



Postcolonial Media Theory

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The artist Guillermo Gómez-Peña recently commented that in discussions of electronic media “twenty years of post-colonial theory simply disappear.”¹ He was referring to the large and influential body of work known as postcolonial studies, which for the past two decades has been notoriously absent from electronic media practice, theory, and criticism. This absence is not due to the lack of theory in the field, as there has always been theoretically based writing

María Fernández

Postcolonial Media Theory

about electronic media. Much of the early work was based on the theories of Marshall McLuhan and other utopians characterized as “inebriated with the potential of new technology.”² More recent discussions have been anchored in the work of theorists including Walter Benjamin, the Situationists, Jean Baudrillard, Gilles Deleuze, Félix Guattari, Paul Virilio, Jacques Lacan, Luce Irigaray, and Donna Haraway. This eclecticism, in conjunction with recent debates around topics such as multiculturalism, colonialism, the 1992 quincentenary, identity politics, and whiteness studies, make it ever more striking that postcolonial studies and electronic media theory have developed parallel to one another but with very few points of intersection.

To be sure, the two fields have had opposing goals. Postcolonial studies has been concerned primarily with European imperialism and its effects: the construction of European master discourses, resistance, identity, representation, agency, gender, and migration, among other issues. By contrast, in the 1980s and early 1990s electronic media theory was primarily concerned with establishing the electronic as a valid and even dominant field of practice. Many theorists were knowingly or unknowingly doing public relations work for digital corporations. This often involved representing electronic technologies, especially the computer, as either value-free or inherently liberatory. Some theorists proposed a utopian universalism built on the concept of electronic connectivity: anyone in the world had only to be connected to be “free.” Before the Gulf War, it was even proposed that the computer would bring peace to the planet, since through electronic connectivity people would come to understand and love one another.³ The magazines *Wired* and *Mondo 2000*, as well as other publications, championed utopian ideas common among the techno-elite.⁴ Encouraging everyone in the world to enjoy the freedom of cyberspace became a crusade.

In 1995 John Perry Barlow, one of the founders of the Electronic Frontier Foundation, opined that “in a few years, every man, woman, and child in the world will be electronically connected.”⁵ He did not entertain the fact that in many parts of the world electricity is still a rare commodity or the possibility that connecting depends on pancapitalist enterprises—to be free you have to pay. He reiterated this ideal in a report on his recent journey to Africa, tellingly published in the form of an explorer’s travelogue in the January 1998 issue of *Wired*.⁶

Such utopian universalism can be seen as replacing the ideals of the “civilizing mission” of earlier colonialisms. As Edward Said has eloquently argued, humanitarian rhetoric is crucial for imperialist projects, since it is through such rhetoric that decent people come to willingly support imperialism.⁷ The promoters of these ideas in electronic media theory could not afford to

1. Guillermo Gómez-Peña, personal communication, September 1997.

2. Timothy Druckrey, ed., *Electronic Culture: Technology and Visual Representation* (New York: Aperture, 1997), 17.

3. See proceedings, SISEA, Groningen, The Netherlands, 1990.

4. See Sadie Plant, *Zeros and Ones: Digital Women and the New Technoculture* (New York: Prentice Hall, 1997) and Esther Dyson, *Release 2.0: A Design for Living in the Digital Age* (New York: Broadway Books, 1997).

5. John Perry Barlow, speech delivered at symposium Mythos Information—Welcome to the Wired World, Ars Electronica 1995, Linz.

6. Much material has been published about the relation between travel literature and imperialism. For an excellent discussion of this topic, see Mary Louise Pratt, *Imperial Eyes, Travel Writing, and Transculturation* (New York: Routledge, 1992).

7. Edward Said, *Culture and Imperialism* (New York: Alfred A. Knopf, 1993), 9–11.



Lee Bul. *Cyborg Blue*,
1997–98. Cast silicone
mixed with paint pig-
ment, steel pipe support,
and steel base. 63 x 27 $\frac{5}{16}$
x 43 $\frac{3}{16}$ (160 x 70 x 110).
Commissioned by
Ssamzie, Ltd., Seoul.
Photo Yoon Hyung-moon.

acknowledge the existence of postcolonial studies, a field concerned with the analysis of colonial discourses and imperialist strategies, at least not until they felt sure that their goals were reasonably well accomplished. What allows us to discuss issues of colonialism in relation to electronic media today is the fact that the incorporation into the global market of parts of the world that can afford connectivity has already occurred. Despite recent urgent calls to “resist the virtual life,” there is no possibility of turning back.⁸

At the opening of this decade, prominent electronic media artists contended that electronic communication would help facilitate global peace as the exchange of text, sound, and image among virtual strangers would increase human empathy and understanding. These artists include Roy Ascott, Bruce Brieland, Kit Galloway, and Sherri Rabinowitz, among many others. Giving little attention to economic and educational limitations, Barlow and Esther Dyson of the Electronic Frontier Foundation still predict the imminent wiring of everyone on the planet.⁹ But in most of the world, connecting requires money, utility infrastructure, literacy, and competency in English.¹⁰ Like the rhetoric of the civilizing mission in previous colonialisms, utopian rhetorics of electronic media occlude the practical project of creating new markets and work forces for capitalist enterprises. In electronic media this applies to all levels of production, from writing code to the assembly line. In his explorer’s travelogue Barlow muses: “Will there be data sweatshops? Probably, but, just as the sweatshops of New York were a way station for families whose progenies are now psychiatrists on Long Island, so, too, will these pass.”¹¹ He does not specify who would reap the economic benefits from these sweatshops. At present one cannot disassociate the manufacture and distribution of these technologies from economic profits made in the developed world or from an ongoing process of the colonization of knowledge that began with the book and continued with media such as film and television. In Said’s opinion, these technologies are crucial for the construction of identity in formerly colonized regions, since colonized peoples learn about themselves through these forms of knowledge.¹²

A survey of critical writing in both postcolonial studies and electronic media theory discloses an overwhelming preoccupation with the body, identity, history, feminism, and agency that could be used imaginatively toward common ends. However, the theorization of these and other subjects in the two fields is frequently in opposition. Can postcolonial studies and electronic media theory be productively reconciled, in spite of the obstacles that stand in the way? Such a reconciliation might temper imperialist initiatives presented in the guise of utopianism in electronic media theory and bring a more global perspective to both fields.

The Body: Flesh versus Virtualization

While in cultural studies, the adjective *posthuman* refers to subjectivities outside the metanarrative of humanism, such as women, queers, and people of color, in electronic media theory it usually indicates the increasing irrelevance of the flesh. Many cybertheorists envision the future as one in which fleshed humans have evolved to greater integration with machines or disappeared altogether. They constantly reiterate the theories of artificial intelligence gurus Hans

8. James Brook and Iain A. Boal, *Resisting the Virtual Life: The Culture and Politics of Information* (San Francisco: City Lights, 1995).

9. Barlow, speech; Dyson, 52.

10. For an excellent discussion of English as an instrument of empire, see Joe Lockland, “Resisting Cyber-English,” in *Bad Subjects*, no. 24 (February 1996). The Brazilian artist Rejane Spitz has discussed the frustration that illiterate people experience in basic banking transactions at automatic tellers in Brazil in “Qualitative, Dialectical, and Experiential Domains of Electronic Art,” FISEA, Minneapolis, 1993.

11. John Perry Barlow, “Africa Rising: Everything You Know about Africa Is Wrong,” *Wired*, January 1988, 158.

12. Phil Mariani and Jonathan Crary, “In the Shadow of the West: Edward Said,” in *Discourses: Conversations in Postmodern Art and Culture*, ed. Russell Ferguson, William Olander, Marcia Tucker, and Karen Fiss (New York: New Museum of Contemporary Art, 1990), 95–96.



Björk. *Hunter*, 1998.
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13. Hans Moravec, "Pigs in Cyberspace," <www.nada.kth.se/~nv91-asa/Trans/pigs>; see also Moravec, *Mind Children: The Future of Robot and Human Intelligence* (Cambridge, Mass.: Harvard University Press, 1988).

14. References to the fleshed body as meat appear in several of William Gibson's books, including *Neuromancer* (New York: Ace, 1984), *Count Zero* (New York: Ace, 1986), and *Mona Lisa Overdrive* (New York: Bantam, 1988). McKenzie Wark refers to nostalgia in his response to "Slacker Luddites," paper delivered by Critical Art Ensemble at the symposium Mythos Information. For an enlightening analysis of posthuman development, see Critical Art Ensemble, *Flesh Machine* (Brooklyn: Autonomedia, 1998).

15. This segment of the invitation's statements was reprinted in "The Memesis Network Discussion," compiled by Geert Lovink in *The Future of Evolution*, Ars Electronica 1996 (Vienna: A. Holzhausens, 1996), 30.

Moravec and Marvin Minsky. Moravec, the author of *Mind Children*, envisions a future in which humans discard their bodies, replace their brains with manufactured electronic equivalents, and eventually download to digital space. He predicts: "Ultimately, our thinking procedures would be totally liberated from any trace of our original body, indeed of any body. But the bodiless mind that results, wonderful though it may be in its clarity of thought and breadth of understanding, could in no sense be considered any longer human."¹³

The writer William Gibson and the performance artist Stelarc maintain that the fleshed body is meat or only nostalgia. Anyone who wears contact lenses, has an implant, or has a sex change is already a cyborg.¹⁴ The invitation to a symposium at Ars Electronica 1995, entitled *Memesis: The Future of Evolution*, dramatically summarized contemporary concerns: "Human evolution is fundamentally intertwined with technological developments; the two cannot be considered apart from one another. Humanity has co-evolved with its artifacts. Genes that are not able to cope with this reality will not survive the next millennium."¹⁵

Another way of envisioning posthumanity is through the virtualization of the body achieved not only through virtual reality but by the body's literal dispersion throughout the planet through sperm and organ banks. Pierre Levy has argued that "by virtualizing itself the body is multiplied. Virtualization is not disembodiment but a recreation, a reincarnation, a multiplication, vectorization and heterogenesis of the human."¹⁶ Virtualization is thus elevated to a spiritual achievement.

In the late 1980s and early 1990s, electronic media theory debates focused on the preeminence of the virtual body; in the late 1990s the body is altogether irrelevant.

More interesting in current theory are discussions about genetic technologies and artificial life. As with other live entities, humans are viewed primarily as patterns of information transferable to various media, such as computers. In this scheme of things, embodiment is secondary; the organism has been replaced by its code.¹⁷ Christopher Langton, one of the guiding theorists of artificial life, explains that one of its premises is the possibility of separating the informational content of life from its material substrate. Although a small number of theorists have cautioned against "forgetting the body," they are a minority.¹⁸

Human/Machine hybrids and the virtualization of the body have long-standing roots in the theorization of electronic technologies: prefigurations of cyborgs appear in the writings of both McLuhan and Jack Burnham in the 1960s. A decade earlier, the cyberneticist Norbert Wiener had proposed the theoretical possibility of telegraphing a human being.¹⁹ In contrast to this fascination with mechanization and virtualization of the body, postcolonial studies underscores the physiological specificity of the lived body as the realities of subjection are inscribed on the bodies of colonized peoples: torture, rape,

and physical exhaustion, as well as the learning of new bodily grammars and forms of discipline required by colonization and conversion. Of primary importance have been examinations of the construction of social and scientific discourses about race that initially authorized colonial violence against subject peoples and that in our era continue to support imperial military invasions, police brutality, and repressive economic policies.

Frantz Fanon, Edward Said, Homi Bhabha, and Anne McClintock, among others, have written extensively on the overdetermination of the racialized body as sign and have explored connected issues in the representation of colonized and postcolonial peoples: mimicry, stereotyping, exoticism, and primitivism.²⁰ Discussion of these subjects is underdeveloped in electronic media theory in part because most theorists are white and middle-class, but also because the lack of physicality and the anonymity made possible in electronic communication are believed to elide all differences. To admit that inequalities exist in cyberspace is for some tantamount to authorizing inequality. Rather, it has been suggested that marginality and subalternity exist only outside of cyberspace in the masses yet to be linked to the global network.²¹ In summary, in postcolonial theory, the body is conceived as a palimpsest on which relations of power are inscribed. In electronic media, the body is irrelevant to those relations. This difference in foci between the theorization of the body in each field affects the theorization of other areas I will explore: feminism, identity, history, and aesthetics.

Feminism

In her famous essay "A Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the 1980's," Donna Haraway proposed the cyborg, "a hybrid of machine and organism," as a foundation for feminist politics.²² By basing her cyborg on the model of *mestizaje*, the phenomenon of racial mixing that took place during the colonial period in the New World, Haraway attempted to bridge a profound gap that had opened in the United States between white and Third World feminism. As she explains, the category *woman* in previous feminisms "negated all non-white women." White women "discovered (i.e., were forced kicking and screaming) to notice the non-innocence of the category 'woman.'" She refers here to a series of contestations by women of color that had challenged the universalist claims of the feminist movement. Building on the work of feminist theorist Chela Sandoval, Haraway posits that women of color "might be understood as 'a cyborg identity, a potent subjectivity synthesized from fusions of outsider identities.'"²³

While the hybridization of humans, animals, and machines found enthusiastic acceptance among feminist cultural theorists, Haraway's attempts to incorporate postcolonial or so-called Third World feminism have been largely forgotten in current theorizations.²⁴ With the exception of references to cyborgian qualities, including the multiple subjectivities of the *mestiza*, women of color seldom figure in the work of cyberfeminists.²⁵ The supposition that women of color are natural cyborgs or that they already possess the tools necessary to oppose and to subvert oppressive practices is often used tacitly to condone separatism. Strategies of mutual support and coalition in theory and practice urgently need to be developed. The liberational aspects of the cyborg

16. Pierre Levy, *Becoming Virtual*, trans. Robert Bononno (New York: Plenum, 1998), 44.
17. Druckrey, 23; see also Vilém Flusser's "Digital Apparition" in the same volume.
18. Christopher G. Langton, "Artificial Life," in *Artificial Life*, ed. Langton, Santa Fe Institute Studies in the Sciences of Complexity, vol. 6 (Redwood City, Calif.: Addison-Wesley Publishing Co., 1989), 2. On forgetting the body, see Rosanne Stone, "Will the Real Body Please Stand Up? Boundary Stories about Virtual Culture," in *Cyberspace: First Steps*, ed. Michael Benedikt (Cambridge, Mass.: MIT Press, 1992), 81–118; Simon Penny, "The Virtualization of Art Practice: Body Knowledge and the Engineering World View," *Art Journal* 56, no. 3 (Fall 1997): 30–38.
19. Norbert Wiener, *The Human Use of Human Beings: Cybernetics and Society* (Garden City, N.J.: Doubleday, 1954), 103–4.
20. Frantz Fanon, *Black Skin, White Masks*, trans. Charles Lam (New York: Grove Press, 1967); Edward Said, *Orientalism* (New York: Vintage Books, 1978); Homi K. Bhabha, *The Location of Culture* (New York: Routledge, 1995); Anne McClintock, *Imperial Leather: Race, Gender, and Sexuality in the Colonial Context* (New York: Routledge, 1995).
21. Olu Oguibe and Ben Williams, as cited in Jordan Crandall, summary of e-mail forum "Citizenship," <eyebeam><blast>, February 1–April 30, 1998, distributed via Nettime, June 15, 1998.
22. Donna Haraway, "A Manifesto for Cyborgs: Science, Technology and Socialist Feminism in the 1980's," *Socialist Review* 80, no. 15 (2) (March–April 1985): 65–108.
23. *Ibid.*, 73, 75, 93.
24. VNS Matrix, "A Cyberfeminist Manifesto for the 21st Century" and "All New Gen," in *Unnatural-techno-theory for a contaminated culture*, ed. Mathew Fuller (London, 1994), unpag. (*All New Gen*, CD-ROM 1994); Plant, "Productive critiques of cyberfeminism are offered by Susanna Paasonen, 'Digital, Human, Animal, Plant: The Politics of Cyberfeminism?' and Faith Wilding, 'Where Is the Feminism in Cyberfeminism?'" both published in *n.paradoxa* 2 (July 1998).
25. Stone, 112.

apply least to women forced to repetitive work, who in Sandoval's words "know the pain of the union of machine and bodily tissue" but have no health or social benefits and no legal rights against abusive employment practices.²⁶

But while the recent enthusiasm for hybridity is being contested in postcolonial studies, few theorists of electronic media problematize the racial identity of cyborgs. In the opinion of media theorist Jennifer González, what makes the term *hybrid* controversial is "the assumed existence of a non-hybrid state—a pure state, a pure species, a pure race—with which it is contrasted. It is this notion of purity that must in fact be problematized."²⁷

Identity

Postcolonial studies and electronic media theory concur in challenging traditional understandings of identity as stable and singular. In both areas identity is conceptualized as multiple, contradictory, and even conflictive. Discussions of identity in postcolonial studies frequently involve collective identities: ethnic, national, gender. As in much postmodern literary theory, discussions of identity in electronic media theory concentrate on the individual as author of his or her own identity. Thus, where electronic media theory stresses the present (the moment of authorship), many postcolonial theorists view identity as rooted in specific historic pasts.

Stuart Hall has advocated the construction of a collective will through difference. This implies the recognition of multiple identities, a crucial process for diasporic cultures. Hall proposes that in order to conduct this cultural politics it is necessary to return to the past. But he recognizes that this return is not of a direct and literal kind: "we go through our own pasts through history, through memory, through desire, not as a literal fact."²⁸ Other theorists, including Bhabha and Spivak, have independently proposed similar strategies.²⁹

After the philosopher Daniel Dennet, the psychologist Sherry Turkle views individual identity as "several versions of a document open in a computer screen where the user is able to move between them at will." She emphasizes the ludic possibilities of virtual spaces for the construction of identity, as one can play with one's identity and try out new ones. Participants in MUDs (multiple user domains) are authors not only of text but of themselves: "you are who you pretend to be."³⁰ Turkle's writings remain largely uncritiqued in electronic media circles.

What does it mean to sever the construction of identity from history and from bodily experience? Some of us might welcome these propositions as nonessentialist, but as Tim Dean has noted in another context, the idea of cross-dwelling in multiple identities involves an intricate collection of issues including "tourism, colonization, Orientalism, appropriation, domestication and such like—to which cultural studies in general and post colonial studies in particular have sensitized us."³¹ For Bhabha, the constant refashioning of the subject in postmodern theories of identity may be ethnocentric in its construction of cultural difference, since it allows one to be "somewhat dismissive of the 'real' history of the other—women, foreigners, homosexuals, the natives of Ireland."³² González notes that cyborgs, "given their multiple parts and multiple identities . . . will always be read in relation to historical

26. Chela Sandoval, "New Sciences: Cyborg Feminism and the Methodology of the Oppressed," in *The Cyborg Handbook*, ed. Chris Hables Gray (New York: Routledge, 1995), 407–21.

27. Jennifer Gonzalez, "Envisioning Cyborg Bodies: Notes from Current Research," in *Cyborg Handbook*, 275. For recent problematizations of hybridity, see *Debating Cultural Hybridity: Multi-Cultural Identities and the Politics of Anti-Racism*, ed. Prina Werbner and Tariq Modood (London: Zed Books, 1997).

28. Stuart Hall, "Old and New Identities, Old and New Ethnicities," in *Culture, Globalization, and the World System*, ed. Anthony King (Binghamton: State University of New York, 1991), 57–58.

29. Bhabha, 40–65 and 236–56; Gayatri Chakravorty Spivak, "Acting Bits/Identity Talk," *Critical Inquiry* 18, no. 4 (Summer 1992): 770–803.

30. Sherry Turkle, "Rethinking Identity through Virtual Community," in Lynn Herschman-Leeson, ed., *Clicking In: Hot Links to a Digital Culture* (Seattle: Bay Press, 1996), 121–22; see also her *Life on the Screen: Identity in the Age of the Internet* (New York: Simon and Schuster, 1995).

31. Tim Dean, "Two Kinds of Other and Their Consequences," *Critical Inquiry* 23, no. 4 (Summer 1997): 914.

32. Bhabha, 240.

context.”³³ A cyborg is not without origins. Thus, both postcolonial studies and electronic media theory view identity as multiple and open-ended, but they differ drastically in focus. In postcolonial studies theories of identity emphasize the social—identities are historically rooted, open-ended, collective political projects. Electronic media theory gives primacy to the individual as the construction of identity is viewed as an opportunity for self-development and (re)creation.

History

The writing of history has been a major concern of postcolonial studies as subaltern histories are omitted from dominant historical narratives or remain intractable to historians. In the West, reclaiming histories has been a preliminary step in the construction of identity for marginalized groups. Consequently, the nation has come to be understood as a result of many narratives.³⁴ The representation of the subaltern in history has been problematic either because the groups have not left their own sources, or because their narratives lack the historian’s requirement of a rationally defensible point of view from which to tell the story.³⁵ These issues were hotly debated by the Subaltern Studies Group in the 1980s.³⁶ More recently, Dipesh Chakrabarty, a former member of the group, proposed that subaltern pasts do not belong exclusively to socially subordinate groups. Elite and dominant groups can also have subaltern pasts. Thus the writing of history must implicitly assume a plurality of times existing together, a discontinuity of the present with itself.³⁷ Chakrabarty’s theories coincide with Bhabha’s proposition that colonial and postcolonial moments create a disjunction, a time-lag that renders the project of modernity contradictory and unresolved. For Bhabha this time-lag should provide a basis for the representation of subaltern and postcolonial agency, since it introduces an alternative site for intercession: “The cultural inheritance of slavery or colonialism is brought before modernity not to resolve its historic differences into a new totality nor to forego its traditions. It is to introduce another locus of inscription and intervention, another hybrid, ‘inappropriate’ enunciative site through that temporal split—or time lag.”³⁸ For these and other postcolonial theorists the examination of history is integral to postcolonial agency.

By contrast, in electronic media theory history is either nonexistent or has become what Arthur Kroker and Michel Weinstein termed *recombinant history*, “a universal digital archive, always available for sampling, triggered by system operators at its XY axis, and infinitely recombined into hybrid images of the telematic future.” Through digitization, archiving, and recombination, history is fully virtualized, local histories acquire the status of games, “fantasy worlds, maintained and periodically visited by representatives of the media for spectacular recombination into the entertainment function for the comfort zone tastes of the virtual class.” Kroker and Weinstein conclude that “just when we thought that history as a grand *récit* had finally died . . . suddenly it returns in full recombinant force: that point where history merges with digital technology, becoming the world-historical process animating the will to virtuality.”³⁹ Theories of history are intimately tied with the theorizations of the body since recombinant history concerns primarily what exists in the digital. It has been proposed not only that surveillance and control focus on the virtual body but

33. González, 272.

34. Dipesh Chakrabarty, “Minority Histories, Subaltern Pasts,” *Humanities Research* (Winter 1997): 17; Homi K. Bhabha, ed., *Nation and Narration* (New York: Routledge, 1990).

35. Chakrabarty, 18.

36. Ranajit Guha, ed., *Subaltern Studies 1: Writings on South Asian History and Society* (Delhi: Oxford University Press, 1982); Gayatri Chakravorty Spivak, “Can the Subaltern Speak?” in *Marxism and the Interpretation of Culture*, ed. Gary Nelson and Lawrence Grossberg (Urbana: University of Illinois Press, 1988).

37. Chakrabarty, 30.

38. Bhabha, 238, 242.

39. Arthur Kroker and Michael A. Weinstein, *Data Trash: The Theory of the Virtual Class* (New York: St. Martin’s Press, 1994), 133, 136, 133.

that the most effective forms of resistance must take place in cyberspace.⁴⁰ Here there seems to be an area of irreconcilable difference. At the point where postcolonial theorists suggest productive approaches to the representation of subaltern histories, suddenly there is no field to be contested. There is no history. Must postcolonial peoples forget if they are to function in cyberspace?

Aesthetics

Postcolonial theorists have examined the construction of aesthetic values questioning the validity of universality in aesthetics and exploring strategies of appropriation, cannibalization, and subversion of dominant visual vocabularies. Said, Sally Price, Marianna Torgovnick, James Clifford, and others have argued that scholars often mistake "European" and "North American" for "universal" and as a result develop aesthetic criteria that marginalize and exclude the distinctive characteristics of other cultures. The canonization of works of art thus serves purposes of inclusion and exclusion as the construction of universal aesthetic systems has been an integral part of colonial and neocolonial domination. In addition, postcolonial theorists have examined the legacy of colonialism on contemporary critical discourses, such as the prevalence of stereotypes in discussions of artists from postcolonial regions.⁴¹

Discussions of aesthetics are rare in electronic media theory. Critics are often more concerned with the technological currency of works of art than with examining what makes them work (or not).⁴² Festivals of electronic media art place a premium on the exploration of new technologies, excluding and implicitly announcing the obsolescence of older technological forms. For instance, the category of still image has been abolished from the grand prize competitions at Ars Electronica and did not figure prominently in the exhibitions at the 1998 International Symposium of Electronic Art (ISEA 98) in Manchester and Liverpool. Progressive art practice is indirectly linked with new generations of technology. The role of the artist is to explore the technology before it is commercialized. In other words, the artist does the R&D for corporations and then goes on to explore the next wave of technological media.⁴³ Electronic art concurs with commerce, where products are ranked on the use of the latest technology. The value of novelty is so extreme that corporations customarily sell unfinished hardware and software that customers not only purchase but beta-test. In electronic media art, the artist's concentration on technology frequently makes content irrelevant. Emphasis on state of the art technology requires artists who work in these media to struggle to keep up with the latest trends. In this period of scarce funding for the arts, artists who cannot afford to join the race are at a disadvantage.

In recent years, several artists and writers, including Margaret Morse, Erkki Huhtamo, Simon Penny, and Lev Manovich, have discussed the value placed on specific works by virtue of the use of state of the art technology; but they discuss this issue exclusively in the context of art in developed nations. The effects of aesthetic technofetishism in the wider context of world art are at present largely unexamined.

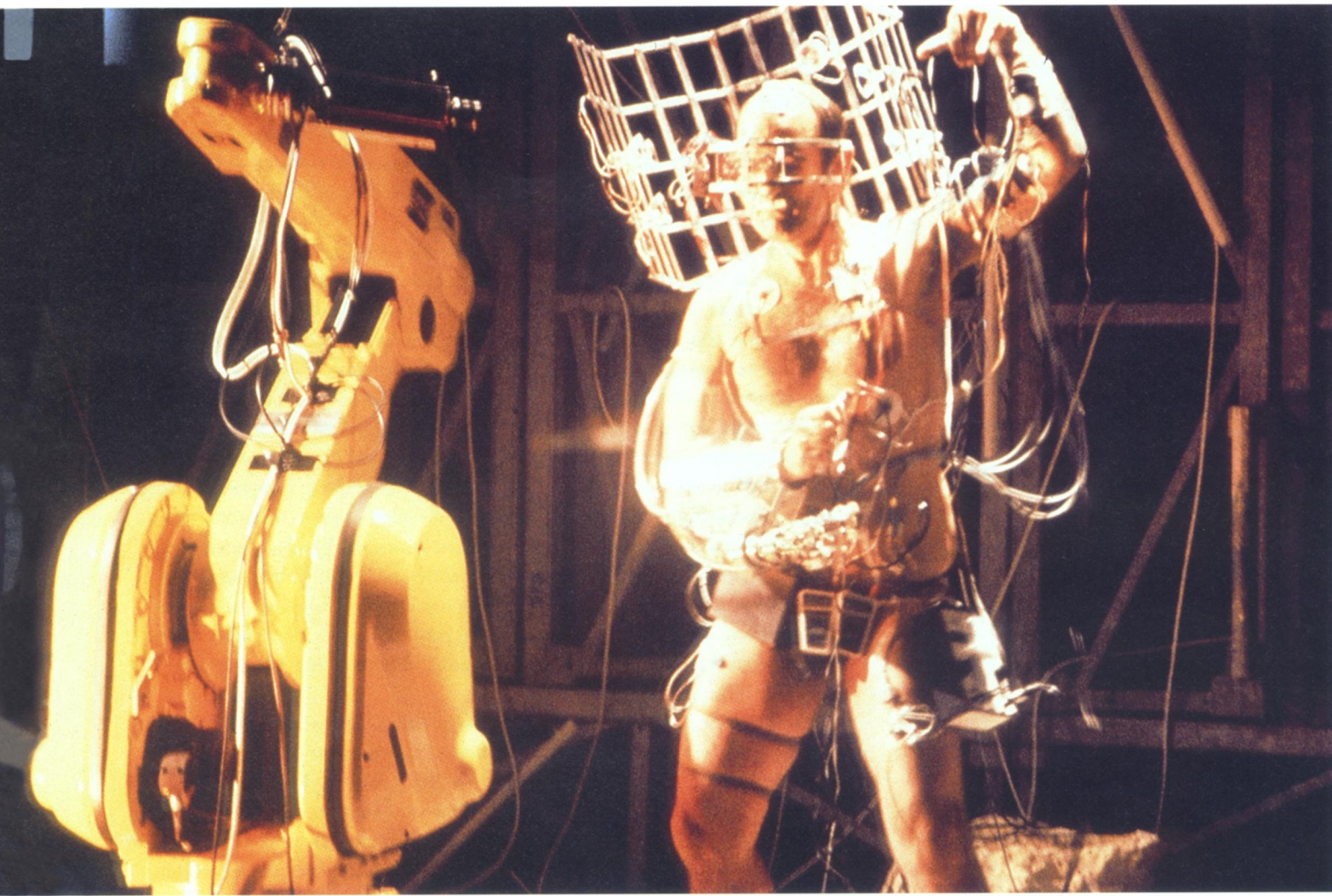
When looking at computer-aided images, technologically sophisticated viewers can usually tell whether the artist is using current or antiquated technology. High-end computer art can achieve greater degrees of mimesis to the

40. Critical Art Ensemble, *Electronic Disturbance* (Brooklyn: Autonomedia, 1994).

41. See Mari Carmen Ramírez, "Beyond the Fantastic: Framing Identity in U.S. Exhibitions of Latin American Art," in *Beyond the Fantastic: Contemporary Art Criticism from Latin America*, ed. Gerardo Mosquera (Cambridge, Mass.: MIT Press, 1995), 229–46.

42. Sean Cubitt's *Digital Aesthetics* (London: Sage, 1998) and Anne Marie Duguet's essay in Jeffrey Shaw, *A User's Manual: From Expanded Cinema to Virtual Reality* (Karlsruhe: ZKM, 1997) are exceptional in this respect.

43. Dr. Future, "New Media, Old Technology," paper distributed via Nettime, June 14, 1998.



**Stelarc. *Scanning Robot/Involuntary Arm*.
Edge Biennale, London,
1992. Photo M. Burton.
© Stelarc.**

extent of making the presence of the technology invisible. Since the late 1980s, a primary goal of computer graphics has been to achieve the reality effect of color photography and, more recently, 35mm film. This imperative has parallels in theoretical writing. According to the late media theorist Vilém Flusser, the aesthetic value of computer art depends on realism. Because digital images can be quantified, he equated realism with truth: "From now on we will have to embrace beauty as the only acceptable criterion of truth. . . . This is already observable in relation to computer art: the more beautiful the digital apparition the more real and truthful the projected alternative worlds."⁴⁴

If the use of state of the art technology increasingly becomes a primary factor in determining the aesthetic significance of a work of art, it will be impossible to maintain the respect for aesthetic diversity that postcolonial studies has supported. The new aesthetics will promote a cultural supremacy that will not be easily challenged as the construction of new canons will be justified by quantifiable and measurable attributes. Manovich has noted that all the dimensions in a digital image, including detail, number of colors, shape, and movement, can be specified in exact numbers. For example, the spatial

44. Flusser, 243.

and color resolution of a two-dimensional image is expressed by the number of pixels and the colors per pixel. The degree of detail of a three-dimensional model and consequently its reality effect is specified by three-dimensional resolution, the number of points of which the model is composed. "Not surprisingly, the advertisements for graphics software and hardware prominently display these numbers. . . . The bottom line: the reality effect of a digital representation can be measured in dollars. Realism has become a commodity. It can be bought and sold like anything else."⁴⁵

If artists in developed countries feel pressured to constantly upgrade, fearing that the value of their work will be judged on the currency of the technology, artists in poor countries could be even more severely marginalized, as they have less opportunities for upgrading and may choose not to work with the technology in the first place. Thus, the emerging aesthetics could be retrogressive in two ways: in reestablishing mimesis as the norm to which art should aspire and in reestablishing the aesthetic superiority of wealthy nations over poor ones. Here I should add that in contemporary culture mimesis is not limited to the realism of images, as Flusser envisioned. Mimesis is a more open realm including the simulation of all levels of organic behavior, from the reproduction and evolution of viruses to animal and human interaction. Although not all simulations of behavior necessitate high technology, they require specialized technical skills from computer programming for artificial life, autonomous agents, and animatronic robots. Because these fields are closely connected with the military industrial complex, they have greater representation in developed countries.

Objections could be made to these suggestions on two grounds: the incidence of low-tech photography and video in contemporary art and the phenomenon of art on the Net. The current enthusiasm for photography and video occurs at a time when these art forms are being absorbed by digital media. This enthusiasm could be interpreted as a nostalgic gesture rather than as proof of the equality of all technologies in the contemporary art world. The race for high technology is evident in the art showcased at institutions that have established themselves as models for art in new media, including the InterCommunication Center (ICC) in Tokyo, the ZKM/Center for Art and Media in Karlsruhe, and the Ars Electronica Center, the Museum of the Future, in Linz.

The phenomenon of Net art presumably neutralizes the question of value, since no work has a higher value than the next.⁴⁶ In this respect, art on the Net partakes of its utopian rhetoric, in which all creatures are created equal. The Net has been ascribed the potential to liberate humanity; Net art is believed to have the capacity to restructure the art world. Net artists are believed to be more revolutionary than artists working in another media, as they function independent of institutions, commercial and academic.⁴⁷

No one will dispute the openness of the Net as an exhibition medium. But although anyone who has access to a server can exhibit work there, this does not mean that anyone will see it. In the early days of Web-based artwork (ca. 1996), the works that gained the most critical notoriety were often by artists who already had established a reputation in other media, such as Antonio Muntadas.⁴⁸ More recently, activist interventions such as those

45. Lev Manovich, "The Aesthetics of Virtual Worlds: Report from Los Angeles," in *Telepolis*, <www.ix.de/tp> (Munich: Verlag Heinz Heise, 1996); reprinted in *Digital Delirium*, ed. Arthur Kroker and Marilouise Kroker (New York: St. Martin's Press, 1997).

46. Edited version of "A Conversation with Alexei Shulgin," interview by Rachel Baker, distributed via Nettime, March 16, 1997.

47. For an example, see Jennifer Cowan and Ingrid Hein, "Sage of Subversion," *Wired*, December 1997, 62.

organized by the Electronic Disturbance Theater in solidarity with Zapatistas in Mexico have gained recognition.⁴⁹ These are innovative forms of activism, but the effects of these actions on the art world are yet to be determined.

Then there is the question of the transposition of the museum and gallery world to the Web. Commercial galleries are already numerous there. Traditional museums, initially dismissive of art on the Net, are racing to have a presence in this new realm. Major museums like the Guggenheim and the Museum of Modern Art in New York are sponsoring Web site projects, and institutions that previously funded artworks in traditional media are currently favoring Web-based projects.⁵⁰

Because it is possible to receive images from anywhere in the world in seconds, the Net has the possibility of obliterating hierarchies and homogenizing difference. Some theorists view it as a medium for people from different places to enter the space of modernity.⁵¹ The rapid accessibility of images on the Net opens great possibilities for a homogenizing hybridity, although at present most of Net culture is Western.⁵² The hybridity of images alone will not necessarily erase differences, nor will it impede the formation of new canons. Hybridity is already ingrained in postmodern aesthetics and has been aptly coopted by the world of advertising. Multiculturalism and multinational capitalism are complexly interconnected. What is relevant now is not the sources of an image but its ability to partake in current technological discourses. At present, there is much investment in VRML sites, autonomous agents, and artificial life on the Web, all of which require sophisticated resources. The technological imperative in the arts is creating a new and exclusionary universalism. Lessons from postcolonial studies could provide a frame of reference to question this new order.

Encounters

The making of art is ahead of electronic media theory. A number of artists have brought postcolonial concerns to electronic media. But because many of these artists work with digital photography and video, their work is underrepresented in established electronic media contexts. Of all subjects relevant to postcolonial studies, work that involves history is presently the most prevalent. Many artists have used digital media specifically to remember and to construct that “inappropriate” site of intervention theorized by Bhabha. These include Roshini Kempadoo, Esther Parada, Martina Lopez, Pedro Meyer, Silvia Malagrino, Keith Piper, Reggie Woolei, and Pervaiz Kahn, among others.⁵³ Many of the images created by these artists bring to the digital realm the subjects of colonialism, imperialism, and their legacy in the form of immigration and transculturation. Often, the work mixes facts and fictions, past and present, materializing Hall’s claim that the past is not reclaimed literally but with the imagination. Few artists working with interactive media have created work that involves postcolonial histories; of these, the two artist/scientist collaborations discussed below are exceptional as conceptually and technologically challenging works.⁵⁴

For several years, Rafael Lozano-Hemmer, Will Bauer, and Susie Ramsay have developed a series of works that explore relational architecture, which they define as “the technological actualization of buildings and public spaces

48. For a select bibliography on Muntadas, including Web-based work, see <www.gsd.harvard.edu/library/bibliographies/muntada.htm>.

49. The Electronic Disturbance Theater was invited to participate in the prestigious Ars Electronica Festival in 1998; its Web site is located at <www.thing.net/~rdom/ecd/ecd.html>.

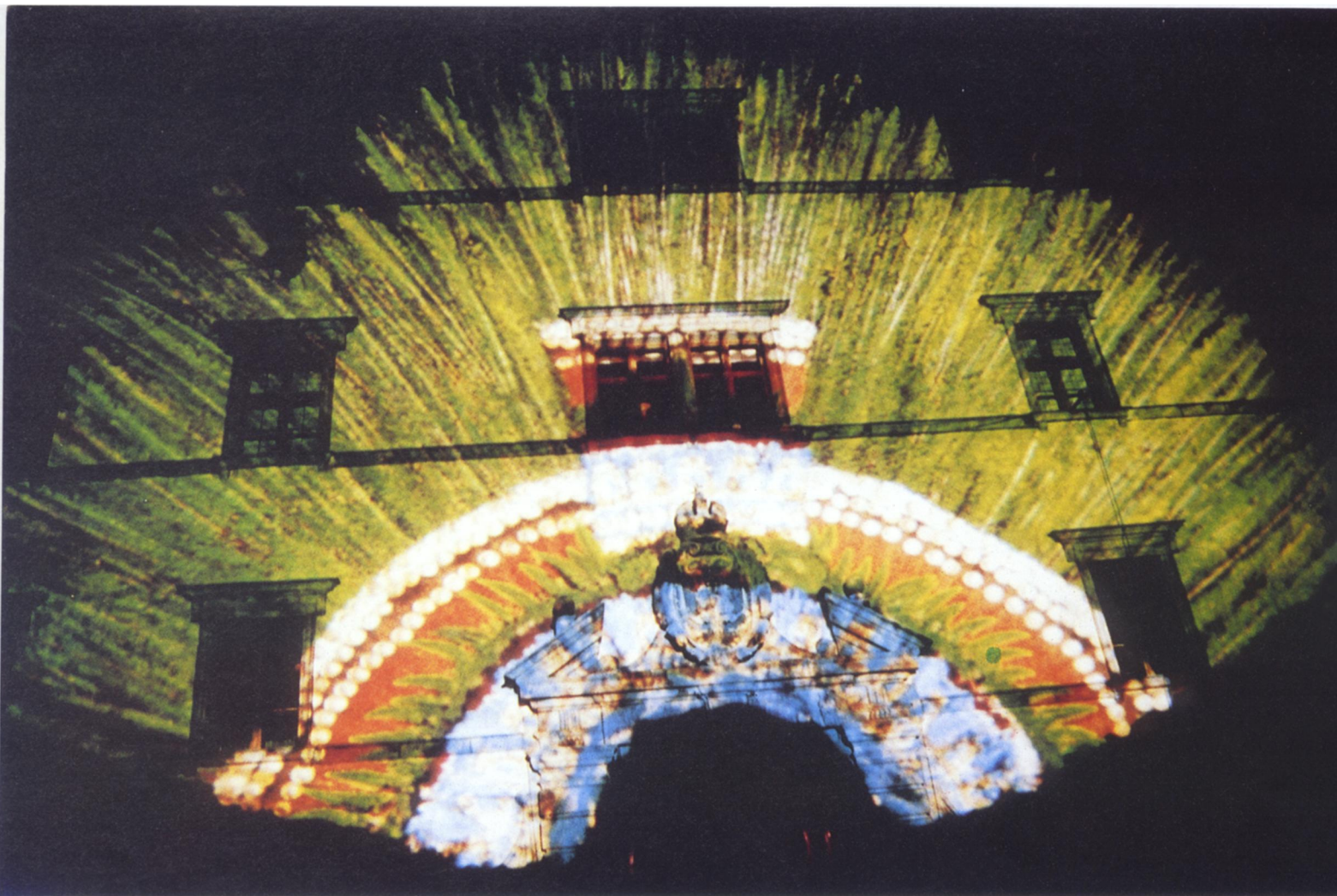
50. Dr. Future.

51. Manovich, cited by Crandall.

52. Saskia Sassen, *ibid.*

53. See the exhibition *TRANSLOCATIONS*, curated by Displaced Data (Janice Cheddie, Keith Piper, and Derek Richards), at <www.artec.org.uk/displaceddata/>.

54. As this article approached completion, the Mongrel project was launched in England. Mongrel is an example of activist and critical work often absent in electronic media. It is a collaborative and interactive project that engages audiences in issues of race, new eugenics, and national identities. Interfacing digital and street cultures, the project includes newspapers, street posters, an interactive installation, a Web site, and an arcade game still under development. The core members of Mongrel are Matsuko Yokokoji, Richard Pierre Davis, and Graham Hardwood. See <www.mongrel.org.uk/Natural/Mongrel/mongrel.html>.



**Rafael Lozano-Hemmer,
Will Bauer, and Susie
Ramsay. *Displaced
Emperors. Ars
Electronica, Vienna, 1997.*
Courtesy the artists.**

55. Rafael Lozano-Hemmer, "Relational Architecture #2," *Ars Electronica 1997, Fleshfactor* (Vienna: A. Holzhausens, 1997), 336. Lozano-Hemmer has degrees in chemistry and art history (as an artist, he has experience in radio, technological theater, and installation); Bauer has a background in electrical and computer engineering and musical composition; Ramsay is a choreographer and dancer.

56. Although there is no evidence that this headdress belonged to Moctezuma, it is recognized to have been a symbol of political and religious power in ancient Mexico. Similar headdresses appear in Aztec monuments as part of the ruler's ritual paraphernalia.

with alien memory."⁵⁵ In Lozano-Hemmer's view, relational architecture transforms the master narratives of a specific building by adding or subtracting audiovisual elements to recontextualize it. Relational buildings function as hypertext, since they have audience-activated hyperlinks to predetermined spatiotemporal settings that may include other buildings, political or aesthetic contexts, and histories.

In *Displaced Emperors*, presented at Ars Electronica 1997, the Habsburg Castle in Linz became both figure and ground for seemingly alien historical encounters. The piece constructed a vector between two apparently unrelated historical events that link Mexico and Austria: the Mexican empire of Maximilian of Habsburg (1864–67) and a feather headdress made primarily of Quetzal and blue cotinga feathers, rumored to have belonged to the Aztec ruler Moctezuma II, currently housed in the ethnological museum in Vienna.⁵⁶ In *Displaced Emperors*, participants standing in a small plaza in front of one of the castle gates interacted with the building by pointing with one of their hands. Two wireless three-dimensional trackers invented by the artists, a *Gesture and Media System (GAMS)*, placed on one arm and hand of each participant, calculated the direction of his or her arm movement in real time. An animated projection of a human hand appeared wherever the participant pointed. The images were projected on the building using sophisticated motion-controlled

projectors. As the participant moved his or her arm, the projected hand also moved. As the virtual hand “caressed” the facade of the building, it opened a window that disclosed interior rooms matched to the exterior so as to seem to be inside the castle. The virtual hand also activated music sequences that seemed to emanate from the rooms in view. In fact, the interior rooms were the interior of Chapultepec Castle, the main residence of Maximilian and his wife Carlota during the Habsburg rule in Mexico.

At a makeshift souvenir shop near the castle was a computer monitor that showed the location of the participant who carried the trackers. Next to the monitor was a big bright red button labeled *Moctezuma*. For twenty-five schillings people could press the button and interrupt the interaction. The lights went off and a thirty-five-meter projection of the feather headdress appeared on the facade of the castle, accompanied by a track of Mexican music. A searchlight with the cultural property symbol, placed on monuments and buildings to indicate that they are cultural properties to be protected in the event of armed conflict, followed the participant who had the tracker. A few seconds after the button was released the participant could resume his or her interaction. After the image of Moctezuma’s headdress disappeared, a selection of Habsburg jewels paraded across the facade of the castle. This event triggered slow dance music known in Latin America as bolero.

By enticing participants to caress the building, Lozano-Hemmer, Bauer, and Ramsay invited them to explore the interdependence of European and so-called minor histories, in this case Mexican history, even at the level of a shared cultural heritage. Despite repeated attempts by the Mexican government to have Moctezuma’s headdress returned to Mexico, the object is officially part of Austria’s cultural treasures. Similarly, in Mexico the Habsburgs’ palace, transformed into a museum, is considered an important part of the national heritage. In *Displaced Emperors*, even the body of the participant becomes vulnerable to appropriation as it is followed by the cultural property symbol. The piece ultimately proposed that rather than returning Moctezuma’s headdress to Mexico, Austria should offer some Habsburg jewels as a romantic cultural exchange, and for the headdress to become an integral part of Austrian identity.⁵⁷

The participant’s experience of *Displaced Emperors* pieces is ludic. Many users reported feeling a sort of “node of desire” for the facade of the Linz castle in the palm of the hand that gestured toward the building. There is here a subtle parody of human erotic involvement with inanimate objects and machines. The experience of Austrians and Germans standing in front of the Habsburg Castle in Linz might have been more complex, as the caress forced them to “salute” a building that Hitler had selected as his retirement residence.⁵⁸

Terminal Time (1998), a collaboration among video producer Steffi Domike, electronic media artist Paul Vanouse, and computer scientist Michael Mateas, is a “recombinant history engine” that explores and critiques the notions of order and linearity in history by generating believable historical documentaries in response to audience polls. Rather than counteracting traditional historical writing by constructing a nomadic or chaotic narrative, the work exposes the problems of writing history in the contemporary period by demonstration. At present, it concentrates on the history of the last century; eventually, the artists intend to cover history from 1000 to the present.

57. Rafael Lozano-Hemmer, Will Bauer, Susie Ramsay, *Relational Architecture: 3 recent pieces*, video produced by the artists, 1998.

58. *Ibid.*

Terminal Time has three main components: a database of video clips, a program called the drama manager that can construct believable histories from the database of clips, and an applause meter that measures audience preference to questions asked by the system. In a presentation of *Terminal Time*, the audience is presented with a series of multiple-choice questions. Their response to each answer is rated by the applause meter. For each question, after all the possible answers have been rated, the drama manager matches the historical clips best suited to each particular viewing public, and the “winner” is displayed in the bottom of the screen. The audience is then presented a documentary history constructed in response to their preferences.

In order to construct a believable history from the video clips, the data manager searches through its narrative memory, modifying and combining pieces of narrative in novel ways. Each time the work is performed, any novel narrative combinations are added to the drama manager’s memory. Any given performance has the memory of all past performances at its disposal to aid in constructing a historical narrative.⁵⁹

In contrast to traditional histories, the work includes episodes from so-called minor or marginal histories, and considerations of race and gender frame many of the questions and answers. By constructing historical narratives with the collaboration of the viewer, the piece reveals the manner in which contemporary history is constructed by the media. Events make news in response to audience opinion polls and ratings. At least this was the explanation given by reporters from leading newspapers when questioned about their preference to cover the Monica Lewinsky story instead of the Pope’s visit to Cuba.

Almost a decade ago, Daniel S. Milo proposed the construction of an experimental history. In his view, to experiment was “to do violence to the object.” To conduct an experiment, one could remove elements intrinsic to an entity, add elements to it, or observe it on a scale different from that against which it was usually measured. Milo argued that experimentation was also decontextualizing by definition; refusing the object its “normal” context was a process of discovery leading the observer to know the object better or differently. This presupposed gaining another perspective on the object and developing critical views on the previous ways of representing it.⁶⁰

These works do violence to history. Lozano-Hemmer, Bauer, and Ramsay actualize Milo’s experimental history. The Linz Castle, a historical monument, is recontextualized in foreign narratives through the addition of visual elements and sounds not usually connected with it. The building’s “new” associations ultimately challenge the supremacy of its previous historical narrative: The history of the Habsburgs is no longer only European. *Terminal Time* decontextualizes the writing of history by making it a public spectacle. Through participation in the construction of the historical narrative, the participant is made aware of the artificiality of order in history and his or her complicity with the institutions that construct it. In choosing to illustrate the problems of historical narratives by replication, the artists rely on the Deleuzian assumption that simulacra ultimately affect the preeminence of the original.

In addition to offering alternative ways to view history, both *Terminal Time* and *Displaced Emperors* contribute to technological discourses. Lozano-Hemmer,

59. My thanks to the artists for sharing their time and project description with me. *Terminal Time* was presented at the Studio for Creative Inquiry, Carnegie Mellon University, Pittsburgh, in spring and summer 1998 and at the Center for Twentieth Century Studies, Milwaukee, in June 1998.

60. Daniel Milo, “Toward an Experimental History of Gay Science,” trans. David Case, *Strategies*, no. 4/5 (1991): 90, 91 and 94, 97

Bauer, and Ramsay's GAMS is an elaboration of earlier three-dimensional tracking systems, including Put That There, developed at MIT in the 1970s.⁶¹ Their tracking system is a media-integration tool that has multiple applications in the arts and has already been purchased by various institutions.⁶² *Terminal Time* advances contemporary discussions in artificial intelligence concerning expert systems. Recently, computer scientists have abandoned the goal of constructing a comprehensive artificial intelligence and now limit their efforts to computations on contained and codified domains of knowledge. These specialized knowledge tools are called expert systems. Mateas, Domike, and Vanouse attempt to apply techniques of knowledge engineering to a cultural domain, referred to by the artists as "ideological rhetoric."⁶³ The collaborations between artists and computer scientists in both works suggest the changing role of the artist in contemporary culture. *Displaced Emperors* and *Terminal Time* are exemplary in their injection of a postcolonial criticality into experimental electronic media practice. Such artistic innovation in advance of theory should function as a call for the elaboration of an electronic media theory that acknowledges contemporary political, cultural, and economic complexities.

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61. Lozano-Hemmer and Bauer, interview with the author, September 11, 1997.

62. For details on a later piece of relational architecture by Lozano-Hemmer, Bauer and Ramsay, see *Re-positioning Fear*, November 1997, <xarch.tu-graz.ac.at/filmarc/fest/fa3/fear/>.

63. Paul Vanouse, personal communication, July 12, 1998.