of the work's structure and narrative. Blue encourages these men and women to process "what are the essential questions and what are the consequences of those decisions."

There is admittedly a very thin line that separates the advisers in a complex documentary from the omniscient "experts" who infect the media's coverage of everything from sports to warfare. At times Blue does give the group more weight than he should. Although the group does not distract too much from the primary evidence collected in the interviews, their presence does problematize Blue's utopian vision of a nonhierarchized process of investigation. If there is one way in which Blue falls short of giving the "people in the streets . . . a chance to speak," it is when he has his advisers speak for them.¹⁰

At their best, however, these advisers serve as models of involved spectatorship. In *The Invisible City*, Blue intercuts the accelerated montage mentioned earlier with reaction shots of the advisers, demonstrating the way the formal construction drives home the decay of the relatively young Houston housing stock. By showing the advisers' animated responses and interactions as a group, Blue demonstrates

for the television audience the process of active viewing, encouraging those at home to move beyond mere acceptance of narrative.

Although *Who Killed the Fourth Ward?* does not incorporate a panel of advisers, it contains one sequence of such powerful self-reflexive reception that it deserves a separate reading. In trying to determine why the Fourth Ward's fortunes sank so low, Blue arranges a series of interviews with public figures. One such figure is the dynamic young mayor of Houston, Fred Hofheintz. Hofheintz is quick to blame the displacement of the Fourth Ward on "the natural forces of the market."¹¹ It is at this point that Hofheintz reveals something unsaid publicly in the Fourth Ward debate: he holds out no hope for the neighborhood. The mayor is unwilling to spend money or to flex political muscle in hopes of retaining the area for African-American, low-to-middle-income people.

To this point, Blue has merely elicited unusually candid comments from an elected official, a laudable achievement to be sure but hardly groundbreaking. The electric moment comes when Blue takes this raw footage and screens it at the ward's Mt. Carmel Baptist Church for an audience filled with local residents. The reaction of these people to Mayor Hofheintz's remarks about the neighborhood's decay is powerful. Here are disenfranchised citizens watching a politician talking about them and their problems—not at them or around them. The camera probes the faces in the pews, revealing shock and then despair. The television audience witnesses the rupture of what civic faith they had retained.¹²

Not all documentaries will have such a dramatic representation of involved spectatorship; these congregants are forced by circumstance into an active viewing role. In *The Invisible City*, however, Blue encouraged his television audience to emulate the congregation by establishing a

phone line to take viewer responses. The calls ranged from reactions to the material already screened to suggestions for other areas to investigate in the remaining shows. The technophiles of the entertainment industry often weave tales of wonder about the coming era of interactive television, when fiberoptic cable will bring us high-bandwidth communication. Unfortunately, one gets the sense that what excites them most is lacing the populace ever more tightly into the intricate bondage of postindustrial consumption. Working only with the simple twisted copper wires of the telephone, Blue pointed to the greater possibilities of a responsive media.

Complex Conclusions

What impact did the complex documentaries have? If they are judged solely by their success or failure to effect change in the public sphere, we may not be getting to the most pressing issues. Blue's television work was seen by a small audience over a decade ago and has since been fairly obscure. On the one hand, there is always something admirable in bravery, and in the go-go years of Texas real estate, Blue was courageous even to mention the issues of coordinated urban planning and increased taxation. On the other hand, *Who Killed the Fourth Ward?* neither halted nor reversed the decline of the neighborhood. Likewise, in *The Invisible City*, neither Blue nor the panel comes to any miraculous consensus about solutions, beyond establishing a more coordinated plan for urban growth and creating a better safety net for the poor workers who were flocking to Houston from the Northeast in search of Sunbelt jobs. In terms of its effect on public policy, it is fairly evident that *The Invisible City* has become the invisible nation and that the homeless are still just that. Yet it is vital to think of the complex documentary in terms of process, holding it accountable neither to the demands of the media's market economy nor to the stakes of political infighting.¹³

In *Who Killed the Fourth Ward?* and *The Invisible City*, James Blue brought the issue of housing to the public years before the nation took notice of its homeless citizens. In both works, James Blue enacted the role of the mediamaker as ombudsman—a sympathetic observer who responds to community problems by investigating and showing how people are being wronged. Blue's viewers are active spectators involved in a process of exploration and, crucially, the demystification of both urban politics and the media. In making complex documentaries, James Blue's focus was empowerment. What he wanted was to have "not only the subject, but the audience, seize control of the endeavor." The process begins with investigation and continues through some form of exposition, with the goal of effecting change, starting at the level of the viewer's perception.

An environment devoid of people interested in making or viewing such works, and without the facilities for the production and dissemination of independent media, is unlikely to bring about such perceptual evolution. So it was that through the 1970s, first at Rice and then at the State University of New York-Buffalo, Blue developed a specifically activist approach to the teaching and making of documentary. He was instrumental in establishing Houston's Southwest Alternative Media Project (SWAMP) and worked closely with the access space Media Study Buffalo. For Blue, a media center "was a tool for democracy, a vehicle for access to, control, and distribution of film and video information" (Bannon 9). From the start, the complex documentary was designed to make use of the university's mix of production facilities and eager student mediamakers and to take advantage of the familiarity of those in alternative spaces with the local urban landscape.

The complex documentary's conceptual rigor buttresses the filmmaker's attempts to deal with the superdense information

environment of the city while at the same time acknowledging that the very rendering of meaning from such a site is a process worthy of discussion in its own right. An intermeshing of complexities is evident in all aspects of this television work: in its sophisticated formal construction; in the foregrounding of the subjective nature of documentary narration; and on the level of spectatorial reception. Breaking these down more specifically, Blue's complex documentary announces itself in the following ways: on the formal level with visible focus checks, hanging boom mikes, and nonnaturalized camera moves; in the self-conscious artifice of the editing techniques; through the foregrounding of the documentary form's subjective narrative of process; with the presence of a panel of fact checkers serving as a guide for involved spectatorship; and finally with the incorporation of viewer response into the fabric of the shows themselves.

In a farewell to Blue written after his death, Gerald O'Grady, the founder of Media Study Buffalo, summed up the impact of the complex documentary. It "located film in a more complex interaction with political culture. It was invested in promoting community efforts to examine social and economic issues by presenting and analyzing them through community-based media. [Blue] had transferred his hope to the process through which a work, by attracting and holding an audience on television, could move its members towards participating in solving the problems presented" (O'Grady).

More than 10 years after O'Grady identified the core of the complex documentary, the need for an independent media culture that will be able to make meaning in an increasingly cluttered and stimulating technologically mediated society has grown rather than lessened. Though the call for "meaningful" media has long been a rallying cry for the populist or progressive elements of the film and video community, there are new ways of con-

them to material on the mayor that he has shot which has an immediate impact on the residents of the Fourth Ward and their perceptions of their shared situation.

¹³ We can, however, somewhat gauge the reactions of the international independent film and video communities to Blue's work. Colin Young, who had brought Blue to teach at the National Film School of Great Britain in 1980, described the response to the complex documentaries during a posthumous retrospective Blue received at the Cinéma du Reel Festival in Paris in 1981: "[They] were completely unprepared for the Houston tapes, finding it hard to conceive of a television system in Europe which would be open to such work. We explained that James had helped create the points of access in Texas and elsewhere—that everything had to be fought for" (Jackson 5).

¹⁴ In *Strange Weather*, Andrew Ross begins to formulate a "green theory" by drawing from the work of writers such as Murray Bookchin.

Works Cited

- Bannon, Anthony. "An Interview with James Blue." *Afterimage* 8.3 (Oct. 1980): 9-13.
- Benjamin, Walter. "The Work of Art in the Age of Mechanical Reproduction." *Illuminations: Essays and Reflections*. Ed. Hannah Arendt. Trans. Harry Zohn. New York: Schocken Books, 1969. 217-51.
- Blue, James. "Thoughts on Cinéma Verité and a Discussion with the Maysles Brothers." *Film Comment* 2.4 (Fall 1964): 22-30.
- . "One Man's Truth: An Interview with Richard Leacock." *Film Comment* 3.2 (Spring 1965): 15-22.
- Bookchin, Murray. *Remaking Society: Pathways toward a Green Future*. Boston: South End, 1990.
- de Michiel, Helen. "Towards a Sustainable Media: New Paradigms for Film and Video." Paper presented at the Society for Cinema Studies Annual Conference, New Orleans, 1993.
- Haraway, Donna. "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective." *Simians, Cyborgs and Women: The Reinvention of Nature*. New York: Routledge, 1991. 183-202.
- Hewitt, Don. *Minute by Minute....* New York: Random House, 1985.
- Jackson, Lynne. "Tangled Up in James Blue: A Committed Filmmaker's Journey through Independent and Commercial Filmmaking, Propaganda, Documentary, Observational Cinema and Alternative Media." Ph.D. diss., New York University, 1992.
- Leab, Daniel J. "See It Now: A Legend Reassessed." *American History/American Television*. Ed. John E. O'Connor. New York: Ungar, 1983. 1-32.
- Mamber, Stephen. *Cinéma Verité in America*. Cambridge: MIT P, 1974.
- Nichols, Bill. "The Voice of Documentary." Rosenthal. 48-63.
- O'Grady, Gerald. "EE-EE OW! A YIP-I-O-EE-AY! A Farewell to James Blue." *James Blue*. Catalogue published by Media Study, Buffalo, 1980.
- Penley, Constance, and Andrew Ross. "Cyborgs at Large: Interview with Donna Haraway." *Technoculture*. Eds. Constance Penley and Andrew Ross. Minneapolis: U of Minnesota P, 1991. 1-20.
- Pryluck, Calvin. "Ultimately We Are All Outsiders: The Ethics of Documentary Filming." Rosenthal 255-68.
- Rosenthal, Alan. "You Are on Indian Land, George Stoney." *The Documentary Conscience: A Casebook in Film Making*. Berkeley: U of California P, 1980. 346-56.
- Rosenthal, Alan, ed. *New Challenges for Documentary*. Berkeley: U of California P, 1988.
- Ross, Andrew. *Strange Weather: Culture, Science and Technology in the Age of Limits*. New York: Verso, 1991.
- Rouch, Jean. "The Camera and Man (Extract)." *Anthropology—Reality—Cinema: The Films of Jean Rouch*. Ed. Mick Eaton. London: British Film Institute, 1979. 54-63.
- Ruby, Jay. "The Image Mirrored: Reflexivity and the Documentary Film." Rosenthal 64-77.
- Sharits, Paul. "Seeing: Hearing." *The Avant-Garde Film: A Reader of Theory and Criticism*. Anthology Film Archives Series 3. Ed. P. Adams Sitney. New York: New York UP, 1978. 255-60.

212 min. d. light sun 2 PM

Vol. 23 No. 4 \$5.00

afterimage

The Journal of Media Arts and Criticism published by the Visual Studies Workshop

**UNPACKING POSTCOLONIALISM
MEDIA AND COMMUNITY CHANGE**

**BETTY HAHN:
PHOTOGRAPHY OR MAYBE NOT**

**ROTTERDAM'S
"COUNTER CULTURES" EXHIBITION**

TINA MODOTTI'S PHOTOGRAPHS

**BOOKS RECEIVED AND NOTED,
NEWS AND NOTICES**

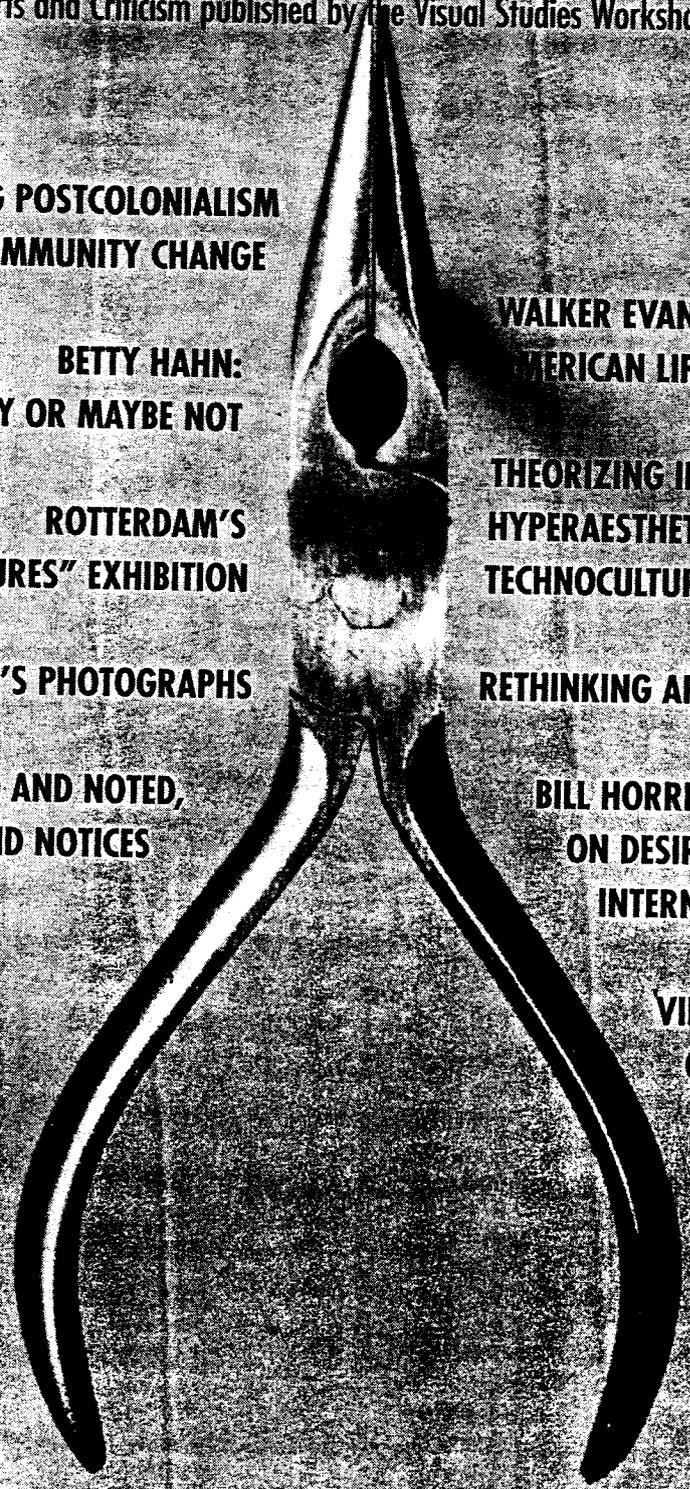
**WALKER EVANS AND
AMERICAN LIFE**

**THEORIZING IN REAL TIME:
HYPERAESTHETICS FOR THE
TECHNOCULTURE**

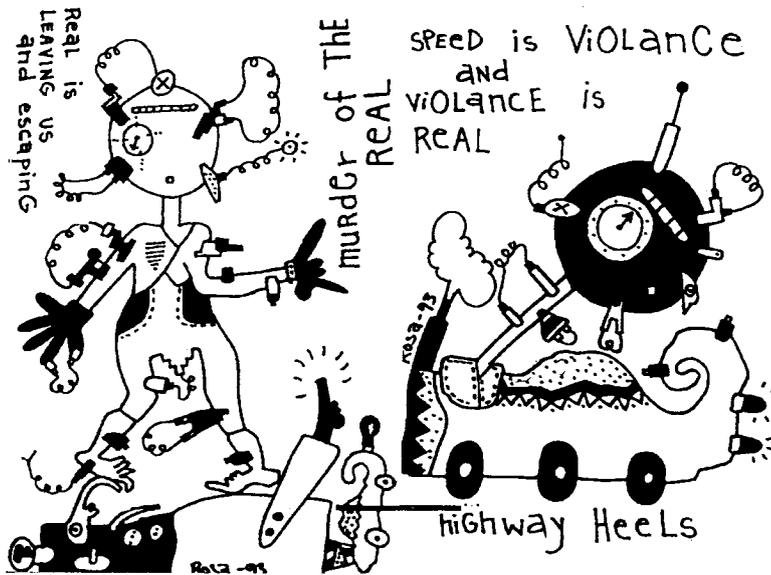
RETHINKING ARTS FUNDING POLICY

**BILL HORRIGAN
ON DESIRE AND THE
INTERNET**

**VINCE LEO
ON PHOTO BOOKS
FOR YOUNG
PEOPLE**



THEORIZING IN REAL TIME: HYPERAESTHETICS FOR THE TECHNOCULTURE



Page spread from *Imagologies: Media Philosophy* (1994) by Mark C. Taylor and Esa Saarinen.

PETER LUNENFELD

NOSTALGIA FOR THE FUTURE

Infinitely tiny partitions of time contain the equivalent of what used to be contained in the infinite greatness of historical time.

—Paul Virilio¹

I SUFFER FROM NOSTALGIA FOR THE FUTURE. I am one of those people who works with computers, a category fast becoming ubiquitous within the postmodern information economy. I find myself missing systems, softwares, tools and products before they are even gone. I miss them because I know that the ever redoubling speed of digital technologies will render them obsolete memories in the blink of my too human eye. If I do not prepare myself emotionally for their absence, even before the moment of their release, I will be less able to adjust to the immediate future that will regard them either as detritus or charming anachronisms. Only nostalgia for the future allows me the mental space to confront the convergence of digital technologies and cultural production.

On the digital frontier the computer encompasses the arts, entertainment, music, communication and education. The ability to represent text, audio and visual information in a uniform binary code, and the development of an infrastructure to distribute this information on demand and around the world has created a new cultural environment. Of what do the electronic arts consist? The usual descriptors that come to mind include computer graphics, hypertext, digital photography, virtual reality, on-line communities, chat rooms, non-linear video, Web sites, MUDs, MOOs, home pages, etc. The computer is often metaphorized as a "desktop," but is better thought of as a universal solvent, dispersing all our other media in a digital suspension, from which pulled constituent elements are separated and then deployed.

The digital frontier is an environment brimming with energy. As John Perry Barlow, long time lyricist for the Grateful Dead, points out: "It used to be that you hung around rock'n'roll because that was where the interesting people are, but ... [nothing] has the creative juice at the moment that I see in the interesting hybrid

that's developed between the computer and artists."² Theorists, designers, teachers, artists, students, users and writers need to take stock of the technologies available, but they must do more than simply master the mechanics of their use. This has become an era of bad design and unsophisticated computer-inflected art. The typographic nightmare of early desktop publishing will be seen as only the beginning of a 20-year nadir of design aesthetics. As bad as bad media aesthetics are when static, they will worsen as they become interactive. It is not enough to struggle towards hypermedia; we need to develop a hyperaesthetic.

THE FUTURE/PRESENT

An enthusiastic respect for the word 'future,' and for all that it conceals is to be ranked among the most ingenious ideologies.

—Georges Duhamel³

Remember future shock: the "new" boldly announces itself, cuts through the quotidian fog and forces one to confront tomorrow. It is already tomorrow, however, and the future does not shock—it simply exists as a co-equal partner with the present. Grammarians speak of the future perfect tense, which indicates an action that begins in the past or the present and will be completed later. Example: "The snow will have melted before you arrive." Explanation: Melting of snow has begun, is continuing and will soon be completed. We need a similar term to describe the contemporary moment—no longer simply the present, but rather a future/present, a phenomenological equivalent to the future perfect tense. Example: "In the future/present, digital post-production techniques will have become obsolete by the time you learn them." Explanation: The technologies have been developed, are being refined and will soon outstrip your expertise.

That the cycles of development, maturation and decay of future/present environments is ever accelerating has been noted by others too numerous to mention. In fact, the blossoming of meta-commentary is itself an aspect of this acceleration. There is a publishing boom in this as yet undefined field: it ranges from books about computer-inflected art, to investigations of the architectures of cyberspace, to monographs on the linkages between hypertext and critical theory. Just as robust are the jour-

nals and magazines, with articles on the technoculture popping up everywhere, from *Social Text* to *The Whole Earth Review*, plus the fulminations of the id and the superego of technocultural publishing, *Mondo 2000* and *Wired*. These outlets, and the blossoming of discourse on the World Wide Web, offer the conclusion that if the culture is to wrest meaning from contemporary experience, it must come to terms with the future/present ubiquity of the computer.

The cybernetic realm metastasizes faster than cancer, and classical aesthetics is not the diagnostic tool it once was. Yet who said the culture is more pathological now than it has ever been? It is not. Etymologically speaking, to diagnose is to distinguish, and distinguishing one from the other, *a* from *b*, apples from oranges, is the basic function of cognition. Once we distinguish a technoculture and its future/present from that which preceded it, however, we need to move beyond the usual tools of contemporary critical theory. Methodologically sophisticated as this theory has become, it remains imbricated in analog systems. But contemporary critical theory as it is presently constituted in the humanities is insufficient to fully account for this new object of study. A critical reading of the techno-culture must involve more than the facile overlay of well-worn vocabularies and paradigms onto new objects of investigation. Three distinctive strategies of confronting the future/present have developed, each with its own temporal orientation. The first is a confrontational attitude that concentrates on the past, a neo-luddite approach. The second attempts to keep pace with the present, manifesting itself in an almost hysterical neologizing. The third looks forward, deploying a discourse that mimics the structures and concerns of science fiction. I conclude the essay with a fourth alternative, a hyperaesthetic that encourages a hybrid temporality, cycling through the past, present and future to critique the technoculture.

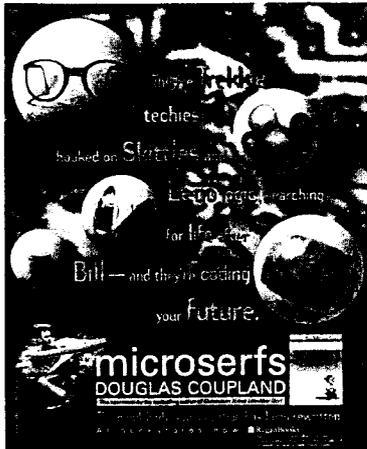
NEO-LUDDITES

All technologies should be assumed guilty until proven innocent.

—Jerry Mander⁴

THERE ARE THOSE IN OUR CULTURE who do not suffer from what Allucquère Rosanne Stone refers to as "cyborg envy": "the desire to cross the human/machine boundary" that computer technologies and their interfaces seem to promise.⁵ Books like *War in the Age of Intelligent Machines* (1991, by Manuel De Landa) and *Cyborg Worlds: The Military Information Society* (1989, Les Levidow and Kevin Robins, eds.) offer arguments that the new cybernetic technologies are not removed enough from their origins in the military's obsession with C³I (Communications, Command, Control and Intelligence) to be seen as entirely beneficent.⁶ Yet as cautionary as these critiques are, they still do not go as far as others. In deference to the Luddites, those early nineteenth-century bands of English mechanics and their supporters who set themselves to devastate the manufacturing machinery in England's Midlands and North, this farthest wing of techno-critique can be called "neo-luddite."⁷ Neo-luddite thought approaches digital socio-cultural manifestations as phenomena that must be examined with the focus firmly on the past—looking at historical and even pre-historical models of a more "humane" relationship between the environment, culture and technology. The neo-luddites do more than risk the approbation of the technophiles—they court it. Author and provocateur Kirkpatrick Sale goes as far as smashing computers with sledge hammers during public lectures.

When impassioned ex-advertising executive turned director of the ecologically-minded Elmwood Institute, Jerry Mander, maintains "the importance of the negative view," he is expressing exhaustion with the pro-social rhetoric of the twentieth century's technology boosters. Philosopher Langdon Winner succinctly questions: "What kind of world are we building here?"⁸ Though there is no catchism for the neo-luddites, they could agree that the ills of the future/present's post-industrial revolution can only be solved by attention to the lessons of the past. Groups ranging from Earth First! (the radi-



Advertisement for Douglas Coupland's *Microserfs*. From *Wired* (October 1995).

cal environmentalist organization) to the *Processed World* collective (publishers of a magazine about the horrors and boredom of the electronic workplace) may not always accept the label "neo-luddite," but they often find themselves in sympathy with this perspective on the past.⁹

Critical theorist Andrew Ross, by no means a neo-luddite, posits that "the high-speed technological fascination that is characteristic of the postmodern condition can be read . . . as a celebratory capitulation to the new information technologies."¹⁰ For those who adhere to this reading, the effect of the move to the digital frontier merely atomizes, accelerates and renders instantly accessible the violent, racist, sexist, consumerist and anti-environmental excesses of post-industrial capitalism. If so, who needs it? What point is there in theorizing that which deserves merely scathing reportage? Yet the hard-line, neo-luddite stance offers a critique of an expansionist, consumption oriented technology from a conservationist, pacifist point of view, often inspired by the philosophies of aboriginal peoples, rather than a response to the art and culture of the digital frontier. As stimulating as this critique may be, it is of less interest to me than commentary on the actual cultural manifestations of the digital frontier.

Attempts to meld the neo-luddite approach to technoculture to a more explicit aesthetic analysis often situate computer-inflected arts as handmaidens to the ubiquitous entertainment industries of post-industrial capitalism. Poet and essayist William Irwin Thompson positions the citizenry of the technoculture as the "electropasantry in the state of Entertainment."¹¹ In *Generation X* (1991), a novel far more interesting than the marketing label it became, author Douglas Coupland is less concerned with technopolitics, which he labels "bread and circuits," than in post-baby boomers and their numbed personae. The ever expanding digital frontier contributes to what he has termed "option paralysis: the tendency when confronted with numerous choices to make none."¹²

Yet we must make choices, especially if we reject Mander's complete skepticism about new technologies. The question becomes how to reason or feel our way vis-a-vis the technoculture, without relying too heavily on a perspective focused on the past. Admittedly, the digital frontier has an embryonic and oddly amalgamated politics. It professes on some levels to be inclusive and open to divergent voices—for example, the digital democracy of the electronic meeting house so central to the populism of Ross Perot's quixotic 1992 presidential campaign. The digital frontier is a cash-intensive proposition that dramatically demonstrates the split between rich and poor, north and south. Regardless of the growing presence of women and people of color, especially in the "new edge" of the movement, there is still a poor enunciation of gender consciousness, and questions of race are elided. The entire field continues to maintain its gnostic and nerdy insularity, with experts happily plying their trades for anyone who buys them equipment and rents their time. In the age of mechanical reproduction, Walter Benjamin wrote that "immediate reality has become an orchid in the land of technology." In the age of electronic replication, his concern that technology overwhelms lived experience has even greater resonance. The best hope for the digital frontier is to educate farmers to plant orchids there. The question, then, becomes, how to effect this education.

LEXICOGRAPHERS OF THE FUTURE/ PRESENT

Rasterbator—A compulsive digital manipulator. A Photoshop abuser.

—"Jargon Watch," *Wired* Vol. 2, no. 4 (April 1994)¹³

TO ENTER A COMMUNITY and to practice its crafts, an individual must learn to speak a specific language. Eric Raymond, the editor of *The New Hacker's Dictionary* (1991) writes of the computer community's "almost unique combination of the . . . enjoyment of language-play with the discrimination of educated and powerful intelligence" to account for the prodigious rate at which it coins new words, acronyms and slang to describe and comment on the systems it creates and utilizes.¹⁴ Critical discourse's adoption of the hackers' penchant for neology is evident throughout the myriad of academic journals and conferences springing up to confront the technoculture. The venerable *South Atlantic Quarterly*, founded in 1901, published an issue almost a century later entitled, "Flame Wars," with essays like "Compu-sex: Erotica for Cybnauts (1993)." In the acronymic triads of the

lurker:

n. One of the "silent majority" in an electronic forum; one who posts occasionally or not at all but is known to read the group's postings regularly. This term is not perjorative and indeed is casually used reflexively: "Oh, I'm just lurking." Often used in the lurkers, the hypothetical audience for the group's flame-emitting regulars.

—from *The New Hacker's Dictionary* (1991) by Eric Raymond

humanities, CAA, SPE, MLA and SCS (the College Art Association, the Society for Photographic Education, the Modern Language Association and the Society for Cinema Studies), panels and papers bulge not merely with references to cyberspace and cyberpunk—the direct descendants of Norbert Wiener's "cybernetics"—but also their distaff cousins: cybersex, cyberfunk, cyberbunk, cyberpunk, cyburbia, *et cetera*, or perhaps, *ad nauseam*. I think that this neologorrhea—to coin a phrase—is a response to the foreshortening of the horizon of new technologies.¹⁵

As the future/present barrels along, the critical community follows the lead of developers and hackers, refashioning language to account for the novelties it confronts. This accounts for the neologizers' fascination with the immediate present. These scholars are engaged in a breakneck race to enunciate the immediate moment. Yet one of the features this second stance towards technoculture is that novelties—and the vocabularies that grow with them—have ever-quickenning half-lives before they turn into constituents of the general culture or painfully anachronistic clichés. Less than a decade after the release of William Gibson's *Neuromancer* (1984), the term "cyberpunk" was already beginning to seem creaky. When a movement makes the cover of *Time*, it is usually over, and so here entered into evidence is the February 8th, 1993 cover blurb: "Cyberpunk: Virtual sex, smart drugs and synthetic rock'n'roll! A futuristic subculture erupts from the electronic underground." This feature—which could have borne the alternate title, "Are Cyberpunks a Danger to Your Kids?—A Time-Warner Guide for Parents"—served to foreground the problems of chasing furiously after the present. The recent explosion of journalistic hype about the Internet (following the period of hype about virtuality) is simply more evidence of such hysteria. But, hysterical neologizing is not enough. There must be more than mere naming. We must also take care to develop a process for contextualizing the new words and concepts generated in and by the future/present.

VAPOR THEORISTS VS. DIGITAL DIALECTICIANS

Media philosophy attempts to move beyond existing institutions to imagine and fashion possibilities that *might be*.

—Mark C. Taylor and Esa Saarnen¹⁶

THE FORESHORTENED HORIZON OF NEW TECHNOLOGIES also causes a parallax in critical vision. The position of the critic with regard to the culture is always in flux. Driven by the market and the laboratory, techno-mediated culture is constantly mutating—leading cultural critics like R. L. Rutsky to observe that we don't read science fiction so much as live it. Rutsky maintains that it is a conceit to imagine that we are capable of stepping outside the future/present to comment on it from a "stable" posi-

tion. He follows the lead of Donna Haraway, who urges us to make the best of this and metaphorize our present condition "in a kind of science fictional move . . . imagining possible worlds."¹⁷ Such talk of imagining announces that the temporal focus of this third approach to technoculture is the future. But is this the best strategy? Must we adopt a science-fictionalized discourse to critique a science-fictionalized world? The danger here is that the critic can be drawn into an ever-escalating cycle of conjecture and unsubstantiated speculation, that generally sorts out into either utopian longings or dystopian warnings. Are scholars to critique the material conditions of the future/present or to speculate on the phantasmic?

The computer industry respects a hierarchy of realisms: market-proven products stocking the shelves at the local CompUSA superstore have a substantiality that the new releases to be purchased only by the brave do not. Beta packages with testers are treated with more respect than airware offered as bait to reel in the curious on the floor of massive trade-shows like COMDEX. Most ineffable is "vaporware," sold only to exceedingly gullible venture capitalists. Are critics to follow suit, offering a brand of dialectical immaterialism—a vapor theory of rumina-

tions unsupported by material underpinnings?

This is certainly not to say that the science-fictionalized discourse should be stamped out. I am simply worried that too many theorists are modeling their methods after work like Haraway's insightful and speculative essay, "A Cyborg Manifesto" (originally published in 1985) without acknowledging that the insights contained within her work grow from a long-standing inquiry into the material history of science and its practices. In *Future Hype: The Tyranny of Prophecy* (1992), Max Dublin refers to sociologist Daniel Bell's particularly offensive notion that just as historians create "retrospective history," futurologists are writing "prospective histories." Dublin creates a savage image of a "time-telescope" first focused on the past, then mechanically flipped around "one hundred and eighty degrees" to the future.¹⁸ My complaint about the science-fictionalized discourse of contemporary theory is that critics should differentiate themselves from unscrupulous futurists. Theorists contemplating the future/present should ground their insights in the constraints of practice, speculating *after* thorough investigations, not *before*.

Subsuming the neologizing and science-fictionalized discourse to the investigation of the production, consumption and use of computer-inflected media technologies is a strategy that I have previously labeled the "digital dialectic."¹⁹ The digital dialectic educates his or herself in the ways of these new technologies, thinking not only of their theoretical potentials but also of their practical limitations. Here, for example, is critic Timothy Druckery, who in calling for a new approach to interactive art forms also requires a thorough investigation of the modes of production and dissemination of this work: "A model of interactivity will have to include an assessment of the fragmentation of knowledge, a reformulated concept of identity within discourse as well as the creation of media to manage information dispersal, and a refigured model for access and distribution."²⁰ Also in line with a digital dialectic is the work of William J. Mitchell, who in *The Reconfigured Eye* (1992) situates his theses about "visual truth in a post-photographic era" within a meticulously researched account of the practice of computer imaging technologies.²¹

In contrast, the discussions surrounding virtual reality exemplify a discourse that often seems entirely removed from any conception, much less comprehension, of computer graphics technologies. Why discuss the economical use of graphics primitives or the intricacies of interface design when you can wax rhapsodic about teledionics, the mechanical aids to virtual sex? It is one thing when the founder of pioneering Virtual Technologies Corporation (VPL), Jaron Lanier, crafts a gnomic and visionary public persona; after all, he had a start-up company he needed to hype. It is quite another when film theorist Anne Friedberg discusses the dissolution of gender

through the adoption of virtual identities, as though this were technically feasible, or even likely to move beyond mere masquerade.²²

The term "leather academics" has been coined to describe that segment of the professoriat that concerns itself with fashion, theory and media. The digital frontier seems to be attracting such academics at an ever escalating rate. Williams College's Mark C. Taylor and the University of Helsinki's Esa Saarinen basked in the mediasphere's attentions for the requisite 15 minutes when they conducted an educational experiment in 1992. They co-taught students in America and Finland, linking their classrooms together by computer networks and phone, fax and video transmission. Two years later they published their on-line theoretical doodlings in an over-designed volume entitled *Imagologies: Media Philosophy* (1994). Taylor and Saarinen demand that we "move beyond existing institutions to imagine and fashion possibilities that *might be*," eliding rigorous investigations of what "was" and what "is." No less than the neo-luddites and the hysterical neologizers, those who practice a science fictionalized discourse about the digital frontier need to readjust their temporal focus.

crippleware:

n. 1. Software that has some important functionality deliberately removed, so as to entice potential users to pay for a working version. 2. [Cambridge] Guiltware that exhorts you to donate to some charity (compare careware, nagware). 3. Hardware deliberately crippled, which can be upgraded to a more expensive model by trivial change (e.g., cutting a jumper).

—from *The New Hacker's Dictionary* (1991) by Eric Raymond

HYPERAESTHETICS IN REAL TIME

When a poetic structure attains a certain degree of concentration or social recognition, the amount of commentary it will carry is infinite.

—Northrup Frye²³

TRADITIONALLY, THE STUDY OF AESTHETICS is the study of stable forms. In literature the traditional genres of the epic, lyric and the dramatic still generate debate, two and-a-half millennia after Aristotle. The discourse around art has concentrated on the concrete object: painting, sculpture and architecture. The advent of the computer, however, has destabilized these systems—blurring categories and boundaries beyond even postmodern hybrids. Artist and theorist Peter Weibel has described a categorical error that many make in their critiques of technological work: aesthetics of the static are being applied to dynamic arts.²⁴ The neo-luddites focus on the past; the neologizers on the present; and the science-fictionalizers on the future. A dynamic object, however, requires constant

the other.²⁵ This brings to mind the contrast between the discrete steps of digital imaging systems versus the continuity of change in analog photographic technologies. Expanding upon Bohr's work, Paul Dirac pointed out in 1928 that the most we can know of a microparticle is its partially defined state—its contribution to an irresolvable ensemble. This is quite different from being able to pin down the exact location of a particle in the Cartesian grid at place *x*, *y* and *z* and at time *t*.²⁶ In a like manner, we can no longer count on the physical unity of the book, and cannot precisely determine the position of the proposition within a hypertext system. We simply accept its position as a probability and make do with that level of uncertainty. I do not want to stretch this physics metaphor much further, in large part because orthodox quantum mechanics relies on aggregates, the law of large numbers allowing for meaningful probabilities. Rhetoric and aesthetics, even hyperaesthetics, are notoriously uncondusive to analysis via large numbers and we are thus thrust back upon that old standby, the close analysis of exemplars.

"The sweet hot reek/Of the electric saw/Biting into decades." So closes a stanza of *Agrippa: A Book of the*

Dead (1992), a collaborative project between book publisher Kevin Begos, artist Dennis Ashbaugh and Gibson. Gibson is best known as the author of the previously mentioned *Neuromancer*, the most influential cyberpunk science fiction novel. *Agrippa*, however, is something quite distinct. Described as "a black box recovered from some unspecified disaster," *Agrippa* opens to reveal charred-edged pages, covered with repeated six-letter patterns: "AATAT/TACGA/GTTT." After a moment, the realization comes that these are not merely couplets of concrete poetry, that, in fact, they are the signifiers of the genetic code, sequences of deoxyribonucleic acids, DNA. The pages of DNA codes are intermingled with Ashbaugh's engravings of subjects ranging from guns to telephones. Embedded within *Agrippa*'s back cover is a computer disk that contains the text of Gibson's poem. What is unusual is not simply that the text is designed to be read only on the screen—many hypertexts are written to be read this way—but rather that Gibson's work is meant to be read once and once only: the floppy disk is programmed to destroy the text as soon as it is read. The

creeping featuritis:

n. Variant of creeping featurism, with its own spoonerization: *feeping creaturitis*. Some people like to reserve this form for the disease as it actually manifests in software or hardware, as opposed to the lurking general tendency in designers' minds. (After all, -ism means "condition" or "pursuit of," whereas -itis usually means "inflammation of.")

—from *The New Hacker's Dictionary* (1991) by Eric Raymond

recalibrations in focus, a shifting between three temporalities. Hyperaesthetics requires theorization in real time.

Examine the temporality of text: the action of reading is always linear; meaning is formed by stringing words together one after another in sequence. Yet in the future/present, the computer allows for non-linearity in the way that authors present materials and readers/viewers extract information. The constant play between interlinked nodes of information transforms our conceptions of rhetoric: we can no longer know where a proposition will come in relation to other propositions. Our situation is somewhat akin to that facing the originators of quantum physics. In 1913, Niels Bohr observed that the position of the electron within the atom had more in common with musical notes on a piano's keyboard, which make definite jumps from key to key, than with the notes of a string instrument—that can flow smoothly one to

poem itself is about family and memory, which are usually considered to be elements of our lives that endure. *Agrippa* plays with temporalities; the past, present and future implode as an integral part of experiencing the work. That the material is intended to be read only once, and then to deteriorate, is itself the deftest of hyperaesthetics— "biting into decades."²⁸

When literary critic Northrup Frye observed how certain poetic structures can bear limitless commentary, he was referring to the Bible and the Vedantic texts. Fulfilling a McLuhanite dictum, the computer has become both the medium and the message of the technoculture—the universal solvent of the digital, and Frye's observations are beginning to apply to the future/present's computer-inflected media as well. Yet it is attention to the particulars of electronic objects and digital systems that both grounds and historicizes hyperaesthetics. The three strategies discussed in this article—neo-luddism, neology and science-

fictionalization—developed as attempts to comment upon the computer's impact on culture in general. These have proven to be insufficient because their scope is simply too wide, while their temporal focus is too narrow—and not suited for dynamic recalibration. What is called for is not simply the building of a metacritical language, but a working model for practice. Theory in real time is designed as much for its use value for the artist as for its expedience for the theorist.

PETER LUNENFELD teaches the history and theory of imaging technologies at the Art Center College of Design, Pasadena, CA. He is the founder of *mediawork*: The Southern California New Media Working Group and editor of *The Digital Dialectic: New Essays on New Media* (forthcoming from The MIT Press).

NOTES

1. Jérôme Sans, "Interview with Paul Virilio," *Flash Art* no. 138 (January/February 1988), pp. 57-61.
2. Michael Glosny, "The Verbum Interview," *Verbum* Vol. 5, no. 2 (Fall/Winter 1991), p. 18.
3. Georges Duhamel, *America: The Menace, Scenes of the Life of the Future*, Charles M. Thompson, trans. (Boston: Houghton Mifflin, 1931), p. xii.
4. Jerry Mander, *In the Absence of the Sacred: The Failure of Technology and the Survival of the Indian Natives* (San Francisco: Sierra Club Books, 1991), p. 43.
5. Allucquere Rosanne Stone, "Will the Real Body Please Stand Up," in Michael Benedikt, ed., *Cyberspace: First Steps* (Cambridge, MA: MIT Press, 1991), pp. 81-118. Also see her *The War Between Technology and Desire at the End of the Twentieth Century* (Cambridge, MA: MIT Press, 1995).
6. Les Lewkow and Kevin Robbins, eds., *Cyborg Worlds: The Military Information Society*, (London: Free Association Books, 1989); Mamel De Landa, *War in the Age of Intelligent Machines*, (New York: Zone Books, 1991).
7. Chellis Glendinning resurrects the ghost of Ned Ludd in order to drive a critical wedge in the technoculture in "Notes Towards a Neo-Luddite Manifesto," *Utne Reader* (March/April 1990). Kiripatrick Sale offers a partisan history, with a contemporary moral, in *Rebels Against the Future: The Luddites and Their War on the Industrial Revolution: Lessons for the Computer Age*, (Reading, MA: Addison-Wesley, 1995). Other works of note include Clifford Stoll, *Silicon Snake Oil: Sensational Thoughts on the Information Highway*, (New York: Doubleday, 1995); Sven Birkerts, *The Gutenberg Elegies: The Fate of Reading in an Electronic Age*, (Boston: Faber and Faber, 1994); and Bill McKibben, *The Age of Missing Information*, (New York: Plume, 1993).
8. Langdon Winner, "Artifacts/Ideas and Political Culture," *Whole Earth Review* No. 73 (Winter 1991), p. 18.
9. Oddly enough, the Luddites had an appeal for science fiction authors. In his classic eo-dynastic saga, *Dune*, Frank Herbert created the Butlerian Jihad—a crusade far in the future against computers and thinking machines that spawns the commandment: "Thou shalt not make a machine in the image of the human mind." (Frank Herbert, *Dune*, (New York: Ace Books, 1987, orig. 1965), p. 52). There is even more explicit reference to Ned Ludd in William Gibson and Bruce Sterling's *The Difference Engine*, (New York: Bantam Books, 1991). *The Difference Engine* is a prime example of "steampunk" science fiction, a movement that looks to create alternate, fictionalized histories for the nineteenth century's industrial revolution. "The Luddites are dead as cold ash and steel, we marched and ranted for the rights of labor and such. . . . But Lord Charles Babbage made blueprints while we made pamphlets. And his blueprints built this world." (p. 22). The other historical reference in this passage is to Charles Babbage, a polymath nineteenth-century inventor who created calculating machines, including the programmable "Difference Engine." He is considered the great ancestral figure of computing.
10. Andrew Ross, *Strange Weather: Culture, Science and Technology in the Age of Limits*, (New York: Verso, 1991), p. 99.
11. William Irwin Thompson, *The American Replacement of Nature*, (New York: Doubleday, 1991), p. 31.
12. Douglas Coupland, *Generation X: Tales for an Accelerated Culture*, (New York: St. Martin's Press, 1991), pp. 80, 139.
13. The root of this word comes from the computer's display technology of the "raster grid."
14. Eric Raymond, ed., *The New Hacker's Dictionary*, (Cambridge, MA: MIT Press, 1991), p. 2.
15. I am hardly preaching from a position of grace—after all, the title of this essay incorporates the word, "Hyperaesthetics."
16. Mark C. Taylor and Esa Saarinen, "Media Philosophy," in *Imagologies: Media Philosophy*, (New York: Routledge, 1994), p. 20. Emphasis in the original.
17. See R. L. Rutsky, "TechnoMondo," a paper presented at the Society for Cinema Studies, New Orleans, 1993 and Donna Haraway, "A Cyborg Manifesto: Science, Technology and Techno-Feminism in the Late Twentieth Century," in *Simians, Cyborgs, and Women: The Reinvention of Nature*, (New York: Routledge, 1991), pp. 149-181.
18. Max Dublin, *Future Hype: The Tyranny of Prophecy*, (New York: Plume/Penguin, 1992), p. 101.
19. Peter Lunenfeld, "Digital Dialectics: A Hybrid Theory of Computer-Inflected Media," *Afterimage* 21, no. 4 (November 1993), pp. 5-7.
20. Timothy Druckery, "Feedback to Immersion: Machine Culture to Neuro-machines/Modernity to Postmodernity," *Computer Graphics: Visual Proceedings, Annual Conference Series*, (New York: The Association for Computing Machinery, Inc., 1993), pp. 126-128.
21. William J. Mitchell, *The Reconfigured Eye: Visual Truth in the Post-Photographic Era*, (Cambridge, MA: MIT Press, 1992).
22. "Previous 'identity bound' positions of race, class, ethnicity, age and gender can be technologically transmuted. In virtual reality . . . men can be women, women can be men, and so forth." Anne Friedberg, *Window Shopping: Cinema and the Postmodern*, (Berkeley: University of California Press, 1993), p. 145.
23. Northrup Frye, *The Anatomy of Criticism: Four Essays*, (New York: Atheneum, 1970), p. 88.
24. Peter Weibel, *Transformationen Der Techno-Aesthetik*, (Frankfurt: Suhrkamp, 1991).
25. The closest the piano can mimic the continuity of string instruments is a glissando, which is a sliding effect achieved by sounding a series of adjacent tones in rapid succession.
26. Niels Bohr, "On the Constitution of Atoms and Molecules," *Philosophical Magazine* Vol. 26 (1913); P.A.M. Dirac, "The Quantum Theory of the Electron," *Proceedings of the Royal Society Mathematical and Physical Sciences A*, Vol. 117 (1928); and "The Quantum Theory of the Electron, Part II," *Proceedings of the Royal Society Mathematical and Physical Sciences A*, Vol. 118 (1928).
27. Peter Schwenger, "Agrippa, or the Apocalyptic Book," *South Atlantic Quarterly* Vol. 92, no. 4 (Fall 1993), pp. 617-626.
28. An unofficial copy of *Agrippa* can be found at <http://busch.camu.edu/~erich/agrippa>.