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Maureen Turim, editor

Critical Issues in Electronic Media

edited by
Simon Penny

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CONTENTS

Introduction	1
1 Suck on This, Planet of Noise! <i>McKenzie Wark</i>	7
2 In/Quest of Presence: Virtuality, Aurality, and Television's Gulf War <i>Frances Dyson</i>	27
3 Consumer Culture and the Technological Imperative: The Artist in Dataspace <i>Simon Penny</i>	47
4 Technology is the People's Friend: Computers, Class, and the New Cultural Politics <i>Richard Wright</i>	75
5 Utopian Plagiarism, Hypertextuality, and Electronic Cultural Production <i>Critical Art Ensemble</i>	105
6 Virtual Worlds: Fascination and Reactions <i>Florian Rötzer</i>	119
7 Transforming Mirrors: Subjectivity and Control in Interactive Media <i>David Rokeby</i>	133
8 Encapsulated Bodies in Motion: Simulators and the Quest for Total Immersion <i>Erkki Huhtamo</i>	159

9	Image, Language, and Belief in Synthesis <i>George Legrady</i>	187
10	Track Organology <i>Douglas Kahn</i>	205
11	On Monitors and Men and Other Unsolved Feminine Mysteries: Video Technology and the Feminine <i>Nell Tenhaaf</i>	219
12	The Irresistible Interface: Video's Unknown Forces and Fire-Lit Waves <i>David Tafler</i>	235
13	One Video Theory (some assembly required) <i>Gregory Ulmer</i>	253
	Bibliography	275
	Contributors	287
	Index	293

INTRODUCTION

It would be difficult to refute the suggestion that technological change has been *the* major force for cultural change for at least a century. As we move out of the first technological era, that of industrial production, into the era of the digital, a profound warping and rifting occurs across the cultural surface. This collection seeks to sketch the changing topology of culture as it enters electronic space, and to specifically addresses questions of art practice in that space.

Electronic technology mediates our relation to the world. Although this book is outwardly a traditional object, it, like virtually all others produced in the last decade, was electronically designed, electronically typeset, and printed by computer-controlled machinery. The text was been formulated and edited on digital word processors and the contributors communicated through fax and e-mail networks. None of this technology existed a generation ago.

Since Sputnik, the planet has become wrapped in a blanket of electronic communications, the "datasphere," facilitated by satellite and fiber-optic links between computer "nodes." International satellite data communications and TV broadcast networks have completely re-organized the flow of information, inter- and intra-state. As long ago as the L.A. Olympics, press photographs were shot on still-video cameras, beamed via satellite to Japan, and distributed back over international press networks for appearance in L.A. newspapers. This transformation has been so rapid and so total that few areas of Western life are untouched by it.

The electronic mediascape is about to go through another resounding change of state. Telephone, computer networks, television, and interactive gaming will be digital, and thus connectable. The exponential growth of digital network communications has sent computer companies, cable TV companies, networks and telephone companies all scrambling for a piece of the interactive TV action.

The "information superhighway" looks poised to become a gargantuan virtual mall.

The pace of these changes is itself causing cultural dislocation. Between the time this anthology was conceived and the time of publication, some technologies that were major have become obsolete and others that two years ago were high end research tools have become consumer commodities. In 1990 at the SIGGRAPH conference and elsewhere, virtual reality came out of the research closet. Four years later, Sega released its domestic computer game VR interface. Cultural changes follow these technological changes. Who, in 1990, could have predicted that, under the influence of the rapid growth of the videogame industry, Hollywood would be imploding in 1994.

We have heard for twenty years that the electronic revolution will be as resounding as the industrial one. But we are only now moving beyond the techno-utopian rhetoric to understand the nature of this revolution. We can begin to assess who benefits and who suffers. The entire global economic structure is going through a change of state. The state we have occupied for 150 years is the system of centralized industrial production that consumes raw materials supplied by (economic) colonies. The new and quite unfamiliar state is transnational commodity capitalism, enabled by instantaneous, space-collapsing communication of electronic data, especially financial data. The goods which are produced in this system, and the channels by which the goods are marketed and controlled, are made possible by precisely the technologies that also make possible the practice of electronic media arts. Thus, a condition of esthetic distantiation is untenable for practitioners in electronic media arts. The advent of consumer electronics and software complicates both the esthetics and the politics of art production, by implicating artists as both producers and consumers of technological commodities.

Systems of communication and structures of power have changed; yet the worldviews and critical systems that operate in many of our institutions are pre-electronic, and often pre-industrial; the traditional art-historical methodologies are a case in point. Prior to the infiltration of postmodern theory and media theory, art history was without the tools to cope with multiplicity. How could such critical systems have any application to an aesthetic product that is created untouched by human hands, distributed at light speed as electromagnetic fields or bounced off satellites outside the earth's

atmosphere, and decoded by electronic receiver units in a million homes simultaneously, only to evaporate one thirtieth of a second later?

Scientific critical systems seem also to have played out their usefulness in the cultural arena. Many aspects of twentieth-century culture have come under the influence of scientific fashion. In art, modernism followed a trajectory of reductivism. It has been argued that computer graphics is the last refuge of modernism, and certainly the "art and technology movement" of the late 60s and 70s subscribed to a scientific approach. But the wave of new critical theory of the 80s, particularly feminist and deconstructive theory, and the acceptance of computer-based 'inductive' proofs and simulations have weakened the claims of science to be objective and true, to be a "master discourse."

Neither the traditionally "artistic" nor the "technological" critical systems, nor a counterposing of the two, are adequate for our present historical moment. Critical systems that have evolved to deal with disciplines immersed in older technologies will not be adequate to the new task. Art practice with electronic tools must necessarily be interdisciplinary, and from this interdisciplinary approach will emerge a variety of relevant and useful critical tools.

This anthology is a response to these conditions. The new digital media promise new territories for artistic practice. But they demand a reconsideration of art production and consumption. The new dimensions and capabilities of the new forms (interactivity, instantaneous multiple distribution, ephemerality) demand the generation of new aesthetic models, new ethical models, new institutions . . . and new conventions of consumption.

In an electronic environment immersed in new versions and appropriations of cultural icons and images, the entire question of intellectual property must be reconsidered. Pre-electronic cultural ideas like "plagiarism" and "fakes," and the value systems attached to them, conflict with media designed specifically for precise rapid copying: videotape, photocopying, and, par excellence, computer media. Digital technology, applied to texts, images, and music, has spawned new genres of appropriative creative practice and has simultaneously thrown the copyright/intellectual property law into paroxysms of confusion.

Desert Storm was a cultural/technological threshold, throwing into high relief many of the aspects of this new electronic terrain. At this moment art, dataspace, mass media, and politics are sand-

wicked together into a new complex; its site is neither the Middle East, the living rooms of America, nor deep in electronic space, but a combination of the three. This was not simply because the consumer media was full of synthetic imagery, nor just because geography was fully collapsed, but because the techno-utopian rhetoric of the previous generation was collapsed. Desert Storm demonstrated that greater (electronic) connectivity does not necessarily result in greater world harmony, democracy and liberty.

It has been my goal in this collection to include authors of diverse training and experience. Represented are Australian, British, Canadian, Finnish, and German authors, as well as several from the USA. Professionally, they come from varied backgrounds, including computer graphics, video, sound, drama, and the visual arts; they are involved with media, cultural and literary theory, and the social sciences. But all share a common concern with the cultural implications of current technological change and have strong interests in interdisciplinary creative practice. Each author in this collection takes a different focus. Some essays are specialized, some are wide-ranging, some are pragmatic, some are more theoretical. Some consider the contemporary condition in its historical context, while others look to the future from the vantage point of the present.

These papers do not form a theoretically coherent group. The authors bring various theoretical systems to bear upon the issues they address. This divergence serves to indicate the breadth of interdisciplinary approaches that are informing the interpretation and use of these new media. Those writers who are artists grapple directly with these issues as they negotiate the use of new technologies in their work. I believe that this immediate connection of theory and practice affords these writings special relevance, and not simply to readers who may be practitioners. These papers are "reports from the front"; they come long before the possibility and security of historical distance.

Critical Issues in Electronic Media is an attempt to discuss the techno-cultural context that makes electronic media artwork both possible and necessary. The original impetus for this volume was the recognition that theoretical writings in the field of electronic media art practice were sparse, while neighboring territories such as video, film, media theory, and cultural studies were replete with such texts.

It is hoped this collection offers, if not a guide, at least a network of markers for practitioners, theoreticians, and students in this new territory. It is with pleasure and pride that I recommend each of these essays to the reader. As an added service to the researcher, I have

compiled, with the assistance of the contributors, a selected bibliography of important texts in the field. This bibliography does not claim to be exhaustive, but each entry is regarded by at least one of the contributors as a valuable text.

I would like to thank Clay Morgan and Maureen Turim for guidance in the preparation of this anthology, and I would like to thank the contributors to the volume for going through this process with me. I would like to thank my wife, Mariá Fernández, for endlessly challenging conversation on these topics. Some of my best ideas are hers. Finally, I would like to dedicate this publication to the memories of two thinkers who, each in his own way, have profoundly influenced my development in these areas: Brian O'Nolan (Flann O'Brien) and Felix Guattari.

1

Suck on This, Planet of Noise!

McKenzie Wark

*We are no-one.
Just whites,
marooned in the East
by history.*

—David Ireland

Hell is truth seen too late.

—G. W. F. Hegel

What do I know?

There is quite a particular view of culture and the world that comes with growing up by the sea. Since this is an essay about how media technologies have remade the surface of the world in general and about how we can grasp this from a particular vantage point, it seems appropriate to start by the sea.

In the house I grew up in, a model ship took pride of place on the mantel. It was a model of the Cutty Sark, one of the greatest of the clipper ships. To most people, the name means nothing but a brand of whiskey now.

I went to China once. I went to the Shanghai museum to look at the classical paintings. There's not much to see there, but there is a model of the Cutty Sark. Its famous record-breaking run was from my hometown of Newcastle, on the east coast of Australia, to Shanghai, China.

I still live by the sea, in Ultimo in Sydney, just behind all of the old abandoned wool stores that keep mysteriously burning down

before artists can get their hands on them. They are relics of a lost economy and a fading culture, but even more they are the residues of a regime of power now surpassed. A new regime of power has taken hold of the byways of the planet—a regime not of sea-lanes and ship lore, but of comsats and data flows. We live now, as Manuel Castells says, not in a space of places but in a space of flows.¹

Electronic art is potentially a medium for critical reflection on this new space, but is more often merely symptomatic of it. We need to know what regimes of power it partakes of, so we can consider it critically useful as art rather than merely decorative, interesting, or career enhancing for those concerned. This is a task for a kind of critical framing that, in this case, tries to find some resonance still in the idea of the local. We are not a “global village” yet, and may never be, so for the time being I prefer to consider how the new relations of media globalization can be thought from Ultimo in Sydney, Australia, rather than continue to traffic in received ideas approved in New York and Los Angeles.

You see some strange things from Ultimo—like a great flock of sailing ships, gliding through the bays. Ultimo was a good place from which to watch the symbolic passing, on 26 January 1988, from the naval regime of power to a new matrix of vectors. It was a strange experience, watching those sailing ships simultaneously entering Sydney harbor and entering my living room—and many thousands of others via the live TV broadcast. It was a reenactment of the white invasion of the Australian continent, performed two hundred years later for the cameras. As with the arrival of the first fleet, on this second coming the invaders parked their boats and thanked their sponsors.

Paul Virilio asks: “When we can go to the antipodes and back in an instant, what will become of us?”² This question fruitfully combines a temporal and a spatial problem about our experience of everyday life. The temporal dimension is: What are these times we are living in? The spatial dimension is: What space is this that makes us what we are? I think the answer on both counts must come from the antipodes. Australia is only one of the antipodes in the regime of spatial relations, but an interesting one. In his video work *Night's High Noon: An Anti-Terrain* (1988), Peter Callas shows an image of an Aboriginal standing on the beach, watching the first fleet arrive. Cut to an image of the same headland, some time later. A white figure stands on the beach, watching a mushroom cloud rise

on the horizon. Callas manages to portray a place that is always in a relation to an elsewhere, that is always defined by its relation to a powerful other. First the British came and colonized. Then the Americans came and coca-colonized. This is that place. We are no one, whoever we are, always oscillating in antipodality with elsewhere. This is one of the necessary conditions, for most of us, of making art or criticism in Australia. That is a condition that even electronic art can only transcend by acknowledging it.

To talk about antipodes is to talk very centrally about the regimes of technology via which the West created its relation to its antipodes. These relations now have a life of their own. This is why I want to talk about what Raymond Williams called emergent, as opposed to dominant and residual, cultural technologies.³ To do that means to talk about the vectors of relation between places and people rather than to talk about the identities of the people themselves. This essay is not one of those ethical statements about inter-subjective relations of class, race, gender, or ethnicity. These things are very important, but so too are the social relations that subordinate the people of one place to another, or that organize the exploitation of nature as space itself, through the extraction and movement of value. This is an essay about people's connections to sailing ships and comsats. It is about what Donna Haraway calls our cyborg rather than our humanist selves.⁴

Arguably, the last thing a critical theory of culture ought to have anything to do with is electronic art. It is not popular. It is not cheap. It is not influential. No matter how much well-meaning people talk about how new technologies can empower people, it is still mostly American white boys who have their finger on the power stud. And yet there is something critically useful about electronic art, even if it does not always recognize this itself. Electronic artists negotiate between the dead hand of traditional, institutionalized aesthetic discourses and the organic, emergent forms of social communication.⁵ Electronic art is an experimental laboratory, not so much for new technologies as for new social relations of communication. This is why electronic art matters to critical theories of culture, be they of the Frankfurt school or, in my case, the Birmingham school of cultural studies.⁶

Moreover, a confrontation with electronic art might have some salutary effects on criticism, which sometimes lapses into moral and conservative homilies. When confronted by technologies—the tools of rapid change—criticism gives in to Burkean urges to conserve

"cultural difference" from what it imagines to be the entirely negative and homogenizing effects of change. This moral reaction forecloses debate on the necessity and desirability of change. Some dynamics in culture cannot be halted. Some may be positively beneficial. A dialogue with experimental electronic media may help keep these questions open for a criticism that all too often forgets its own history—and forgets how to think historically. This Burkean criticism imagines that it is this technology, this epoch of change, that ushers in "the fall" from grace, from an organic and unified culture. Everything from the newspaper and the illustrated magazine to cinema and television, and now Nintendo and CNN, are imagined to be the last straw that hurls us out of Eden. As Simon Penny notes, "This all creeps up on us while we're asleep anyway: who worries about our dependence on the global computerised telephone network, or that because of pocket calculators nobody can do mental arithmetic anymore?"⁷ While uncritical faith in the liberatory potential of technology may in the main be the principal ideology to combat, uncritical fear of it is also debilitating. The convergence of the critical tradition with new technology seems to me to be a dialectic with potential to raise both to a new level of cultural and political salience.⁸

Given a will to think historically about cultural change and to use electronic art as a foil, two problems arise in thinking about the emergent, global forms of culture. One is the problem of access to knowledge about new techniques. The other is the problem of generalizing from specific experiences. In other words, we confront a limit to what we know of time and of space. We know least about what is nearest in time—the emergent present—and what is most distant in space, namely, the forms of culture of our antipodean others. What compounds the issue is that the things we want to critically examine—new media—are precisely what appear to overcome these problems for us. This is a problem that calls, in short, for art and for theory: for intuitive visualization and speculative conceptualization.

No matter how global and how abstract the analysis wants to be, it can never extract itself from its quite specific cultural origins. Hence this writing takes the form of an essay and asks the essay's classic question: "What do I know?" I want to begin with my own experience of this planet of noise we now live on. The result is a very abstract essay, but also a very self-consciously partial one, tied to particular experiences of sailing ships and television. In it I rephrase

Montaigne's self-questioning from "What do I know?" to the more suitably antipodean "From where am I interpolated?"⁹

To the vector the spoils

For a long time Australian culture has manifested a desperate attempt to fix a few things in consciousness between two great abstract terrains of movement. The first is the sea. The sea, as Hegel says, "gives us the idea of the indefinite, the unlimited, and infinite: and in feeling his own infinite in that Infinite, man is stimulated and emboldened to stretch beyond the limited: the sea invites man to conquest and to piratical plunder, but also to honest gain and to commerce."¹⁰ Thus, ambivalently, did this first regime of the vector traverse the globe.

The cultures that invaded Australia did so using a naval technology. This technology turned the space of nautical dangers into an abstract space of movement, migration, trade, and, above all, strategy. This history was a history of the transformation of the space of the oceans into a universal space of movement. The project of transforming the antipodes through invasion and settlement presupposes a world of material flows. The "conquest" of nature and the creation of the second nature of built environments presupposes this abstract space of flows. From the first fleet to the fast clippers, its development is central to the project of modernity.

Yet overlaid on this second nature of material flows there is now another abstract space that produces another feeling of the unlimited—the terrain of the media vector. The passage from modernity to postmodernity seems to me to involve the passage from one form of abstraction to another—from the second nature of abstract social spaces created by sea and rail transport to the abstract communicational spaces created by the telegraph, telephone, television, and telecommunications. These are the techniques of telesthesia, of perception at a distance. Since the telegraph, the time of communications has been less than the time of transport, and indeed these two synonymous terms begin to diverge in meaning as they diverge as terrains of abstraction.¹¹

Put somewhat more theoretically, second nature emerges out of the struggle to wrest freedom from necessity. It is an overcoming of the tyranny of nature, achieved through the social organization of labor. As we know only too well, the process of creating second nature creates new tyrannies as well. Freedom from nature becomes

the elimination of nature. The social organization of second nature is, among other things, a class relation. The division of labor makes every function—including art—partial and fetishized.¹²

An artist who I think quite graphically maps most of the predicament of second nature is Stelarc, who makes of the surfaces of his body a theater of second nature. In his performances, his skin becomes the point of interface for relations to the technical. He appears strapped and wired to any and every device. Some are devices he controls through the movement of his muscles. Some are devices that control him, triggering involuntary parabolas and disconcerting jerks. Here is the body as second nature made it and maintains it: in a state of permanent dependence and symbiosis with what Peter Callas calls technology as territory.¹³

The decline of modernity is in many respects a loss of faith in second nature. The division of labor brings with it fragmentation, anomie—the compulsions of discipline and the anarchy of the market. The redemptive vision of second nature withered in both its Marxist and bourgeois forms. Yet this does not stop the projection of the fantasy of redemption onto third nature. In both the cool and the nerdy techno literature in *Mondo 2000* and *PC Monthly*, redemption is always around the corner in virtual reality, hypertext, cyberspace. Although the terrain is different, the projection of a vectoral field of total communication extends and completes the projection of a vectoral field of extraction and production. With an extra ten megabytes I can finally RAM down the doors of data heaven! Such is the new fantasy of wresting freedom from necessity—for those at least who are at the very heart of the relations of power that constitute third nature.

Representation and power

Sitting on the dock of the bay, the question concerning technology looks a little different. Viewed from the antipodes, the fundamental thing about modernity is the creation of the globe as an abstract space of movement, exploitation, and strategy. It is not what happened in Europe that is fundamental to modernity; it is Europe's relation to its many antipodes. It is not what is happening in the United States (or Japan) that is fundamental to postmodernity, but what is happening in its relations to its antipodes.¹⁴ In both cases, that relation is only secondarily intersubjective. It is primarily the encounter of techniques of power premised on a radical abstracting of space overcoming prior modes of dwelling on the earth.

From the perspective of the antipodes, or at least from a harbor-side flat in Ultimo, one can contrast Foucault's notion of disciplinary technologies with a genealogy of what one might call vectoral technologies. It is not the *Panopticon* but the British navy that in this latter view emerges as a key technological regime of power in the early modern period. Let's not forget that Bentham's famous pamphlet was called *The Panopticon, or New South Wales?* Vectoral power was not based on close disciplining and inspection of the social body, but purging of the social body. The vector vents its spleen on an other that is partly mapped but still mostly imagined.¹⁵

Yet there is a link between the panoptic strategy and the vectoral strategy of transporting surplus, criminalized people to the antipodes. Both are regimes that combine a field of visibility, a technology for enclosing or traversing it, and a discourse and its executors. While the panoptic strategy is one of intensive techniques, subdividing, scrutinizing, and enclosing space within the city, transportation is an extensive vector, based on a technology that can project, plan, and traverse the globe. The world becomes the object of the vector, of the potentiality of movement. Bodies, cargoes, weapons, information: this principally naval technology produced, almost as an afterthought, Botany Bay and Sydney.

The antipodes are not the other of the west but the project of the West. While the idealized mythologies of the exotic still haunt global media exchanges (and the arts), they are subsidiary to the management of the antipodean other via techniques of appraisal that see in the antipodes not the noble savage or the evil demon, but a resource to be managed and mobilized along the lines opened up by the vector. The sublime antipodean other becomes enmeshed in an abstract grid capable of more mundane valuations of economic and strategic advantage. The other becomes a project, not a double for the West.¹⁶

In the development of the vectoral regime of power, everything depended on the development of technologies of perception.¹⁷ In the naval regime, techniques for finding a ship's longitudinal position were decisive.¹⁸ This made possible a much more productive relation between the abstract space of maps, charts, and solar calculations and the places through which ships passed on their travels. Gradually, every movement becomes equivalent and interchangeable with any other movement. Gradually, any destination becomes

equivalent and interchangeable with any other place. As with physical movement, so too with information. Information no longer knows its destination.

In his remarkable book *European Vision and the South Pacific*, Bernard Smith shows how the rise of British naval imperialism precipitates the fall of neoclassical representation.¹⁹ The neoclassical style pictured landscapes in terms of the ideal, and this aesthetic was institutionally enshrined in the Royal Academy. The Royal Society itself favored an aesthetic based on the representation of the typical. Through its connection with scientific naval expeditions to the Pacific, the Royal Society saw to it that the typical became the technique of representing what explorers like Cook and Banks found. The new mode of art became an organic part of the most advanced edge of modern social relations. The old form of representation was preserved—as if in aspic—as a traditional but no longer living form. This split has troubled modern art ever since.

It was alive and well in the tension between photography conceived as a fine art practice and the photography that was dependent on techniques developed from and organically connected to the practices of military reconnaissance. It is alive and well again in video practice dependent on cameras powered by CCDs developed for spy satellites and designed to track the telltale flare of Russian missile launches. Since the triumph of the model of the typical in pictorial representation, a certain type of art frames the world as picture and presents it to power as an image of its potential sites for the project of transforming nature into second nature.

Today we appear to have gone beyond technologies that frame the world, in Heidegger's sense. We live not with the discrete framing of the continuous space of the world but with the temporal editing of its multiple and continuous times into a singular rhythm of cuts and ruptures. The edit becomes the device for regulating, not static pictures or singular texts, but constant flows of information. Information about markets, products, consumers, events, forces and resources—above all, information about other information—now has to be organized in the exercise of far more extensive powers. The naval vectoral regime created a new role for the artist in framing and inscribing the typical. The typical became the mode of assessing the relative worth of projects designed to exploit what the typical pictured. This process could result in miscalculation, as it did notoriously in the decision to colonize Botany Bay, Australia. The land itself did not live up to its representation.²⁰ Nevertheless, the pursuit

of the vector has also been the endless process of refining and verifying information about the world and hence increasing its openness to development and transformation into second nature.

Today, sophisticated techniques are gathering to make ever more complex projects instantly and constantly comparable and assessable—from refinancing News Corp. to selling Benetton jumpers. The development of vectoral flows of information is what makes possible the space of flows, in which jobs, troops, money—anything—can be redirected from one interchangeable site to another. Art, whether it likes it or not, is part of this emergent terrain of third nature, as Mike Davis shows in his book *City of Quartz*.²¹ When Los Angeles sells itself as a destination for footloose global capital, it sells not only as a sound business investment but as a prestigious storehouse of cultural capital. The art gallery becomes an investment in attracting attention in the global space of flows. Art is not innocent, but that is why it still has critical value. It is art's relative organic proximity to the emergent vectoral relations that makes art interesting, not its relative detachment.

From second nature to third nature

But I have wandered across the Pacific again. To return to our question: "When we can go to the antipodes and back in an instant, what will become of us?" Perhaps, among other things, we will start making and appreciating art like the Photoshop collages of Robyn Stacey.²² Stacey's work keys into this expanded terrain that the media vector creates. Stacey has grasped and exploited the radically new protocols of third nature as a space of perception and relation—a space that is not void of rules and conventions of historicity, appropriateness, genre, and scale, but a space where such rules are in a constant state of evolution. Unanchored from the space of places and cast into the space of flows, images become polyvalent, revealing a visual poetics that the surrealists could only imagine but that the vector has now rendered as a philosophy made concrete. While art can map and display an image of this new space of vectoral relations, it cannot theorize it. Both art and theory need to look into the experience of everyday life—that elusive reservoir of tactics and ethics—for the practical foundations of a critique of this new terrain, our third nature. So let us return, for a moment, to everyday life.

When I was a kid growing in suburban Newcastle, in a little weatherboard house perched between the railway line and the

Pacific highway, I loved to look at the atlas and draw maps with colored pencils. First I would draw the contours of nature. In green and blue and brown I projected an image of the ocean, the land, and the mountains. This was a jaggy mass of impassable terrains, each unique and torturous.

Then I filled those contours with dots of various sizes, all enclosed with jagged lines that divided the land mass up into a patchwork of spaces. Unknowingly, I drew the geography of places, of our second nature. The dots marked out cities and towns of various sizes; the borders marked out the territories these towns were able to bring under their control in the modern period. The railways and the newspapers between them defined spaces that were integrated economically, politically, and culturally. Regionalism gave way to nationalism.²³ This tendency breaks down the separation of places and aggregates them into bigger, more abstract units. Thus the natural barriers and contours of the land were overcome with a second nature of productive flows.

Next, I took out a big red magic marker and started to join up all of the dots. Big fat lines between the big towns, smaller ones between the regional centers. From the telegraph to telecommunications, a new geography has been overlaid on top of nature and second nature. This, it seems to me, is one way of reading what most Australians were and probably still are taught in school.

The development of third nature overlaps with the development of second nature—hence the difficulties of periodizing the modern and postmodern. The salient point for me is the development of the telegraph. What is distinctive about the telegraph is that it begins a regime of communication whereby information can travel faster than people or things. The telegraph, telephone, television, telecommunications—telesthesia. When information can move faster and more freely than people or things, its relation to those other movements and to space itself changes. From a space of places, we move on to a space of flows.

If there is a qualitative change in the social relations of culture that deserves the name of postmodern, perhaps this is it. Or perhaps we could call this state of affairs third nature. Second nature, which appears to us as the geography of cities and roads and harbors and wool stores, is progressively overlaid with a third nature of information flows, creating an information landscape that almost entirely covers the old territories. While this process has been going on since the telegraph, it reaches critical mass in the late 70s. The

“postmodern” is thus a catalog of its symptoms. “Cyberspace” is a description of its subjective effects. Both postmodernism in theory and cyberspace in literature are explorations of the landscape of third nature.

We can see now, very clearly, what the terminal state of third nature would be. Deleuze and Guattari ask provocatively and more than once: “Perhaps we have not become abstract enough?”²⁴ What would it mean to become more abstract, ever more abstracted from the boundedness of territory and subjectivity? One can imagine a delirious future, beyond cyberspace. Not the future of Marx’s communism: from each according to his abilities, to each according to his needs. Rather the future of the rhizome made concrete: where every trajectory is potentially connected to every other trajectory, and there all trajectories are equal and equally rootless. Where we no longer have roots, we have aerials. Where we no longer have origins, we have terminals.

This fantasy appears in different guises, also, among the Californian techofreaks, the postmodern wing of the Green movement, in the corporate improvisations of Rupert Murdoch, and among the high-frontier hegemonists in the Pentagon.²⁵ The struggle over the relations of communication and the making of third nature is every bit as intense as the struggles over the relations of production and the shaping of third nature—but many of the old rules no longer apply.

Autonomy versus antipodality

The perception of postmodernism, cyberspace, third nature—call it what you will—differs from place to place, and it is high time to start breaking down these rather ethnocentric concepts. One way to do so is to try to discover the relations of antipodality lurking within them. Antipodality is the feeling of being neither here nor there. It is an experience of identity in relation to the other in which the relation always appears more strongly to consciousness than either the identity it founds or the other it projects.

Experiencing antipodality is always very unsettling, sometimes a little schizophrenic. There is nothing uniquely Australian about it, although it is a very common anxiety in Australian culture.²⁶ This is a place that is always in a relation to an elsewhere, that is always defined by its relation to a powerful other. First the British came and colonized. Then the Americans came and coca-colonized. We are

no one, whoever we are, always oscillating in antipodality with elsewhere.

I think that these days the anxiety of antipodality is growing ever more common. The globalization of trade flows and cultural flows made possible by information technology reopens the old wounds of identity, breaking the skin at unexpected places. The volume and velocity of cultural product in circulation on the planet of noise keeps rising. Popular music, cinema, and television, the raw materials of popular culture, are increasingly sold into global markets in accordance with transnational financing and marketing plans. Suddenly cultural identity looks like it is in flux. The relations and the flows are more clearly in view than the sources or destinations. Cultural differences are no longer so tied to the experience of the particularities of place. These "vertical" differences of locality, ethnicity, and nation are doubled by "horizontal" differences, determined not by being rooted in a particular place but by being plugged into a particular circuit. We vainly try to preserve forms of difference that are rapidly reorganizing themselves along another axis.²⁷

This new experience of difference is an experience of an active trajectory between places, identities, and formations, rather than a drawing of borders, be they of the self or place. This is antipodality. Antipodality is the cultural difference created by the vector. The acceleration of the vectors of transnational communication will make the antipodean experience more common. With CNN beaming into every part of the globe that can afford it, many people are experiencing "antipodality," the feeling of being caught in a network of cultural trajectories beyond their control.²⁸ In the overdeveloped world, both the culture of everyday life and the culture of scholarly thinking about the present seem to me to betray traces of unease, if not downright paranoia, about antipodality. Yet it is undoubtably the emergent axis of technocultural struggle.

At present, antipodality exists in the politics of third nature in two forms. On the one hand, it leads to attempts to shore up identity against the flux. Black nationalism and born-again Christianity seem to me to have elements of this reactive return to an imagined core of immutable identity and community. On the other hand, the kind of coalition building involved in queer politics and the politics of affinity Haraway speaks about in contemporary feminism seem to me to treat antipodality more as a fact of life than as a threat to identity.²⁹

Now, the point about this is that any attempt to create communities of resistance of necessity exclude something or someone.

Community only exists dialectically, as a struggle against something other, be it nature, other communities, or the vector. While struggles still, of course, take place in relation to nature and second nature, they now have an added dimension: the struggle, not for natural space, not for social space, but for information space. Every community de-informates certain spaces within itself and creates certain barriers to the flow of information from without. Every community, by definition, requires some degree of "correctness" from would-be members. There is, then, a certain moral ambiguity about the concept of community and identity. They are necessary, perhaps, but as intellectuals we need to keep a critical distance.

The work of VNS Matrix plays on antipodality to the extent that this group of women artists continually draws a connecting line between phallogentric and technological culture. They play off, play on, and play up to the antipodal position women are supposed to occupy in relation to the male *techné*. "We are the virus of the new world disorder," they casually announce.³⁰ VNS is not afraid to take on board the threat to traditional notions of female identity posed by the relentless development of the masculinist technology of second nature and the phallogentric image repertoire of third nature. Their project, as in the work *All New Gen* (1992) is to create new and open relations of subjectivity. There is a sense of closure in the process of creating these works: VNS Matrix is an all-women collective. That closure makes possible a radical openness to the flow. VNS takes the most incorrigibly gendered imaginary of Nintendo and imagines it otherwise: literally, as a feminized space.³¹

The virtues of moral ambivalence

For every set of oppositions within a given culture, there is always a trajectory along which one can bypass the fixed speaking positions that identities prescribe.³² One must try not to occupy either the position of domination in an antipodal relation, nor reactively take up the minor position. As petit-bourgeois intellectuals, we are always shuttling in-between.³³ I'm reminded here of the use video artist Peter Callas has made of the images from a Japanese card game, a game that is like the Western children's game of scissors, paper, stone. Each of the three terms is superior to one of the other terms and inferior to the other. There is no fixed hierarchy, and while every relation involves a difference, each is contingent on which cards turn up. That seems to me to be a diagram of antipodality.³⁴

When one knows what it is like to always be both the major and the minor pole of these ambivalent relationships of flow—to be scissors one minute relative to paper but stone the next—then one can begin to think with some subtlety about the problem of cultural diversity and the information vector. This moral ambivalence to antipodality is, I think, very common in Australia, and something to be capitalized on methodologically rather than deplored or ignored. In relation to American culture and economic power, Australia is always on the receiving end of antipodality. As the tyranny of distance gives way to the vector, new defensive mechanisms have been required at the level of the nation. On the terrain of cultural flows, a twofold process has occurred. The integration of the space of the continent into one media market has only taken place quite recently, via satellite technology. At one and the same time broadcasters have integrated the national broadcasting space and hooked it up to the global satellite feeds.³⁵

Until recently, this tendency towards antipodality was countered by local content rules in television broadcasting. As with local content rules in radio, these were successful in promoting the production of high-quality, popular media products, which in turn were successfully marketed overseas. Australian TV programming now has a global audience, and Australia is a successful supplier of recorded music to the world market. Overall, these policies balanced some degree of autonomy with a cosmopolitan media flow. The combined effect of lunatic “free market” policies and pressure from American program producers to have services, including cultural ones, included under GATT agreements are steadily leading to an erosion of autonomous Australian cultural intervention.³⁶

On the other hand, there is very little room for moralizing or playing the “victim” in mainstream Australian culture. “We” may be no one, but “we” were also colonizers, enslavers. The imposition of second nature on this continent, as on continental America, was at the expense of indigenous people. The imposition of third nature, via satellite-distributed TV, has only just begun.³

Becoming abstract

It has taken a long time for white Australians to wake up to the extraordinary cultural forms Aboriginal people have relied upon to survive the two hundred years since invasion. Putting side by side the mechanisms of cultural autonomy deployed by traditional

Aboriginal Australians confronted by white Australians and that of white Australians confronted with global cultural flows illustrates the problem of sustaining autonomy and cultural diversity on the cultural landscape of third nature. It is a problem that involves diverse solutions and quite a number of different scales, from that of the individual and community to that of the nation. In thinking about new media tools and the new vectoral trajectories they may open up, we can do worse than look at historical examples of strategies of survival. We need to think tactically about every form of communication, new and old. Like rocks, paper, and scissors, media are never simply good or evil; they are always contingent.

The growth of an abstract space of third nature, covering the whole globe, is in no sense an unambiguously good thing. The enlightenment mythology of the unalloyed good of knowledge and information can mask a very damaging antipodality, in which powerful centers create and control vectors of information. Anglo-Celtic Australians know only too well what it is like to live in the shadow of the powerful flow of the American media. Unlike Europeans, we have neither a strong tradition nor an autonomous language with which to maintain a communion of identity. The historical trajectory of the vector puts white Australia in an ironically similar predicament to Aboriginal communities, which have great cultural resources for resistance but have been systematically denied the material resources for cultural survival. These situations are, however, quite different, and have to be approached tactically through their particularities.

To return to Deleuze’s question: “What if we have not become abstract enough?” Out of the course of this analysis, some answers begin to suggest themselves. Whether we like it or not, cultural differences cannot be preserved from the impact of media vectors. New forms of difference are emerging out of the struggle with the vector; others succumb and become extinct. The abstraction of social relations from identity and place is not something that technologies achieve of their own accord. It results from the dialectic between communities and the technical regime of the media vector. Innovative forms of autonomous communication give the planet of noise something to suck on, so to speak. We no longer have roots, we have aerals. The dialectic of autonomy and antipodality structures an emerging politics of relationality and flow rather than of identity and locality. Our communicational interventions (for that is what both

art and criticism are) have to be rethought for this world of third nature we have made, which is very rapidly remaking us.

New technology cannot be used to preserve cultural differences. Traditional culture reified as museum interactives—even if they are VR—does not constitute preservation so much as mummification. New technology can be used to create new differences and new forms of autonomy and community, but it cannot be used to “preserve” old differences in any meaningful sense. Traditional forms of cultural difference are not independent of the techniques used to maintain them. The work of Eric Michaels and Francis Jupurrula in the Warlpiri Aboriginal community is interesting precisely because Michaels thought video could be used to create a viable community that would grow organically out of traditional information practices.³⁸ As Tim Rowse points out, Warlpiri social organization does not traditionally take the form of anything remotely like “community” at all.³⁹ This was, therefore, not preservation—it was a creative process. It was not ethnography—it was art. Naturally, it was a far more morally ambivalent project than simply preserving a form of communication assumed to have always already been there. Michaels thought that only by becoming abstract—by incorporating the information managing relations of third nature—could the constraints on knowledge so vital to the oral information economy of the Warlpiri be developed and sustained. Such is the order of problems for a critical practice of electronic media art.

The ends of art

This is, of course, a rather sweeping and world-historical way of framing criticism. I see no reason to relinquish the point of view of the totality to conservative interpreters of Hegel and Kojève such as Francis Fukuyama.⁴⁰ While we may be inclined to agree with Deleuze that the “only universal history is the history of contingency,”⁴¹ there is something heuristically useful and perhaps even tactically necessary in framing the critical or creative act in such a way that it appears as an instant within a much wider and intelligible process. If anything, such a perspective makes us more humble about the possibilities of art and criticism, yet none the less cognizant of the significance of what is at stake. The point of this particular rewriting of the trajectory of cultural history is to insist that there is considerably more to struggle for and to struggle against than Fukuyama’s rather smug picture of the completion of liberal

democracy as the completion of universal history would suggest. When viewed from the antipodes rather than from the center, things appear otherwise. Both art and criticism can make a claim to imagine a particular vision of the totality. This seems to me entirely preferable to the folly, which begins with Hegel, of imagining a total vision that encompasses all particulars. As Adorno warns, “The whole is the false.”⁴² Our imaginings of what is at stake in the transformation of the space of the globe by third nature are still only that: imaginings.

Nevertheless, electronic art is a practice that cannot help but raise issues of the totality, for it works with the tools that are themselves transforming the totality of social relations into the domain of third nature. Electronic artists cannot help but use the material of transformation itself, although they do not always choose to work critically on the issues involved in this transformation itself. The artists mentioned in this essay—Peter Callas, Robyn Stacey, Stelarc, VNS Matrix, Eric Michaels, and Francis Jupurrula—do, in my opinion. They have made use of the interzone of antipodal relations, of their status as “no one” marooned between the channels of third nature, to produce critical work in Australia that is also of a wider provenance.

Notes

1. Manuel Castells, *The Informational City* (Cambridge: Basil Blackwell, 1989).
2. On Virilio, see McKenzie Wark, “On Technological Time: Cruising Virilio’s Overexposed City,” *Arena* 83 (1988).
3. Raymond Williams, “Base and Superstructure in Marxist Cultural Theory,” in *Problems in Materialism and Culture* (London: Verso, 1980).
4. Donna J. Haraway, “A Cyborg Manifesto,” in *Simians, Cyborgs, and Women: The Reinvention of Nature* (New York: Routledge, 1991).
5. This distinction draws on Antonio Gramsci’s contrast between traditional and organic intellectuals in *Selections from the Prison Notebooks* (New York: International Publishers, 1973).
6. On Birmingham school cultural studies, see Stuart Hall, “Cultural Studies and its Theoretical Legacies,” in Lawrence Grossberg et al., *Cultural Studies* (New York: Routledge, 1992), and other essays in that volume.
7. Simon Penny, “Kinetics, Cybernetics, Art Practice in the Age of the Thinking Machine,” in *Irrelevant Ethics: Notes on Art Practice in a Technological Context* (Sydney: Virtual Object, 1988).

8. Two useful works of political and cultural criticism of technology, respectively, are Langdon Winner, *Autonomous Technology: Technics-Out-of-Control as a Theme in Political Thought* (Cambridge: MIT Press, 1978); and Andrew Ross, *Strange Weather: Culture, Science and Technology in the Age of Limits* (London: Verso, 1991).
9. On the everyday, see Michel de Certeau, "Montaigne's 'Of Cannibals': The Savage 'I'" in *Heterologies: Discourse on the Other* (Minneapolis: University of Minnesota Press, 1986).
10. G. W. F. Hegel, *The Philosophy of History* (Buffalo, N.Y.: Prometheus Books, 1991), 90.
11. James Carey, "Technology and Ideology: The Case of the Telegraph," in *Communication as Culture* (Boston: Unwin & Hyman, 1989).
12. Charles Taylor, *Hegel* (Cambridge: Cambridge University Press, 1991), 535ff.; see also Guy Debord, *The Society of the Spectacle* (N. p. Black & Red, 1983), epigrams 186–88.
13. For documentation on Stelarc, see Alessio Cavallaro et al., *Cultural Diversity in the Global Village: The Third International Symposium on Electronic Art* (Adelaide: Australian Network for Art & Technology, 1992).
14. McKenzie Wark, "From Fordism to Sonyism: Perverse Readings of the New World Order," *New Formations* 16 (1992).
15. Compare Bernard Smith's neglected masterpiece *European Vision and the South Pacific* with Michel Foucault's *Discipline and Punish* (Harmondsworth: Penguin Books, 1977).
16. Paul Foss, "Theatrum Nondum Cogitorum," in *The Foreign Bodies Papers* (Sydney), Local Consumption Series 1 (N. p. 1981).
17. McKenzie Wark, "The Logistics of Perception," *Meanjin* 49, no. 1 (Autumn 1990).
18. Geoffrey Blainey, *The Tyranny of Distance: How Distance Shaped Australia's History* (Melbourne: Macmillan, 1986).
19. Bernard Smith, *European Vision and the South Pacific* (Oxford: Oxford University Press, 1989).
20. See Paul Carter, *The Road to Botany Bay* (New York: Knopf, 1988).
21. Mike Davis, *City of Quartz* (London: Verso, 1991).
22. On Stacey's work, see Ray Edgar & Ashley Crawford, "Point Blank," *Tension* 24 (December 1990).
23. Benedict Anderson, *Imagined Communities*, (London: Verso, 1983).
24. Gilles Deleuze and Felix Guattari, *Anti-Oedipus: Capitalism and Schizophrenia* (London: Athlone Press, 1984), 321.
25. William Shawcross, *Murdoch* (Sydney: Random House Australia, 1992); Manuel De Landa, *War in the Age of Intelligent Machines* (New York: Zone Books, 1991).

26. See Ross Gibson's essays, especially his reading of Mad Max in *South of the West* (Bloomington: Indiana University Press, 1992).
27. Roland Robertson, *Globalisation: Social Theory and Global Culture* (London: Sage, 1992).
28. McKenzie Wark, *Virtual Geography: Living with Global Media Events*. (Bloomington: Indiana University Press, 1990).
29. Donna Haraway, "A Cyborg Manifesto" (see note 4). On black nationalism and its exclusions (particularly of women), see Michele Wallace, *Black Macho and the Myth of the Superwoman* (London: Verso, 1990).
30. VNS Manifesto, *Art & Text* 42 (May 1992), 66.
31. For documentation, see A. Cavellaro, R. Harley, L. Wallace and M. Wark eds., *Cultural Diversity in the Global Village: The Third International Symposium on Electronic Art* (Adelaide: Australian Network for Art & Technology, 1992).
32. McKenzie Wark, "Speaking Trajectories: Meaghan Morris, Antipodean Theory and Australian Cultural Studies," *Cultural Studies* 6, no. 3 (October 1992), 433–48.
33. Meaghan Morris, "Politics Now (Anxieties of a Petit-Bourgeois Intellectual)," in *The Pirate's Fiancée* (London: Verso, 1988).
34. On Callas, cf. Ross Harley, "Alphabyte Cities," *Art & Text* 28 (1988); McKenzie Wark, "Japan, Postmodernism and Beyond," *Tension* 22 (August 1990).
35. Tom O'Regan, "Towards a High Communications Policy," *Continuum* 2, no. 1 (1988).
36. Stuart Cunningham, *Framing Culture: Criticism and Policy in Australia* (Sydney: Allen & Unwin, 1992).
37. See McKenzie Wark, "Autonomy and Antipodality in the Global Village," in A. Cavellaro et al., *Cultural Diversity* (see note 13).
38. Eric Michaels, *For a Cultural Future: Francis Jupurrurla Makes TV at Yuendumu*, Artspace Art & Criticism Monograph Series (Sydney, 1987).
39. Tim Rowse, "Enlisting the Warlpiri," *Continuum* 3, no. 2 (1990).
40. Francis Fukuyama, *The End of History and the Last Man* (London: Hamish Hamilton, 1992).
41. Deleuze and Guattari, *Anti-Oedipus*, 224.
42. Theodor Adorno, *Minima Moralia* (London: New Left Books, 1973), 50.

2

In/Quest of Presence: Virtuality, Auality, and Television's Gulf War

Frances Dyson

The term "virtuality" emphasizes the indebtedness that the development of artificial environments such as "virtual reality" (VR), or the simulation of experience via robotics, such as telepresence,¹ owes to the rich popular and theoretical discursive arena in which such technologies are located. The cultural imaginary propelling virtuality inhabits a curiously sophisticated rhetorical landscape, shaped by the endless permutations of futuristic, libertarian, psychedelic, cybernetic, anarchistic, subcultural, utopian, mystical and science-fiction mythologies permeating late-twentieth-century culture. The tropology thus formed has astonishing breadth, given the relatively short span of VR or "cyber-tech's" existence and its comparatively low level of development. It also engages audacious declarations that, for instance, cyber-tech represents not only a new electronic medium, but a radically different, autonomous, and authentic "reality."² This is quite a claim for what is still within the realm of media, and illuminates the intense networks of desire currently constructing the present state of virtual affairs, where, it seems, the actual technologies deployed are overshadowed by the glorious promises they hold: a revolution in modes of sociality, access to an electronic sublime, and new forms of thought arising from a redefined subjectivity and refigured ontology. The compulsion to fulfill such promises, or prophecies, is so great that enthusiasts will, for instance, debate the value of certain systems that do not actually exist; hence their term "vaporware."

Although the postmodern metaphor par excellence, virtuality cannot be thought of apart from modernist institutions of mass media and the mechanisms of desire they have promulgated.³ Thus

when cyber-tech made its public "debut" during the Persian Gulf War to one of the largest audiences in television history, the media/public reaction to the "Nintendo"-like weaponry revealed a desire for virtuality that was and is intense but deeply conflicted. This "hi-tech war" seemed to concentrate a plethora of critiques already associated with media and technology into the paradox of a "bloodless war," and it is this kind of paradox, structured within the term "virtual reality" itself, that imbues visions of virtuality with a kind of ambivalent, anxious glee. When VR is described as a "reality" equivalent to, or "as real as," the earthbound, materially circumscribed reality most people endure, it diminishes the electro/spiritual mission that the "virtual" and the vaporlike are supposed to inaugurate.⁴ Yet eulogizing the immaterial over the mundane worldliness of present 'reality' is highly problematic, not only because it entails the derogation of the body, the "meat" that has thus far defined twentieth-century humanism, but also because disembodiment has historically constituted the *lack* associated with mass media. As media theorists have argued, it is this lack that surrounded the acceptance of the telephone, radio, cinema, and television with hushed expressions of loss and a growing nostalgia for the "real" that media represents, and in representing, supplants. Advocates of virtuality have attributed such "loss" simply to the artifactual and two-dimensional nature of the image, which can only be viewed and never "entered," which produces phantoms rather than the real thing. The dream of virtual reality has developed along with and often in response to this hiatus between the real and the visual representation, and it is within this context that the spatiotemporal and participatory attributes of VR technology seem to provide a solution. Through an odd kind of disembodied "embodiment," activating an "unmediated" media, the virtual subject is thought to recoup the "there" absent in other media, although that "there" belongs as much to the future as to the past, as much to a radical posthumanism as to a nostalgic yearning for the environments, communities, and lifestyles lost to twentieth-century "progress."

The kind of envelopment that virtuality offers as a solution to the limits of screen-based media is, however, not without precedent. Historically, it is through *sound* that visual media and media industries have recuperated the "presence" lost in imagistic representation, and the conceptual strategies behind this recuperation are just as operational in the rhetoric of virtuality. This is not say that virtual media offer presence through sound (although certainly this

occurred in the representation of VR during the Gulf War), but rather to point to the phenomenal, ontological, and symbolic status that aurality has and that virtuality simulates, if only in theory. While the image has suffered a loss of credibility throughout the twentieth century, audiophony has maintained its claim to presence and truth, and thus presents a protovirtuality, equipped with an uncontested mythology and supplying a ready-made range of metaphors and technological precedents (Lanier, for instance, first likened VR to the telephone). However, audiophonic innovations continue to generate the same ambivalence towards technology and new media that virtuality is experiencing. The major concern of what follows will be to situate aspects of aurality—its "presence," its utopian histories, and its corporate deployment—within the rhetorical, mediumistic and militaristic emergence of virtuality.

Virtual metaphysics

"Aurality" refers to the phenomenal and discursive terrain of sound, and it is interesting that this terrain is formed by concepts and metaphors that also appear within virtuality. Like virtuality, the phenomenal invisibility, intangibility, multiplicity, and existential flux of sound challenges an understanding of the real based upon the visible, material, and enduring object. Sound cannot be held for close examination, nor can it be separated from the aural continuum and given a singular identity. In a constant state of becoming, sound comes into and goes out of existence in a manner that confounds ontological representation. Similarly, being both heard outside and felt within, sound blurs the distinction between the interior and exterior of the body, annihilating the distance between subject and object, self and other. This immersive quality, together with the physiology of the ear, destabilizes the subjectivity of the subject; unlike the eye, the ear cannot be closed. Unlike the gaze that is always *in front of* the subject and projected onto the world, listening involves an awareness of the unseen and possibly unwelcome spaces on the periphery of one's being. In short, aurality presages a reexamination of how the real is constituted, how knowledge is grounded, and the metaphorical and biological sense apparatus by which the "I" and the "world" coincide.

Within the opposition constructed between the sensible and the intelligible, the body and mind, sound emerges as an agent of destabilization, indicating the extreme fragility of dualistic structures. It is