

## LEONARDO REVIEWS

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### LECTURE

#### **BILL VIOLA IN CONVERSATION WITH ADAM WEINBERG, 27 OCTOBER 2009, THE WHITNEY MUSEUM'S 2009 ANNENBERG LECTURE.**

Event web site: <<http://whitney.org>>.

*Reviewed by Giovanna Costantini.*  
*E-mail: <giovanna@umich.edu>.*

"I don't really believe anymore that we are meant to go it alone," intoned Viola at the Whitney Museum's annual Annenberg Lecture. "Our task is to teach," he continued, "for we become broader and deeper when we experience the work of those who have gone before us to take our place in the flow of time."

To this purpose Viola opened his talk with quotations from *Japanese Death Poems: Written by Zen Monks and Haiku Poets*, verses composed at the end of life from poets about to take their last breath—moments, much like Viola's body of video art, that would mark a transition from this world into the next life. Reading passages from the text, he described the poems as a single brushstroke painted at the very moment that one steps from a material existence into immateriality, a transformation of death into life, like art, through an act of creation.

Speaking not in the theater but in the common areas of the museum's portico, where he was framed by simultaneous projections of himself against *Passage into Night*, a 2005 work in which a

reflected image advances into a pool of water, the space seemed eerily cryptic-like, the projections disembodied and ephemeral, like much of his artwork, in which figures emerge and recede from ulterior dimensions of time and space.

He compared the creative process to a ritual act of destruction and creation in which the artist, as Prometheus, journeys to the edge of possibility (or emptiness) and contemplates the force required to externalize the fire within. Viola looked to technology, the Greeks' *techné*, for the means to "trick" nature into revealing her secrets, to translate revelation metaphysically into art. "Never has there been a time of greater possibility," he emphasized, with illumination extending from stained glass to digital machines, synchronization codes and electrical circuitry that can scan lines of visual data into a single frame and vibrate at incredible rates of speed to suggest amazing movement in order to reproduce a single, simulated image of reality. The digital revolution ultimately emanates from the mere four watts of energy that power the electrical system of the human brain, he explained, yet like the blood vessels of the body, technology can be used for purposes of destruction as well as to express human connectivity and life's imponderable mysteries. He pointed to his most recent installation, *Pneuma* (1994/2009), in the current exhibition, *Bodies of Light* at the James Cohan Gallery in New York, as an example. Here, projections merge and submerge from indistinct shadows as grains of shifting memories, sensations or dreams. Each time light passes through the body it reveals another layer of skin from a figure that is barely recognizable, until eventually the body disappears altogether. Yet the image appears to linger indefinitely in the penumbra of consciousness that leads from one state of being to another.

He admonished artists to learn from a position of weakness—to work in the messy areas of love, not its pristine repositories where one places things one has forgotten how to use. "Position yourself both within and outside of yourself," he advised, "so as to work as though there is someone greater than

you in the room watching you. Masterpieces tell you nothing," he cautioned. "It's about not figuring out the end until you get there."

At the Whitney, Viola's voice accompanied the screening of *Passage into Night* as a transfiguration occurring at his back. A silhouetted woman garbed in black advanced toward the viewer at a pace timed to coincide with the duration of Viola's remarks. Slowly, almost imperceptibly, we become aware of her inner radiance as glints of light dancing over a body of water. "She is almost here"—he turned to regard her from time to time, until ultimately, she was immersed, as art, in her own reflected image. In certain ways, he pointed out, the image echoes that of *Fire Woman* (also 2005), inspired by the opera *Tristan and Isolde*, in which a dying man, consumed in flames, falls into an ocean, where the flames elongate, expanding into brightness as prisms of light.

**Reviews Panel:** Kathryn Adams, Nameera Ahmed, Katherine Ancher, Fred Andersson, Wilfred Arnold, Jan Baetens, Niran Bahjat-Abbas, Brian Baigrie, Jenny Bangham, John F. Barber, Jon Bedworth, Roy R. Behrens, Katharina Blassnigg, Martha Blassnigg, Barry Blundell, Catalin Brylla, Annick Bureau, Franc Chamberlain, Chris Cobb, Ornella Corazza, Geoff Cox, Sean Cubitt, Luisa Paraguai Donati, Hannah Drayson, Anthony Enns, Jennifer Ferng, Enzo Ferrara, George Gessert, Thom Gillespie, Luis Cirao, Allan Graubard, Dene Grigar, Diane Gromala, Rob Harle, Craig Harris, Paul Hertz, Craig J. Hilton, Jung A. Huh, Amy Ione, Boris Jardine, Richard Kade, John Knight, Mike Leggett, Helen Levin, Kieran Lyons, Roger Malina, Jacques Mandelbrojt, Florence Martellini, Eduardo Miranda, Rick Mitchell, Robert A. Mitchell, Christine Morris, Michael Mosher, Axel Mulder, Frieder Nake, Maureen A. Nappi, Angela Ndaliansis, Martha Patricia Nino, Simone Osthoff, Jack Ox, Narendra Pachkhede, Jussi Parikka, Rene van Peer, Giuseppe Pennisi, Cliff Pickover, Patricia Pisters, Michael Punt, Kathleen Quillian, Harry Rand, Sonya Rapoport, Tracy Reddell, Hugo de Rijke, Stefaan van Ryssen, Sundar Sarukhai, Laura Salisbury, Lara Schrijver, Bill Seeley, Aparna Sharma, George K. Shortess, Chris Speed, Yvonne Spielmann, Eugene Thacker, Pia Tikka, David Topper, Nicholas Tresilian, Ian Verstegen, Claudia Westermann, Stephen Wilson, Brigitta Zics, Jonathan Zilberg

## EVERYDAY CREATIVITY: SHARED LANGUAGES & COLLECTIVE ACTION

7th Creativity and Cognition Conference, 27–30 October 2009, Berkeley Art Museum and the University of California at Berkeley.

Reviewed by Amy Ione, Berkeley, CA, U.S.A.  
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Creativity is a word that people use as if we all share a similar sense of what it means. Yet, and I am certain I am not unique in this, talking to others at length often shows that how we define creativity is more multifaceted than our assumptions suggest. Given that I am a “creative” person and have come to see the term as both complex and ambiguous, I was delighted to learn that the 7th *Creativity and Cognition Conference* was coming to Berkeley this year. As a Berkeley resident, I was excited to find I could easily attend and learn how this group approached the idea. For this conference, the organizers decided to frame the program around the rubric of “Everyday Creativity” and posed several questions in their call for projects/papers: How do we enable everyone to enjoy their creative potential? How do our creative activities differ? What do they have in common? What languages can we use to talk to each other? How do shared languages support collective action? How can we incubate innovation? How do we enrich the creative experience? What encourages participation in everyday creativity?

It was no surprise to find that those at the conference answered these questions from many vantage points, although it seemed the accepted submissions emphasized computer science, design (in an engineering sense) and education. (I believe they said that only 23% of the proposals were accepted, so I would assume that this kind of emphasis mirrors what the organizers wanted the conference to stress.) Still, the more hands-on discussions are those that have stayed with me to a greater degree. Although often more descriptive than quantitative or statistical, this work was striking because it showed evidence of problem-solving through visuals that also demonstrated a complexity that I do not think we have quantitative tools

to describe. One paper that brought the humanness of creative acts to mind was “Assistive Devices—Stroke Patients’ Design” by Ana Correia de Barros and Carlos Duarte. Their interviews with 48 stroke patients illustrated many cases where “private” solutions were used to provide equipment to the patient so that they were better “equipped” to deal with their disabilities. Often these impressive handcrafted devices, made by family and friends of the patients, were similar to those on the market. Not having access to, or information about, the manufactured product, these “helpers” developed solutions that would function similarly to the unknown device and would successfully ease the daily tasks of someone in need.

Cathy Treadaway’s paper “Hand E-craft: An Investigation into Hand Use in Digital Creative Practice” similarly presented a sensitive articulation of the complexity of the creative process. In this case, she showed a video to allow us to see how an artist combined computer-aided design with work by hand. Treadaway’s approach to conveying the value of haptic sensitivity in a creative process seems important when we consider the trend toward digital and technological projects that often include a “distance” from directly exploring our natural space.

I was also quite taken with a personal element that was very present throughout this conference. For example, Sarah Atkinson’s contribution, an invited installation commissioned by BigDog Interactive, Ltd., was a creative inspiration that allowed many of us to receive unique conference bags. Atkinson issued a “Call for Bags” before the conference, asking participants to recycle their old conference bags so that she could re-craft them for this event. I received one of these bags at registration, with an attached tag that says it was “constructed using three different CHI conference sweaters that were cut into circles of various sizes and then sewn back together to make the fabric for this bag.” Thank you, Sarah! I simply adore my bag and I am delighted to have this cool replacement for an old, ratty bag I’ve carried around forever. Another nice touch was the poster and demo madness session. Everyone who was doing a poster or a demo spoke for about a minute. These quick summaries allowed the attendees to have a sense of each project and to build a mental map of what to look for in the poster-demo session. There were also a number of prizes presented, includ-

ing Amy F. Ogata for “Cultivating and Commodifying Everyday Creativity in Postwar American Childhood,” Kimiko Ryokai for “Children’s Storytelling and Programming with Robotic Characters,” and Benjamin G. Shaw for “A Cognitive Account of Collective Emergence in Design”; Brittany Smith received the “most helpful student volunteer” prize.

Anyone who has attended a parallel track conference knows how frustrating it is to have to make choices between papers when conflicts arise. Creativity and Cognition had only one stream of sessions, so we were all able to appreciate all the activities. Another plus was the idea to have a keynote on each of the three days. Each was different and, as a whole, they added tremendous scope to the event. JoAnn Kuchera-Morin of AlloSphere Research Laboratory Nanosystems opened the conference with her paper “Using the Creative Process to Map N Dimensions: Quantum Information at Your Fingertips.” Her powerful talk put me in exactly the right mental space for the three-day event. To oversimplify, Kuchera-Morin introduced us to the Design Stage environment she has set up in the AlloSphere. This site allows researchers to transform their working space into an immersive design canvas where they can overlay their mathematical algorithms and real data and, in a sense, perform their work. Her presentation was so captivating that it was only later that it occurred to me that I am not sure I entirely grasped what all of this has to do with quantum information.

On the second day, Jane Prophet’s keynote introduced us to her work as an artist who frequently collaborates with scientists. I found her talk the most engaging of the conference because of the multi-faceted nature of her projects and the themes she incorporated into them. Her *Swab Drawings*, also on display in the Creativity and Cognition exhibition area, was a video work she created in collaboration with cardiothoracic surgeon Francis Wells. It presents a drawing done by this doctor during a pause in an open-heart surgery. It was conceived to explain his procedure to medical visitors in the theater. Because the doctor is using the patient’s blood to make this quick sketch, the drawing challenges us to think about what a creative person does. In this case, I was confused about what was going on until Prophet explained that he was not taking time from the operation to do the drawing. In terms of “Everyday

Creativity,” it is intriguing to think that he made this sketch using the material at hand in his “everyday” environment. This work alluded to many things, including the creativity of the surgeon, the sharing of this creativity through the teaching of others in the theater, the artistic vision of Jane Prophet in recording the sequence, and the reactions of the audience to the unusual drawing she presents. Prophet writes: “In the Swab Drawing videos, we are privy to an intimate moment as cardiothoracic surgeon Francis Wells uses a swab of the patient’s blood, during open heart surgery, to recall diagrammatically the operating procedure.” The subject and the controversy bring to mind *The Sacred Heart: An Atlas of the Body Seen through Invasive Surgery* by Max Aguilera-Hellweg.

The final keynote, by Mihaly Csikszentmihalyi, was one of the few papers that incorporated recent work in cognitive neuroscience. I was surprised to find those at the meeting emphasized psychological studies and results rather than what is going on in the cognitive neuroscientific community, particularly in light of the interest in musical work at the conference and the recent explosion of studies on music and the brain. Perhaps it was because many of the projects seemed to stress applications more than theories.

Overall, the program provided a stimulating environment. The emphasis on design and engineering reinforced my sense that creativity has various meanings in our culture, a thought partially reinforced by the fact that my research into creativity is in other areas and moves in parallel directions. At the end, I found myself unsure as to how to evaluate the outcome. On the one hand, as someone who is generally critical of overly theoretical work, I was surprised to find myself feeling this event placed too much stress on contextual and applied approaches to the topic. It is undeniable that deciphering psychological traits is useful, as are efforts to encourage creativity in children and in the population at large. Indeed, it might be said that all our efforts to learn more about why the urge toward creativity resonates on so many levels are of value.

On the other hand, when walking home from the conference, I realized that I had wanted to raise many points about everyday creativity that seemed outside of the scope of this meeting. One that has nagged me for many years is that highly creative people sometimes

have a negative impact on society. The financial devices that have wrecked havoc on the world economy, like Bernard Madoff’s Ponzi scheme, are undeniably creative inventions that deserve no praise. Also, the many creative behaviors that defy social norms and stymie our lives were on my mind. Coincidentally, the next morning I awoke to a discussion on NPR in which a reporter explained that one of the problems in Afghanistan is that the terrorists are becoming more *creative* in how they make and use their weapons of destruction. I’m not certain it is appropriate to suggest that an academic research conference centered on Everyday Creativity should have addressed financial and moral issues. Still, one of the most challenging aspects of creativity is that we cannot separate it from these kinds of difficult aspects of life because the negative products of the creative mind are also a part of our environment. Even Leonardo, the acknowledged master of creativity, put as much energy into devising battle machines as other kinds of engineering devices.

So the question remains: How does a society differentiate between a discovery that is a “correct” product in the sense that it is in line with a culture’s norms and the discovery of something that is socially disadvantageous? As we educate each generation, I suppose the tools we use help formulate cultural balance and individual potential and build models that include structure, cooperation, teamwork, the individual and the exceptional. All of these elements were a part of the 7th Creativity and Cognition Conference to some degree, which is no doubt why it was a successful event.

## BOOKS

### EX-FOLIATIONS: READING MACHINES AND THE UPGRADE PATH

by Terry Harpold. University of Minnesota Press, Minneapolis, MN, U.S.A., 2009. 365 pp., illus. Trade, paper.  
ISBN: 978-0-81-665101-6;  
ISBN: 978-0-81-665102-3.

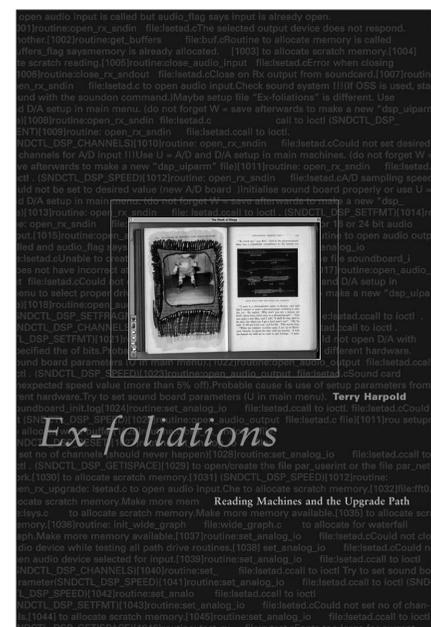
Reviewed by Dene Grigar.  
E-mail: <dgrigar@mac.com>.

My 12-in Macintosh, circa 2003, returned home today unable to be

upgraded to the newest operating software. Running simply on a PowerPC G4 processor instead the newer Intel Core 2 Duo processor, it had reached its limit with the move to Leopard last year. I also found out I could not revive the dead battery that had gotten jammed into the computer. To install a new battery, I had to sacrifice the old—that, or be prepared to spend \$500 to remove the casing of my computer to get to the old battery without destroying it.

I tell this story because it fits well with what Terry Harpold talks about in *Ex-foliations: Reading Machines and the Upgrade Path*, for the focus of his book is a reexamination of seminal ideas that helped to shape our thinking about digital media in respect to “media obsolescence, changing user interface designs, and the mutability of reading.”

Generally speaking, we think of exfoliation as throwing off or removing something from a surface, as in eliminating a layer of skin, but the Latin version offers a more specific meaning: to strip off leaves. Playing on this etymology Terry Harpold uses the word as “a loosely grouped set of procedures for provisionally separating the layers of the text’s surfaces without resolving them into distinct hierarchies, with the aim of understanding their expressive concurrencies.” Such an approach, he tells us, is “opportunistic,” since “it accepts a disjunction between the signifiers it isolates . . . and the signifieds it derives from . . . in response to those signifiers” (p. 137). Just as Harpold suggests, I will eventually have to quit using my laptop, essentially throw it off, because it will one day be unable



to access more robust documents that will, without a doubt, emerge. Like the old Classic, the blue gumdrop iMac and the white mushroom iMac sitting on a desk in my office, it will be relegated to accessing outdated media.

Harpold's ironic humor is at work with the book's format, for it reflects an upgrade of sorts of print technology—call it “Book 2.0”—in that the text is divided into chunks and numbered based on its location in the book. The first paragraph of *Ex-foliations*, for example, is listed as 1.01. Inside each discrete textual grouping (I am avoiding using the term *lexia* since Harpold takes Landow to task for his departure from Barthes' definition of it), we may find a link to another section of the book, a note at the end of the book or a figure within the chapter. That Harpold devotes close to a third of the book to Notes, Works Cited and Index should clue the reader in to the book's scholarly contribution to the field.

Those of us weaned on hypertext theory of the early 1990s will definitely find much to enjoy in Chapters One and Two, “A Future Device for Individual Use” and “Historiations: Xanadu and Other Recollection Machines,” respectively. Here Harpold revises and/or clarifies old views of hypertext, challenging Jakob Nielson's assumption of reading practice, distinguishing between Ted Nelson's and Vannevar Bush's “textual systems” (p. 20), and rethinking Nelson's Xanadu project, to name a few points. We who spent hours creating links and nodes in Storyspace documents will gain much in Chapter Three, “Revenge of the Word,” where Harpold revisits hypertext fiction and theories by Michael Joyce and Stuart Moulthrop, particularly as their work functions within the affordances of the user interface. It is in Chapter Four, in the 51st paragraph, that Harpold finally gets to detailing his ideas on “ex-foliations,” defined above. We learn that ex-foliations

are well suited to the interpretation of the multiple and irregularly layered surfaces of objects in the digital field, especially those in which idioms of the GUI are of relevance to the expression and reception of meaning, or in which they are repurposed or subverted for aesthetic effect (p. 137).

This explanation helps to underpin the discussion found in Chapter Five, “Lexia Complexes,” of George Landow's notion of *lexia* within the context of Roland Barthes' introduction of the term and Shelley Jackson's *Patchwork*

*Girl*. In Chapter Six Harpold moves on to a discussion of Joyce's *afternoon: a story*, focusing particularly on the way the story is affected by the Mac and Windows operating systems. As he tells us,

Conceiving of digital reading solely or even chiefly as a practice of excavating meaning from the machine's secret registers means mistaking for signs of depth objects that may be best thought of as stuck to the surface of the text: jammed, with the reading subject, someplace among the clattering apparatus of the reading scene (p. 208).

While he laments the “lack of a general methodology for making sense of the contributions of applications and operating systems to writing for the screen,” he does allude to both “platform studies,” introduced by Nick Montfort and Ian Bogost, as well as “literary-digital forensics,” introduced by Matt Kirschenbaum, as “show[ing] great promise in the analysis of [this kind of work]” (p. 204). Harpold ends the book with Chapter Seven (one would be tempted to assign meaning to this well-used Western symbol for completeness if it weren't for the warnings about the disjunction between signifier and the signifieds given earlier), “Reading Machines.” This title, reminiscent of N. Katherine Hayles's book, *Writing Machines*, looks at the technology we call the book and compares it to a computer's interface, which he describes as “an impoverished system” (p. 13).

So deep is Harpold's knowledge of his subject matter that it is difficult to quibble over any points. Those of us who have been following his work for the last two decades will recognize the usual wit, mastery of theory and attention to detail. In sum, *Ex-foliations* is a must read for all digital media scholars, for it contextualizes current issues and trends (and concerns) in digital media within the larger notions of the reading experience and human desire.

### DIGITAL CONTAGIONS: A MEDIA ARCHAEOLOGY OF COMPUTER VIRUSES

by Jussi Parikka. Peter Lang, New York, U.S.A., 2007. 327 pp., illus. Trade, paper. ISBN 978-1-43-310093-2; ISBN: 978-0-82-048837-0.

Reviewed by Anthony Enns, Department of English, Dalhousie University, Halifax, Nova Scotia, Canada. E-mail: <anthony.enns@dal.ca>.

In his introduction to *Digital Contagions* Jussi Parikka argues that the history of

computer viruses offers new insights into the role that accidents play in modern culture. Parikka claims that accidents should not be seen as the result of technological malfunctions but rather are part of “the ‘normal’ functioning of a technological machine” (p. 5). Computer viruses thus reveal not only the heightened degree of risk that is symptomatic of high-tech societies but also the ways in which accidents are useful and perhaps even necessary components of technological machines. One of the principle aims of this book, therefore, is “to emphasize the affirmative perspective we can take on accidents, events, and hence viruses by considering them as *events* that are overflowing their rigid territorializations” (p. 5). Rather than seeing viruses as “malicious software made by juvenile vandals,” in other words, Parikka argues that they are “an inherent part of digital culture” (p. 23).

The book is divided into three chapters, the first of which focuses on the issue of risk and security. Parikka argues that the computer industry depicts computer viruses in a negative light in order to regulate and control consumer behavior. By examining how the emergence of new viruses required the sustained development of new anti-virus software, however, Parikka shows that viruses actually help rather than hinder the computer industry. Parikka thus concludes that “digital capitalist culture . . . succeeded in converting its own accidents to its own profit” (p. 100), and he even suggests that capitalism itself functions as a virus that is similarly “capable of continuous modulation and heterogenesis” (p. 96).

In the second chapter Parikka analyzes the cultural discourse surrounding the rise of computer viruses in the 1980s and argues that the sudden increase in public concern over viruses was closely related to the AIDS crisis. The computer industry introduced concepts like “safe hex,” “responsibility in use,” and “digital hygiene,” for example, in order to encourage “natural” and “healthy” methods of computing, which implied that computer viruses were spread by unsafe practices or degenerate hackers. By associating computer viruses with the AIDS virus, in other words, digital networks were frequently described using biological and ecological metaphors:

Bodies and diseases were not just entities of the biological sphere but taken in their diagrammatic dimensions as

notions that span the whole social field. . . . This provided elements for a media ecology that essentially relies on a certain metaphoric and metamorphic basis deterritorialized by biology and ecology (p. 204).

In the third and final chapter Parikka complicates this metaphorical use of biological and ecological terminology by arguing that computer viruses can also be understood as living entities. Parikka begins by noting that it is often difficult to distinguish between “useful” software and viral “malware,” as many viruses also serve benevolent functions. Moreover, viruses are not anomalies within the system but rather “express its very defining modes of operating” (p. 215). Because these semi-autonomous programs are built into the very structure of digital networks and are fundamentally necessary for the functioning of these networks, Parikka argues that they represent auto-poietic systems:

The perspective of ecologies should be understood as self-referential systems or processes, where to understand (or observe) the function of the system, one cannot detach single elements from its synthetic consistency (and label some elements as purely anomalous). . . . [A] focus on such a systems approach allows one to think also of digital culture as couplings where “organisms” or “components” participate in the auto-poiesis of the general system (p. 259).

Parikka then draws several connections between second-order cybernetics and Deleuzian-Spinozan philosophy in order to show how biological and computer viruses both illustrate the ways in which bodies and environments “resonate together” and “infect each other” (p. 270). Rather than understanding terms like “computer virus” and “media ecology” as metaphors, therefore, Parikka concludes that biological and ecological concepts can be applied to both natural and technological systems.

Parikka’s project is largely informed by German media theory, particularly the work of Friedrich Kittler, which has often been criticized by Anglo-American media theorists for promoting a kind of technological determinism that grants undue power to machines. Parikka’s materialist approach is certainly vulnerable to similar accusations; indeed, the very notion of computer viruses as living agents or actors clearly endows the apparatus with a degree of power that some critics may find disturbing. While Parikka briefly mentions that computer viruses represent an example of “bottom-up emergence”

(p. 3), he seems to employ this term in a biological or perhaps even evolutionary sense and he explicitly rejects the notion that viruses might represent the resistant logic of hackers attempting to subvert or appropriate corporate technologies. Parikka’s discussion of “viral capitalism” seems to pose a similar problem, as it implies that capitalism might also be understood as a living and potentially even benevolent entity. Nevertheless, Parikka’s argument is extremely persuasive and poses a serious challenge to critics who prefer to think of computer networks as potential instruments for promoting digital democracy. Parikka brilliantly weaves together historical research and post-structural theory in order to explore the nature of digital computer networks and expand the field of media ecology.

### SONIC MEDIATIONS: BODY SOUND TECHNOLOGY

edited by Carolyn Birdsall and Anthony Enns. Cambridge Scholars Publishing, Newcastle upon Tyne, U.K., 2008. 286 pp., illus. Trade. ISBN: 1-84718-483-9.

*Reviewed by John F. Barber, Digital Technology and Culture, Washington State University Vancouver, Canada. E-mail: <jfbarber@eaze.net>.*

A great deal of academic theory and research is devoted to discipline-specific study of sound in cinema, social thought, new media technologies, music, orality and literacy, as well as the avant-garde in general. Within such contexts questions are raised

concerning the study of sound when it crosses disciplinary boundaries. How, for example, does one define a field of interdisciplinary sound studies that encompasses music, literature, film, art, theater and performance?

One approach is to identify common concerns that can become objects of analysis for more fundamental philosophical questions.

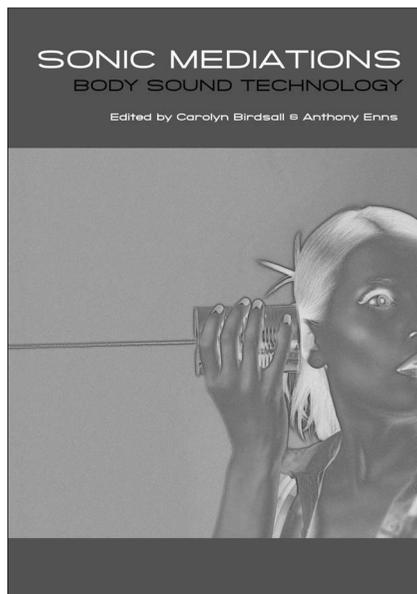
This is the approach taken by *Sonic Mediations: Body Sound Technology*, edited by Carolyn Birdsall and Anthony Enns. This collection of essays identifies mediation as one of the core concerns for scholars working in sound studies because, according to the editors, mediation “touches on most basic questions concerning the relations between the *body*, *sound* and *technology*” (pp. 2–3, emphasis in original); it avoids technological determinism or the overgeneralization of the phenomenal body; and it allows scholars to recognize sound as “a co-participating agent in cultural practices and performance” (p. 3).

Each chapter in this collection provides a detailed and focused case study involving different sound and music technologies, performances and installations. These case studies come from diverse disciplinary backgrounds, such as musicology, film and media studies, art history, comparative literature, philosophy, theater studies, and science and technology studies. Each case study deals with specific aspects of sonic mediation, such as affect, memory, voice, musical gesture, gender, sampling, narrative, interactivity and intermediality.

Additionally, each essay focuses on specific questions. How do sound technologies and the performer’s body mediate audio performances? How do bodies and technologies mediate the experience of auditory perception? What is the role of the listener in audio-based performances? How does sound mediate the experience of viewing optical media and how does this complicate vision-oriented theories of spectatorship?

Section 1, “Mediating Perception,” examines the body as the mediator between sonic events and technologies. Essays in this section explore the relationship between sound technologies, auditory perception and memory; precultural factors determining sonic effects, such as anxiety; and the physical role of the body in the act of listening.

Section 2, “Mediating Performance,” examines the intersections between performers and machines. Essays in



this section explore the role of contemporary sound technologies in music production; how sound technologies destabilize authorial control and gender identities; and the specific function of corporeality in composition, performance and perception.

Section 3, “Mediating Space,” examines how sound technologies and installations offer new ways of thinking about how sound mediates between listeners and the spatial environment. Essays in this section explore how the shape of the performer’s mouth is mediated during electronic music performances; how atmospheric noise received by electronic sound technologies inspires new relationships between people and their spatial environments; the potential interaction(s) between sound, technology and audience in sound installations; and how sound installations can convey a sense of history dependent on the listener’s embodied experience and participation.

Section 4, “Mediating Audiovision,” examines the role of both image and sound in mediating theatrical and cinematic events. Essays in this section explore what happens when opera is incorporated into cinema and vice versa; how interactions between visual and acoustic elements in contemporary musical theater allow audiences to reflect on the effects of the theater itself as a medium; and how interactions between visual and acoustic elements create a critical relationship with regard to fixed narratives.

Through their selection of essays, as well as their arrangement in these thematic sections, editors Birdsall and Enns attempt to extend the limitations on existing disciplinary frameworks surrounding the study of sound, while at the same time elucidating fundamental concerns relevant to scholars of sound. As a result, “sonic” is shown to encompass voice, music, noise and silence, and thus presents itself as a much broader category of study. “Mediations” is shown to include contributions of the sonic event itself, as well as corporeality, and the technological apparatus involved in the production, performance and participation of that sonic event.

The end result is, then, an attempt to establish a model for sound studies as a mosaic of innovative approaches where scholars from varied fields can enter into productive dialogues around shared theoretical concerns.

## BITS OF LIFE: FEMINISM AT THE INTERSECTIONS OF MEDIA, BIOSCIENCE, AND TECHNOLOGY

edited by Anneke Smelik and Nina Lykke. In Vivo: The Cultural Mediations of Biomedical Science Series, University of Washington Press, Seattle, WA, U.S.A., 2008. 240 pp., illus. Paper. ISBN: 978-0-29-598809-2.

*Reviewed by Maureen Nappi, Long Island University.*

The ontological metaphor of this anthology’s main title is a playfully clever and potentially invertible trope. Might this anthology just as easily have been called *Cells of Computing*, *Genes of Gigabits* or *Bits of Bios/BIOS* to explicate the intended conjunction of biology, science and technology? The phrase is extensively applicable, providing the editors with a plethora of meanings and schemata to smartly traverse. The use of the term *Bits* delimits the need for engaging with “life as a whole”—employing *binary digits* for ontological measure—while specifying the techno-bios foci of the text. The *life* of bits, inversely, prefigures the conversion of life processes into technological methods, both an ancient and modern praxis. Further attenuated by its subtitle, *Feminism at the Intersections of Media, Bioscience, and Technology*, this lively and ambitious anthology intermixes “bits and pieces” of these overarching and overlapping fields filtered through much-needed feminist scrutiny and examination.

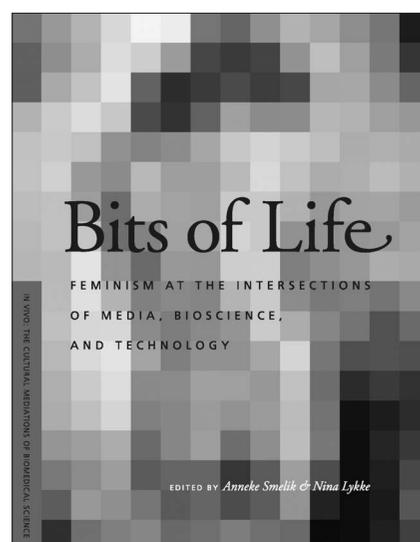
The synecdochical looseness of “bits and pieces” of life largely suits this anthology. It only becomes tedious

when “bits” suggestively infers quantitative equivalence to cells or genes, rendering their functionality dangerously binary and teleological. Although the concept of information was introduced to biological discourse in the early 1950s, it soon became obvious that its use was quantitatively imprecise, thus, not literally applicable but rather metaphoric. The biologist Richard Dawkins offers an apt clarification:

The genetic code is not a blueprint for assembling a body from a set of bits; it is more like a recipe for baking one from a set of ingredients. If we follow a particular recipe, word for word, in a cookery book, what finally emerges from the oven is a cake. We cannot now break the cake into its component crumbs and say: this crumb corresponds to the first word in the recipe; this crumb corresponds to the second word in the recipe, etc. [1].

The fifth publication in the In Vivo: The Cultural Mediations of Biomedical Science Series of the University of Washington Press, *Bits of Life* evolved out of a series of seminars and conferences held between 1996 and 2005 under the auspices of the international exchange program Media, Cultural Studies, and Gender: Looking for the Missing Links, funded by the Netherlands Organization of Scientific Research. Further support and direction was given by the Danish research project “Cyborgs and Cyberspace: Between Narration and Sociotechnical Reality” directed by one of the editors, Nina Lykke. She, along with co-editor Anneke Smelik, culled from these gatherings a collection of 12 scholarly papers by 14 authors. Together they organized their selection into four well-focused feminist trajectories mapped onto and through the intersecting fields of Bioscience, Media and Technology as Part 1: Histories and Genealogies; Part 2: Reconfigured Bodies; Part 3: Remediated Bodies; and Part 4: Philosophies of Life.

As feminist practice emerges out of a blending of scholarly and materialist concerns, or academic activism, here is a caveat to an otherwise extremely positive review. The editors specify the temporal parameters of the anthology as contemporary—post-WWII to the present—however, I found an unfortunate referential omission of *the* primary text on feminism and the biological, Simone de Beauvoir’s 1949 tome *The Second Sex*. Charting biological data of the female from the simplest organism to the most complex, de Beauvoir’s assertions are formidable and would have further



grounded the text in feminist theory, complementing the solidity of techno-feminism on which it is already strongly based. Another feminist reference omitted is *The Dialectic of Sex* by Shulamith Firestone. Published in 1970—shortly after the U.S. Supreme Court decision *Griswold v. Connecticut* declared laws banning the use of contraceptives for married women unconstitutional (1965) and before the *Roe v. Wade* decision on abortion (1972)—Firestone called for a cybernetic revolution to free women from the tyranny of the reproductive role of her *sex class*. The inclusion of both de Beauvoir and Firestone would have added—to an already outstanding anthology—the historical urgency of the biological imperative within feminism.

Rather, the editors cite C.P. Snow's *The Two Cultures* (1993) as the first significant reference in their introduction. Although briefly alluding to the post-World War II advancements in biology and technology in healing this divide and ushering in “The Third Culture,” this allusion reveals the primacy and profundity of Snow's argument, that is, the cultural bifurcation of the humanities and the sciences. However, almost by equal measure, Snow's argument reveals his concern for largely unacknowledged yet entrenched class divisions between what he called the *rich and the poor*, and in fact, he seriously pondered this as a title for his Rede Lecture. Snow asserted that no matter how compromised the lot of the poor still is, that lot (as well as the lot of the rich), has been exponentially raised by advances in scientific methods. Can literary *progress* possibly boast such an achievement?

Although no one could argue against the humanizing effects of literature, it is quite fair to say that scientific and technological progress has not had a unidirectional effect on sex, race and class divisions. For example, such advances from which the average Western woman benefits in her yearly gynecological visit have largely been gained through the incalculable suffering of enslaved black women who underwent dozens of surgeries without the aid of anesthesia, and were, in most cases, only made worse. Numerous such surgeries were performed by Dr. J. Marion Sims, inventor of the Sims Speculum and subsequently dubbed the founder of American gynecology [2]. As evidenced, even within the gender inequity of healthcare, some medical and technological advances that have been made in women's health

have been enabled by class exploitation and racial inequality. Such concerns rightfully ground our thinking in the historical and material bodies of the feminine. To this end, selected chapters will be considered in more depth below.

Of particular interest is Part 2: Reconfigured Bodies, which contributes solidly to this ongoing effort with the inclusion of four varied and distinctive papers. The first paper, “Fluid Ecologies: Changing Hormonal Systems of Embodied Difference,” is by Celia Roberts, author of *Messengers of Sex: Hormones, Biomedicines and Feminism* (2007). Inspired by feminist corporeal theory, Roberts recounts the historical trajectory of our understanding of hormones, as “internal secretions” in the 1850s to discretely manipulable, albeit juicy, parameters of the *chosen* sexed body of today. Amade M'Charek, author of *The Human Genome Diversity Project: An Ethnography of Scientific Practice* (2005) and filmmaker Grietje Keller, in “Parent-hood and Kinship in IVF for Humans and Animals: On Traveling Bits of Life in the Age of Genetics,” present fascinating and novel concerns specific to contemporary in vitro procreation practices, for example, two-mother-and-one-father parent configurations, etc. The third paper, “From *Rambo* Sperm to Egg Queens: Two Versions of Lennart Nilsson's Film on Human Reproduction,” by Mette Bryld and Nina Lykke, reveals the variable contextual meanings in these two versions, speculating on marketing strategies, feminist influences, etc. However, what remains intact in both is the unquestioned biological imperative to procreate as well as the positivist portrayal of the inner portal of life. The fourth and final article is “Screening the Gene: Hollywood Cinema and the Genetic Imaginary” by Jackie Stacey, author of *The Cinematic Life of the Gene* (forthcoming), which offers a deftly intricate reading of genetic inference and representation in two films: Andrew Niccol's *Gattaca* (1997) and Roger Donaldson's *Species* (1995), revealing deceptive ploys, or visual-lies, of the obvious. The final paper selected here for review is from Part 3: Remediated Bodies and is “What If Frankenstein ('s Monster) Was a Girl? Reproduction and Subjectivity in the Digital Age” by Jenny Sundén, author of *Material Virtualities: Approaching Online Textual Embodiment* (2003). In this chapter, Sundén examines *Patchwork Girl*, the multi-layered hypertext fiction by the writer Shelley Jackson, which implicates the writer Mary Shelley as

an active character interacting with the nominal protagonist, the *Patchwork Girl* and the author Shelley Jackson. Again, expertly analyzed and richly critiqued, the paper rids the topic of simplistic solutions but is rich with ambiguity and feminist scrutiny.

Such richness of inquiry is to be found in the anthology as a whole. The editors and contributors alike are to be commended for their contribution to the intersecting fields of feminism, media, bioscience and technology. Enjoy the read; there is something for everyone.

## References

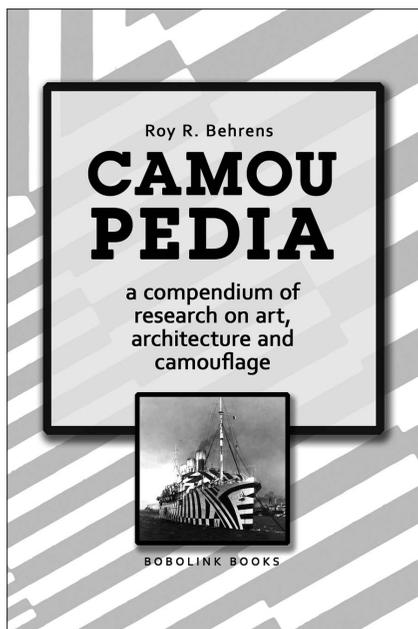
1. Richard Dawkins wrote “In Defense of *Selfish Genes*,” *Philosophy*, Vol. 56, No 218 (556–573), a response to, what he considered, a hostile review of his book *The Selfish Gene* (Oxford: Oxford University Press, 1976) written by Mary Midgley entitled “Gene-juggling” published in *Philosophy*, Volume 54 (October 1979).
2. See Harriet A. Washington's groundbreaking work *Medical Apartheid: The Dark History of Medical Experimentation on Black Americans from Colonial Times to the Present*. New York: Harlem Moon, 2006.

## CAMOUPEDIA— A COMPENDIUM OF RESEARCH ON ART, ARCHITECTURE AND CAMOUFLAGE

by Roy R. Behrens. Bobolink Books, Dysart, IA, U.S.A., 2009. 464 pp., illus. Paper. ISBN: 0-9713244-6-8.

Reviewed by Mike Leggett, University of Technology Sydney. E-mail: <legart@ozemail.com.au>.

Conflating the words camouflage and encyclopedia as a title is clearly an attempt to disguise the true intent of this volume. The outcome of enthusiastic research it is, but an entertaining summary of the field it also manages to be. It's hard to believe that it was only in Modern times that soldiers were obliged to take measures to survive if only to enjoy the peace. Concealing their presence on the battlefield to achieve this desirable outcome was less to do with returning as heroes and more a part of the development of industrialized warfare. Science and technology conspired to deliver death from beyond the horizon with machines of war so cumbersome that they immobilized the soldier. Hiding and obscuring physical evidence of intent was as necessary for the squaddie and the GI as the generals' conspiracies to ensure the continuation of the



conflict—good for business, then as now.

The band of brothers we encounter alphabetically in this research are, for the most part, the boys in the back-room; and we gather they had a lot of fun—razzle, dazzle, baffle and zébrage, especially for the hell of sail or other extreme environments: ice, snow and rain, and more rain. Behrens has, it seems, tracked down every last one of the brothers: printmakers, painters, sculptors, even art theorists and set designers, well versed in forced perspective. Apparently architects made the best field *camoufleurs*, scattering their flowers, their nettings and their *trompe l'oeil* while under fire from the enemy. Painters, however, trained as they were to touchup and varnish, were not good at leaving details to subordinates. Usually wrangled into Groups, Corps and Societies, *camoufleurs* are listed here from amongst the talent of England, France, Australia, South Africa and, predominantly, the U.S.A., where the author is based. Curiously, the adversaries marshaled under the Kaiser are hardly mentioned, except in one instance when some German airmen dropped a message to soldiers of le Grande Alliance suggesting improvements to their methods of concealment—*wir sprechen Technik*.

Claims abound as to who was the first to propose concealment in warfare; Shakespeare gets a mention though not his Forest of Dunsinane. Abbott and son Gerald Thayer's article and book on *Coloration in Animals* in 1909 in the U.S. prompted serious interest from the intelligentsia if not the mili-

tary. It was not until later in the Great War of 1914–1918 that together with other sources in France and the U.K., its usefulness became recognized. The word *denature* was used to describe the painting of familiar objects in strange ways; camouflage became “the Cubists’ revenge,” something denied as coincidental by its main protagonist, Georges Braque, another *camoufleur*; the British surrealist Roland Penrose was another in the following World War, publishing a wartime Home Guard manual on the subject, with a chapter entitled “How To Turn Yourself into a Hedge”; the famed Comédie-Française actor Jean-Louis Barrault (described as a comedian!) also served in a camouflage unit. Robin Darwin (a descendent of the definer of the species), presciently recommended interdisciplinary creative approaches to a British War Ministry; “that artists and designers are of undoubted value in the development of camouflage, but that they should work alongside engineers, architects and scientists.” And the psychologists came up with the term *legendary psychasthenia*, or “the inability of people to distinguish themselves from their surroundings, social or otherwise,” a term surely useful in many contexts today. And camouflage toilet tissue came into being with a U.S. Patent Number!

Camouflage technology emerges as the reader works through the book, picking out detail from the background of seemingly endless anecdotal biography entertainingly presented, although of curiosity value to any but the serious researcher. Experiments by each and every recruit to the cause led to hosts of visual treats guaranteed to alarm if not succeed in their purpose: in the mainly thumbnail-sized images we get a sense of the shock and awe value of the designs for ships in particular, the purpose of which were to deceive rather than conceal. There is little evidence of any serious science-based cognitive evaluation of the success of the various illusions, though a team at the Kodak Labs came closest, risking risibility with the invention of a “visibility meter”! It was however, part of measuring the process of denaturizing visual memory and confounding tacit knowledge of the natural world. The phenomenology of a state of war, the situated actions of helmsmen in the collisions and other accidents at sea attributed to dazzle-painted ships for instance, became the real measures of success determined by commanders.

The paraphernalia of camouflage

continues to fascinate visual artists even as recently as 2009 in Australia, where Sussi Porsborg installed *Portable Cenotaph*: working with army blankets, clothing and textiles gathered from around the world, visitors are encouraged to select from the camouflage patterns that take their attention and, with scissors and sewing machine, construct small objects to become part of the exhibit.

Self-published, this is no coffee table book, and it suffers from sheer quantity of entries as a compendium should but does not lack visual fascination, even though the scale of most of the riveting images are too often postage-stamp size. The obsessive research contained in this compendium delivers a prodigious quantity of leads into the field. It is as if a mountain of post-it stickies had been transcribed and ordered alphabetically, and even the author admits he had to call “cease-fire” as the research results escalated. As such this volume will be a leading contemporary source book, complete with a bibliography of more than a thousand titles, some 40 from Behrens himself.

## OTAKU: JAPAN'S DATABASE ANIMALS

by Hiroki Azuma; Jonathan E. Abel and Shion Kono, trans. University of Minnesota Press, Minneapolis, MN, U.S.A., 2009, 200 pp., illus. Trade, paper. ISBN: 0-8166-5351-5; ISBN: 0-8166-5352-2.

Reviewed by Michael R. (Mike) Mosher, Saginaw Valley State University. E-mail: <mosher@svsu.edu>.

The art and artifacts exhibition, “Little Boy,” held at the Japan Center in New York in 2005 and curated by the artist Takahashi Murakami, detailed some of the milestones of *otaku* culture. The anime cartoons Akira and Neon Evangelion! Personified *chara* advertising characters! Gojiro, a.k.a. Godzilla! It also demonstrated these cultural phenomena's influence upon notable Japanese visual artists under 50 years of age, with examples of their works.

What, or who, are otaku? They're nerdy young men, socially challenged and obsessed with popular culture. Yet the successful globalization of anime and manga tropes (noticeable in the enthusiasm for them among my own mid-American undergraduate art students) have positioned and



elevated otaku as early adopters and innovators. Hiroki Azuma's intriguing book delivers Japanese applications of postmodernist theory to this population. There's a philosophical meaning behind antenna-hair and floppy socks on disturbingly sexy young cartoon "database animals" that appear in various novel games in Japan's cyberspace. "Hyperflatness," the concept with which Murakami has explained the style of his and his contemporaries' Pop paintings, is aptly applied by Azuma to computer screen design as well.

Azuma's concept of the database is that of a continually shifting authorship of *moe* (distinct fan-favorite elements, often yanked out of context) taken from "the grand non-narrative" of otaku stories in various media. Sometimes these are rewritten and reassembled by the original authors—including computer game designers—or sometimes by the fans themselves. Authority and authorization; derivation, variation and vision; official and bootleg versions all have been blurred in this cultural stew called the database—but what does the otaku care, as long as he's entertained and the fun keeps coming? Azuma applies Jean Baudrillard's procession of the simulacra, from imitation to something weirdly sui generis, to the database. Walter Benjamin's "The Work of Art in the Age of Mechanical Reproduction" is also cited as a historical precedent of this analysis, especially in noting the disappearance of the "aura" of a unique artwork (weird momentary reverie: I want to see a lifelike Walter Benjamin Japanese robot, perhaps unpacking and repacking his library of manga in a busy department store). Yet it is Azuma's provocative application of the ideas of Alexandre Kojève that is most interesting. Kojève described a posthistorical realm where material issues of survival have been overcome, which thus allows finicky attention to the aesthetic realm. While Kojève speculated that post-World War II America (where hamburgers sizzle on an open grill night and day) was this slightly effete promised land, Azuma

argues that the otaku's Japan circa Y2K fulfills the posthistorical utopia most appropriately.

The appropriately brief and thoughtful book, with its screenshots and theoretical diagrams, is worthy of multiple readings. The translators, Jonathan E. Abel and Shion Kono, have been conscientious and thorough in providing an introduction that establishes the context of Azuma's work, as well as endnotes of particular subtlety, pointing out shadings of interpretation within the Japanese language. Not having visited Japan since 2002, I am quite happy to have Hiroki Azuma's 2001 appraisal of his nation's cyberscape and happily anticipate (especially if put into English by these scholarly translators) more of the Japanese cultural critic's subsequent writings. Perhaps I await them with an eagerness that could be called otaku-like.

### INVISIBLE VISION: COULD SCIENCE LEARN FROM THE ARTS?

by Sabine E. Wildevuur. Bohn Stafleu Van Loghum, Uitgever, NL, 2009. 190 pp., illus. ISBN: 978-9-03-135101-5.

*Reviewed by Stephen Wilson, Conceptual Information Arts, Art Department, San Francisco State University. E-mail: <infoarts@sfsu.edu>.*

*Invisible Vision: Could Science Learn from the Arts?* is an intriguing book that will be of interest to many *Leonardo* readers. It was written by Sabine E. Wildevuur. She is program manager/healthcare at Waag Society in Amsterdam. (For readers who might not be familiar, the Waag Society is a Dutch cross-disciplinary organization that "develops creative technology for social innovation" and "acts as an intermediate between the arts, science and the media.")

Wildevuur's question "Could Science Learn from the Arts?" is a critical question relevant to the intersections of art, science and technology. There have been many articles and books written in the last few years on the intersections. Also many organizations, festivals and arrangements to encourage collaboration have been set up. Artists have leapt to create unprecedented new works inspired by research. The enthusiasm is building. Most of it is based on the faith that a techno-cultural society will be enriched by the arts and sciences engaging each other in many ways.

Most of this work, however, focuses on how the arts are enriched. By attending to the research world, artists are working with areas of inquiry of great importance to society. They are bringing new concepts and technologies into the art arena. However, according to the artists, theoreticians and policy makers encouraging this work, not only the arts will be enriched. They claim that the research community will also be augmented by being introduced to new research agendas, research processes, visualization methods, interpretations and frameworks for analyzing and communicating research.

The claim is intriguing and makes good sense. Yet there is significant asymmetry in this corpus of work. There is much less evidence and analysis about the impact on the sciences. Wildevuur's book is a strong first step in this analysis. Concentrating on medical imaging, which is key to both science and art, she presents an impressive body of material to bear on the questions.

She offers chapters on "Making the Invisible Visible: The Gallery of Medical Imaging"; "WYSIWYG (What You See Is What You Get)"; "Visualization and Data Beautification"; "From the 'Art' of Medicine to Art in Medicine"; and "Imaging and Imagination of Science: A New Perspective." The book is richly illustrated with historical and contemporary images drawing both from art and science. She has done a marvelous job of locating provocative images to further her analysis.

A few examples will illustrate her approach. In the first chapter she develops the idea that art-making was intrinsic to the scientific enterprise in the early days of Western medicine/biology. Scientists could not proceed without careful drawings and models of what they were seeing as they peered inside bodies. Artistic craft and vision were essential to furthering the research. The objects created not only accurately documented observations but also generated great excitement that motivated scientists and also raised new questions that became part of the engine of science. The "Gallery of Medical Imaging" is an exceptional resource for those studying these topics.

In the "WYSIWYG" chapter Wildevuur explores the idea that contemporary medical research imaging tools such as MRI and PET scans cannot create purely "objective" images. For example, the phenomena being scanned often do not have any specific colorization associated with them in nature. An

MRI returns data about the intensity of the spin of hydrogen atoms. It is up to the scientists and designers of the devices to decide how to map colors to data. Different mappings emphasize different features of the data. Wildevuur explores the contribution an artistic sense can add to maximizing researchers' abilities to learn from their data.

The chapter "Imaging and Imagination of Science: A New Perspective" investigates new media technologies being adapted to research-immersive virtual reality and interactive gaming. For example, immersive VR is seen as opening unprecedented new ways to understand research data. The viewer wears stereoscopic head tracking goggles and 3D headphones so that they can move through and manipulate a high-fidelity representation of a 3D virtual data world. They can explore data elements from all angles as if they were objects floating in space. In the VR environment, worlds that are too small, too big or too abstract are rendered like familiar physical objects. Wildevuur notes that this way of approaching data not only makes it visually clearer; it actually may add new conceptual dimensions for conducting the research. She poses this work with experimental media as a place the arts can teach the sciences.

The book is a great resource both for its ideas and for its visuals. It will add significantly to needed analysis. It should be noted, however, that it is not a comprehensive answer to the questions. It is lacking much direct testimonials from scientists who feel their research has been augmented by art. Also, its focus on visualization means it does not have much to say about some of the other ways artists think they might contribute to science—for example, identification of new research agendas, development of technologies outside commerce and working with non-visual aspects of science. While we can enjoy this book, we must recognize that there is still much work to be done.

### AND WHILE I HAVE BEEN LYING HERE PERFECTLY STILL: THE SASKIA OLDE WOLBERS FILES

by Philip Monk. Art Gallery of York University, Toronto, Canada, 2009. 136 pp., illus. Paper. ISBN: 978-0-92-197253-2.

*Reviewed by Rob Harle, Australia.*  
E-mail: <harle@dodo.com.au>.

This delightful little book is an enigmatic enigma. It was published in conjunction with an exhibition of Saskia Olde Wolbers at the Art Gallery of York University in 2008 and curated by Philip Monk. It is a fiction about fictional fabrications based loosely on true stories loaded with pathological lying. Be prepared to throw logic to the wind.

Olde Wolbers works predominantly with short video pieces, many presented as gallery installations. These videos are fantastical stories matched by equally fantastical landscapes. Sometimes the meticulously created sets are filmed underwater to add to the dream-like fantasy of the story. Each of the videos has voice-over narrative with a hypnotic lure.

*And While I Have Been Lying Here Perfectly Still* is beautifully illustrated, with both color and black-and-white plates, together with excellent graphic presentation. The illustrations are composed of video stills, gallery installation stills and photo archives.

The first section of the book consists of *The Case Studies of Russell Clergy*, 01—*Placebo*; 02—*Interloper*; and 03—*Kilowatt Dynasty*. Each of these script Case Studies is a transcribed narrative from an Olde Wolbers video piece; these run for six minutes each and are accompanied with a foreword by Florence Wellington and an introduction by Stanley Pugh.

The second section of the book has *Postscript to a Fiction* by Philip Monk, followed by 04—*Trailer* and 05—*Deadline*, 10- and 18-minute videos respectively. Discussing the *Trailer* video piece, Monk has this to say:

A lie is not just in the telling. It is just as much what is unsaid, such as family secrets shielded from children—that is living a lie rather than telling one. *Trailer* relates the bizarre unraveling of such a family secret that was always waiting to be exposed (p. 77).

Fictional fabrications indeed,

In this book Olde Wolbers' artworks are treated at an interpretative remove through the genre of psychological case studies . . . these are case studies where the doctor/author, an expert in pseudologia fantastica, is himself a pathological liar (Back Cover).

It reminds me of the old philosophical conundrum known as Epimenides' paradox. Epimenides was a Cretan who made one immortal statement: "All Cretans are liars."

In our contemporary world where "dumbing down," banality, and superficiality seem to be the order of the day, Saskia Olde Wolbers' artwork and

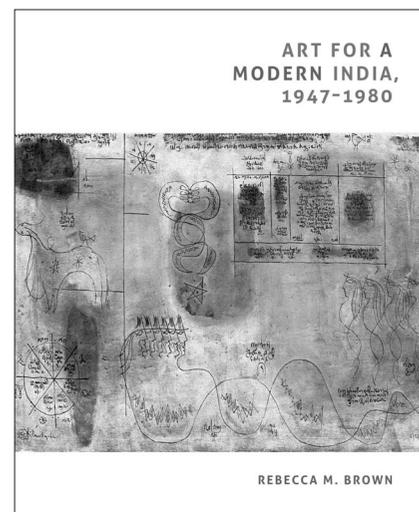
Monk's commentary on her artworks are like a breath of fresh air. Convoluted, challenging, sophisticated and multi-faceted, I guarantee they will intrigue you and mess up your mind in an enchanting way. But then why should you believe me?

### ART FOR A MODERN INDIA, 1947–1980

by Rebecca M. Brown. Duke University Press, Durham, NC, U.S.A. and London, U.K., 2009. 196 pp., illus. ISBN: 978-0-82-234375-2.

*Reviewed by Aparna Sharma.*  
E-mail: <a.sharma@arts.ucla.edu>.

On reading *Art for a Modern India, 1947–1980*, one is most struck by the ambition underpinning this project. Rebecca M. Brown's text unveils an array of artistic output starting from India's independence in 1947 until the 1980s prior to India's economic liberalization. Brown addresses the central paradox embodied in India's postcolonial condition—the transaction between modernity and the quest for Indianness. She does not approach either category as neatly constituted; instead she cuts into recent moves within postcolonial studies that point to the "centrality of colonialism to the production of modernity." She states in the introduction to the book that colonialism served not simply as a "tangential motivating factor but as a constitutive, core element" within modernity" (p. 3). This is a crucial move whose implications span the disciplines of both art history and anthropology, wherein arts and cultural practices outside the Euro-American canon have invariably surfaced as "alternatives" evoked within the



modernist project to critique the dominant and hegemonic paradigm. More specifically in the context of India, this flags up the tensions within the terms of reference for the arts heightening our sensitivity towards the operations of ideology within aesthetics.

Brown's study of arts in India qualifies the disparity between modernity and modernism, which may be clear within a Euro-American context but assumes varied significance in the post-colonial context, principally as modernization comes to be equated with Westernization and neocolonial dependence. Through the breadth of materials examined and their juxtaposition in the carefully designated chapters of the edition, Brown inaugurates a much required and rigorous method for art history in India. This method privileges discourse over other terms of debating arts such as biography or technique—a move that only a few historians from the subcontinent, such as Geeta Kapur, have been previously able to successfully make. Brown brings varied media, such as Hindi cinema, parallel cinema, architecture, painting, industry and photography onto a common plane, from which she investigates and debates their strategies and discursive implications. This fosters cross-disciplinary discussion and overcomes the restrictions of focusing on a single medium. While discussing the works, Brown's approach is descriptive and comparative. She points out that arts discourse in India was effected by the euphoric nation-building project that was itself charged with the quest for asserting a distinct Indian identity on which basis claims were made to India's past, prior to colonialism.

Brown highlights how nationalist assertiveness was problematically regurgitating the varied tropes of colonial discourse, including the orientalist posture. This problematic has two implications: One, it highlights the contingency underpinning the mobilization of India's history and aesthetics prior to colonialism; and two, it sets up the specific terms of critique for a modernist project in India. The first three chapters of the text focus on issues of authenticity, iconicity and narrativity. Brown repeatedly points out how any claim to or valorization of a puritanical past is problematic, being ahistorical and essentialized and therefore counterproductive to a critical, modernist sensibility. She analyzes specific artworks, and while she points out discursive and strategic disparities between a

spread of artists ranging from Charles Correa to Satyajit Ray, MF Hussain, Le Corbusier and Krishen Khanna, among others, what is wanting in this section of the book is a frontal and more direct discussion of the class backgrounds and social histories of the artists. The discussion of the artworks is detailed and evocative, and it is for this reason that one feels a gap between the artist's body and the work. While Brown consciously steered away from plotting biographies, perhaps the ethnographic life history method that serves to contextualize the individual socio-historically could have been used to evoke the artist-as-person before us. In the endnotes for the chapters, Brown does gesture toward the artists' backgrounds and supporting literature, but a rounded and more critical discussion would clearly draw upon the disparity between the liberal cultural elite and the radical practitioners.

The last two sections of the book, "Science, Technology, Industry" and "The Urban," are particularly thoroughgoing and interesting. Art, science and industry are placed in conversation through comparisons such as between city planning and architecture (for example Le Corbusier's planning for the Chandigarh city), photography and industry. While previously in the text Brown treads into the disparity between folk and high art and the mobilization of the former within the nationalist discourse, her discussion for example of the Kanvinde Dudhsagar Dairy Complex and its comparison with Corbusier's design of Chandigarh provide a telling critique of modernist primitivism as associated with issues of "authenticity," "tradition" and the "past" within the context of the nation. With respect to these two projects she concludes,

The dairy complex acknowledges the material needs of local farmers rather than putting them on a pedestal as an example of ostensibly primitive purity. This crucial difference between Corbusian modernism and that exhibited at the Dudhsagar complex allows the dairy factory to represent the mid-century movement of autonomous action *in its modernity*, serving as a hub for cooperative activity, economic growth and the articulation of industrial progress (p. 127).

In further examination of photography, painting and cinema addressing the urban context, Brown highlights the human element and its relationship with the urban context. The human is evoked here not in the sense of

rationalist enlightenment, but more as a folkloristic category, such as in the discipline of American Folkloristics. Her concluding comments about Nasreen Mohamedi's work provide a succinct insight not only into the position of the human individual in the context of urbanity but the wider condition of postcoloniality—the theme of text. She says,

Mohamedi's images show us precisely the difficulty of producing a fully evident, embodied modern Indian subject. We get hints of it, we see evidence of its potential, but it can never be complete or whole. Mohamedi's abstraction, then, provides us a glimpse into the postcolonial condition by articulating how the postcolonial self exists only in glances, shadows, and traces (p. 122).

Bringing together a range of disparate but linked examples, Brown's text makes for stimulating reading—an essential text for any student of the arts, postcolonialism and the interaction of science and arts in the postcolonial context.

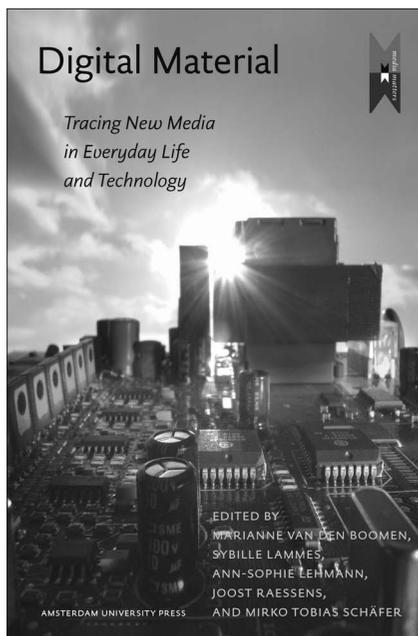
#### **DIGITAL MATERIAL: TRACING NEW MEDIA IN EVERYDAY LIFE AND TECHNOLOGY**

edited by Marianne van den Boomen, Sybille Lammes, Ann-Sophie Lehmann, Joost Raessens and Mirko Tobias Schäfer. Amsterdam University Press, Amsterdam, NL, 2009. 304 pp., Paper. ISBN: 978-90-8964-068-0.

*Reviewed by Jan Baetens.*

The rich selection of essays gathered in this volume provides a survey of cutting-edge research in the field of new media studies as well as a sampling of the type of research performed at the New Media and Digital Culture program at the Department of Media and Culture Studies at Utrecht University. The blending of these two perspectives is undoubtedly one of the most attractive aspects of this book, which demonstrates a strong sense of pedagogy and clarity in each of its contributions, while craving for presenting new insights in a scientific domain that is strongly opened to contextual and cultural analysis, yet for the same reason also difficult to handle or at least to circumscribe.

The editors of this collection are not claiming to present a full-fledged state of the art where the discipline stands



now nor what it is actually standing for. Although well aware of what is being performed in the major research centers, such as MIT's Media Lab (where one of the founding fathers and still-collaborator with the Utrecht program, William Urrichio, is now teaching) or Montreal's NT2 and parallel centers, the Utrecht Department has tried first of all to achieve its own viewpoint on the practices and the discourses that are associated with the notion of "new media." The most striking, and dramatically important, achievement in this regard is the definition of digital culture as an illustration of material culture. Turning away from often very radical ideas on digitization as disembodiment, the Utrecht group rightly stresses the importance of the material aspects of digital culture, not only at the level of software as shaped by as well as shaping a large set of material operations, but also at the level of the incorporation of this software in highly material hardware. The concept that the group has coined for this complex and multilayered form of materiality, namely "in-materiality," expresses in an exemplary way the will to find new paths within the broader approach of digital materialism.

Generally speaking, this ambition is successfully demonstrated in this book, yet in a way that remains rather "soft." Not in the sense that the concept of in-materiality proves only able to cover a tiny part of what is meant by digital culture; on the contrary: the topics and issues that are covered in *Digital Material* are important and wide-ranging and strike a good balance between

philosophical reflections—yet philosophy here does not mean disembodied conceptualism—and close readings of sometimes very small phenomena. The book proposes excellent essays of, for instance, the status of the digital archive, the definition of new forms of indexicality, or the notion of audience participation, but it has no less attractive chapters on more microscopic themes such as specific discussion forums, innovations in e-learning environments or music web sites. If the overall impression of the book is however more "soft" than the editors would like to have it, this impression has more to do with the fact that the authors rely on a wide variety of secondary literature and theoretical framings to study each in a particular subfield the core issue of in-materiality. Some contributors are heavily influenced by psychoanalysis and authors like Žižek (who is of course not a psychoanalytical thinker in the traditional sense of the word). Others have a strong preference for remediation theories à la Bolter and Grusin or are involved in an in-depth rereading of Johan Huizinga. Still others privilege Goffman or Certeau, and so on. This is of course not a critique, for this diversity, which simply reflects the diversity of the new media fields in general, is the best warrant against uniformity of thinking. Yet the mere concept of in-materiality may seem a little too weak or shallow to present the work of the group as fully homogeneous. Actually, after reading the book, one is more struck—and this again is not an unpleasant feeling—by the creative way in which most authors do something with actor-network theory. Nevertheless, at a theoretical level the articulation of in-materiality and ANT remains a little underdeveloped. Corollarily, I think that the role of cultural media criticism as practiced by Henry Jenkins might have been highlighted in a more explicit way. The focus on the "Utrecht concept" of in-materiality, however appealing it is, should not prevent the group from making its relationships to other approaches and theories more explicit. This is done in a wonderful way in the various texts on game theory, with very interesting rereadings of Huizinga (a must in a Dutch context, of course, but an author whose work deserves to be taken more seriously). But one misses at the end of the book a kind of global rethinking of all the theoretical threads that have been followed by authors who do not always share the same theoretical,

critical, and historical framework. The essay by Mirko Tobias Schäfer, already excellent in itself, may be one of those that goes a little further than others in gathering these threads, but it is still far from a "general theory" (provided the editors of this book wanted something like that, which is not certain).

The articles are gathered in five sections, respectively labeled "processor," "memory," "network," "screen" and "keyboard," and it is very positive to see that this structure is already an attempt of translating and instrumentalizing the general notion of in-materiality. Yet here as well, and personally I do not consider this a flaw of the book, the emphasis on social use and reuse, which exceeds always the division between the five basic categories, is very strong. New media theory remains in the very first place media theory, and theory should be in the very first place practice-based, hands-on theory. *Digital Material* manages well to make these points very clear and can therefore be considered a welcome enrichment of the scholarship in the field.

As always, the status and level of the contributions is not the same, and some of the texts are not totally new. Some of them seem to be reworkings of other versions, like the (excellent) essay by Jos de Mul, which contains throughout its paragraphs a list of references to figures that are not in the book (one guesses for copyright reasons, but the effect is a little strange in a well-edited and carefully printed book).

### **SPECLAB: DIGITAL AESTHETICS AND PROJECTS IN SPECULATIVE COMPUTING**

by Johanna Drucker. University of Chicago Press, Chicago, IL, U.S.A., and London, 2009. 264 pp., illus. Trade, paper. ISBN: 978-0-22-616507-3; 978-0-22-616508-0.

*Reviewed by Martha Patricia Niño Mojica, Colombia. E-mail: <manino@gmail.com>.*

*Speclab* has imaginary terms that need to be explained in more detail, such as Graphesis, Patacritical and Trialectics. Graphesis is a term that is strangely associated with what author Drucker calls "boxcar phraseology." Pataphysics is defined as "[t]he science of exceptions and of imaginary solutions," or the science of exceptions and anomalies. This sounds somewhat gloomy. It is not clear whether the term Trialectics is a derivative product of the Trivium, or

what we know as an introductory curriculum at a medieval university, involving grammar, logic and rhetoric, considered to be a triple way to eloquence. Under this definition, Drucker argues that it is possible to think of the term “digital aesthetics” in a more ludic way than an intellectual one. Thus, it is also possible to reinvent the role of speculation as an initial branch of creativity in computing. In this line of thought, speculation should not be understood in the most general and pejorative use or as a conviction about problems of computing based on conjecture rather than knowledge. In the main title, it is not clear why the author does not use the word “literature,” commonly understood as the works of imagination instead of speculative computing. Computing usually has to be clear, effective and precise.

The book presents a reflection about the provocative term, “digital humanities,” which comprehends projects of both data visualization and computational linguistics. For that reason, it explores the possibilities of XML, as a hierarchical tool for ordering systems of content. It would have been nice to have a deeper explanation of XML because the book does not explore its main possibilities as a creator of a semantic web. Comical and fascinating, the examples in the book are not pure XML, but a text that blends a script for an actor made by a theater director and XML, both styles with inaccuracies. On one side, the programming script in XML has content outside of the main tags <>; on the other side, the actor’s script has embedded XML syntax:



“[or perhaps <flirtation> starts here?] <conversation> <directquote>“Really, is that what XML does?</directquote> She asked <directquote> “Yes,” </directquote> he replied, graciously, [or should <flirtation> start here? Trying to catch her gaze]”

Furthermore, there are no other computing code examples in the book, nor an explanation of any computer language. In a rather syncretic way, some religious terms are used to describe computer processes. The work has imaginary words assembled into phrases such as, “Can graphesis change mathesis?” This uncanny question with cryptic words opens the chapter “Graphesis and Code.” It is not evident whether it is a word game; perhaps the author meant “Can Graphemes change Mathematics?”

With an intriguing opening, the chapter “Temporal Modeling” is a response to designs made by well-known designers such as John Maeda and other designers such as John David Miller, which the author considers non-humanistic because they are funded in discrete sciences, although it is not clearly explained why. Humanities, in her view, have more value when they are not interdisciplinary. This is a very surprising affirmation, taking into account that interdisciplinarity is a central issue in the study of digital aesthetics. This is a key topic because aesthetics is something that permeates all the sciences and not a compartmentalized and isolated field that can be separated from the realm of quotidian experience. It would have been nice to read about the role of fiction in scientific discourse and history of science, and about other authors working in the related fields such as Janet Murray, Isabelle Stengers, Sean Cubitt, Iliana Hernandez and Claudia Giannetti, among others. It is very interesting to see how the author makes an effort to reinvent the role of ludic and imaginary works in computing, but some of the graphics lack some clarity and look like sketches.

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## DECEMBER 2009

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*This project is supported by the Marjorie Duckworth Malina Fund, which honors the memory of a key longtime supporter of Leonardo/ISAST. The project recognizes Marjorie's dedication to the ideals of international cooperation by emphasizing the participation of artists throughout the world. For information on making a donation to Leonardo/ISAST in memory of Marjorie Duckworth Malina, please visit <<http://leonardo.info/isast/donations.html>>.*